

developments of the twentieth century. It is always extremely difficult to include contemporary developments in writing a history of anything, and the author has wisely stated explicitly that his aim here is "to give an over-all glance at the results obtained in relatively recent times up to the present, without pretending to give the complete picture either of the subject matter or of the persons". Most readers will agree that Prof. Abetti has discharged this part of his task competently and fairly, and that the book would not have been so good, as it undoubtedly is, if Chapter 19 had been omitted. Any would-be critic will be well advised to ask himself whether he could do the job better.

In the chapters dealing with ancient astronomy, many readers will select Chapter 5 as the most interesting. This chapter gives an account of the school of Alexandria. A valuable feature is an earlier chapter, "Ancient Astronomers other than Greek", which deals successively with the astronomy of the Mesopotamians, the peoples of Central America, the Egyptians, the Jews, the Phœnicians, the Hindus and the Chinese. The last two come in for some courteous but definite 'debunking'.

The author explains in the preface that this "History", now translated for English-speaking readers, was written originally in Italian and that he has "lingered more, in the course of its development, on the Italian personalities and on their contributions to astronomical progress". I consider that Prof. Abetti's 'lingerings' have enhanced the value of the book. I particularly enjoyed the author's 'lingerings' over the work and careers of Toscanelli and of Secchi. The author is probably correct in claiming that the first period of the rise and development of astrophysics closed with the death of Ricco in 1910. The fact is that the contributions of Italians to astronomy are not so well known as they ought to be, and the 'lingerings' come as a useful corrective to English-speaking readers.

The book is excellently illustrated. There is a foreword by the Astronomer Royal, Sir Harold Spencer Jones, and an appendix dealing with the development and aims of the astronomical observatories of the world.

W. M. H. GREAVES

"INDEX GENERALIS"

Index Generalis

Vingt-et-unième Année, 1954-1955. (Annuaire Général des Universités et des Grandes Écoles—Académies—Archives—Bibliothèques—Instituts Scientifiques—Jardins Botaniques et Zoologiques—Musées—Observatoires—Sociétés Savantes.) Pp. xvi+2108+xx. (Paris: Dunod, 1955.) 9,500 francs.

THE "Index Generalis" first appeared in 1920 and by 1939 was a well-established work of reference, having run through a number of editions. Naturally, the Second World War seriously interrupted its publication, and it was not until 1953 that a new edition could be produced. This latest edition is based on the 1953 one with considerable corrections and additions, which make two hundred and fifty pages more of material to the already formidable total of two thousand.

The work is divided into six sections: universities and other major teaching establishments; observatories; libraries and archives; scientific institutes

and research centres; academic and learned societies; and indexes. The section on universities is by far the largest, comprising more than a thousand pages. It is arranged alphabetically by countries, and within each country by the capital city followed by other cities and towns in alphabetical order. (The principal exception to this lay-out is the entry for the United States, where the sequence is by name of university institution.) For each university a list is given of professorial staff and similar persons holding senior appointments.

The section on observatories is a comparatively small one of sixty-five pages, the entries for each observatory indicating its exact geographical position, staff, publications, instruments and work. The section on libraries comprises 171 pages, sub-divided by countries. To economize in space, twenty-five code letters, or combination of letters, are used for specifying particular items—for example, the number of books held—in the details given for each library. The section on scientific institutes, 114 pages long, has a similar but much smaller code; but this code is not often used as the type of information given varies very much from one institute to another. The section on learned societies, which has 91 pages, is different from all the others in that it is grouped by subjects rather than by nations. Thus, under "Generalités", defined as societies with more than two subjects of study, are to be found the Royal Society and the British Academy, while in a completely different part of the section, under "Sciences (generalités)" are to be found the Royal Institution, the British Association and a host of other societies such as the Royal Aeronautical Society and the Institute of Petroleum. This only serves to show that science cannot be divided into watertight compartments, and scientific societies less so; the arrangement by nations, as in all the other sections of the book, would have been much more preferable.

Then there are the two indexes. That dealing with names has more than a hundred thousand entries and can only be described as a 'monumental' compilation. Following each page reference is a number ranging from one to eight, which indicates the part of the page in which the name is to be found; this is a great convenience, because many pages have dozens of names scattered over them. For some reason best known to the compilers, the lists for names beginning with *A*, *B* and *C* have short supplementary lists added at the end. The geographical index, a mere thirty-four pages compared with the three hundred and fifty pages of names, is arranged alphabetically by place-names, and then under each place are the various bodies to be found there. The main criticism to be made is that it is sometimes difficult to find a particular institution, especially if it is an American one; one has to take the various cities in turn—New York, Chicago, etc.—and search through the numerous entries thereunder. Finally, mention must be made of the sixty-four pages at the end of the book, on coloured paper and separately numbered, which contain material that was sent in to the publishers after the main body of the book had gone to press.

The whole work is primarily in French; but this should present no difficulty to the English-speaking reader with a smattering of French. In general, it can be said that in the past this book has been a useful work of reference, and the present edition worthily carries on that tradition.