

In this short notice we have been able to indicate only a few of the more interesting topics dealt with in Prof. Woeikof's treatise. The effects of the agent to which he has directed attention are undeniable and far-reaching, and the publication of his investigations should have the result of making the registration of the depth and duration of snow a part of the regular work of meteorological observatories. Other observations of a more detailed character, which he specifies in the course of his work, are also much needed.

H. F. B.

*THE "CIRCOLO MATEMATICO" OF PALERMO. Rendiconti del Circolo Matematico di Palermo. (Palermo: Sede del Societa, 1887-89.)*

THE "Circolo Matematico" is one of the junior members of the now large family of Mathematical Societies. We have before us Tomo I., which gives an account of the proceedings from March 1884 to July 1887. Tomo II. contains like matter for 1888, and of the current volume we have three parts, each of which contains an account of the proceedings for a period of two months, terminating with June last. The first general meeting of which there is any record was held on March 20, 1884, and in that year eleven meetings are recorded, and the proceedings published within the narrow limits of thirteen pages: it was then the day of small things, and we presume the gatherings were confined almost to conversational expositions of mathematical problems. With increase of days came increase of strength, and the first volume contains seventy communications from twenty-one authors; of these the only foreign contributors are Messrs. E. Catalan, F. Cavallaro, Hirst, and Schoute. Dr. Hirst's short note is "Sur la congruence Roccella, du troisième ordre et de la troisième classe," and in it he points out that Dr. Roccella's congruence is a particular case of the Cremonian congruences discussed by him in his memoir "On Congruences of the third order and class" (L. Math. Soc. Proc., vol. xvi., 1885). These congruences are also the subjects of papers read by Signor Guccia. Amongst the longer papers in this volume are: "Intorno ad alcune formole nella teorica delle funzioni Ellittiche," by Signor Albeggiani; "Sulle superficie dell'  $n^{\text{mo}}$  ordine immerse nello spazio di  $n$  dimensioni," by P. del Pezzo; "Sopra un metodo per formare le equazioni a derivate parziali, delle superficie che ammettono una generatrice di forma costante," by M. Gebbia; "Sopra alcuni sistemi lineari di curve piane algebriche di genere due," by V. Martinetti.

In the second volume there are thirty-nine papers by twenty-six authors. The only long papers are: "Intorno alle curve razionali d'ordine  $n$  dello spazio a  $n-1$  dimensioni," by G. Loria; "Sul carattere aritmetico dei coefficienti delle serie che soddisfano ad equazioni lineari differenziali o alle differenze," by S. Pincherle; "Sur la marche du cavalier," by C. Jordan. These papers are of no great length; the remaining communications rarely exceed four or five pages.

The May-June number of this year contains a "Solution du problème de Malfatti," by M. Lebon, and an "Étude d'un déplacement particulier d'une figure de forme invariable par des procédés élémentaires et purement géométriques," by M. Mannheim. In selecting papers we have had regard mainly to those which may be called memoirs;

the smaller notes treat of similar matters, so that it is readily seen that the field at present occupied by the "Circle" is that of pure mathematics.

The names of the majority of the contributors are well known by their writings in other journals, and their work here is in all cases interesting, and of a high class. A peculiar feature of these volumes which strikes us is the amount of space devoted to the "Biblioteca matematica." In Vol. II., 236 pages are given up to the usual matter of a Society's Proceedings, and 83 pages to the titles of papers, &c., presented to the Society by individuals, or contained in the journals for which the *Circolo* exchanges its Proceedings. This is a useful piece of work, as the circle of exchanges is a large one. We wish the junior member every success.

#### OUR BOOK SHELF.

*Names and Synonyms of British Plants.* By G. Egerton-Warburton, B.A. Pp. 160. (London: G. Bell and Son, 1889.)

THIS little book is a synonymic catalogue of the British flowering plants and vascular Cryptogamia, in which are given the names under which the species stand in the last edition of the four standard hand-books, Sowerby's "English Botany," Hooker's "Student's Flora," Bentham's "Flora," Babington's "Manual," and in the London Catalogue. In a considerable number of cases the five differ more or less in the names which they adopt. This arises partly from the five authors taking a different view of specific limits. About two hundred of what Sir J. D. Hooker and Dr. Boswell call sub-species are usually regarded as species by Babington and as varieties by Bentham. The whole series of genera has lately been revised and redescribed by Mr. Bentham and Sir J. D. Hooker, and many which have been proposed by other authors are now placed as sub-genera or sunk altogether. In the preparation of the great Darwin catalogue of plants, under the editorship of Mr. B. Daydon Jackson, the priority of names has been more systematically investigated than has ever been previously attempted, and this has led to a great many changes. These are embodied in the last edition of the widely-used London Catalogue; but as the new or revised names stand there without any explanation, those who wish to use the list are often greatly puzzled, and it was a good idea of Mr. Warburton to prepare the present synonymic catalogue. It appears to have been drawn up very carefully, and gives a reference to the page or number indicating where in each of the five books every species will be found, and in an appendix there is a list of synonyms used by older British or Continental authorities. There is also a full list of the original authorities for the specific names, with the titles and dates of the books and papers in which the plants were originally described. The author omits to enumerate in his list two very useful books, the "Conspectus" of Nyman, and "Salictum Woburnense" of Forbes. He has failed, and no wonder, to run down some of the London Catalogue names of Rubi (e.g. *echinatus* and *longithyriger*), that refer to long-known plants, fully described in Babington's "Manual and Synopsis."

J. G. B.

*Geology in Systematic Notes and Tables for the Use of Teachers and of Taught.* By W. F. Gwinnell, F.G.S., F.R.Met.Soc., &c. (London: Allman and Son, 1889.)

WHILE we cannot but regard the chief educational value of summary statements of the bare facts of a science, like those contained in the work before us, as consisting