

The sketches, diagrams and maps are taken from work actually done, thereby establishing confidence in the processes described. In this connection it might be suggested that a word of caution should be uttered regarding the tendency to give the interval of contours that have been *sketched*. Beyond this one point, a careful reading has not disclosed anything but meritorious features in all that pertains to the technical side of the book.

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*Neudrucke von Schriften und Karten über Meteorologie und Erdmagnetismus herausgegeben von* PROFESSOR DR. G. HELLMANN. No. 13, *Meteorologische Beobachtungen vom XIV. bis XVII. Jahrhundert.* Berlin, A. Asher & Co. 1901. 4vo. Pp. 70 introduction and notes + pp. 130, fac-similes. Price, 18 Marks.

This is the latest of these reprints that have been reviewed from time to time in *SCIENCE*, and its object is to elucidate the beginning of meteorological observations and to eradicate the impression, which is common even among specialists, that with very few exceptions there were no continuous observations before the end of the 17th century. It is here shown that already at the close of the 15th century many series of observations existed, including some simultaneous ones, and it seems probable that regular observations of the weather were made even in very ancient times. The present volume deals with two kinds of records, meteorological observations on land—those without instruments from 1337 to 1645, and those with instruments from 1649 to 1700—and observations made at sea between 1492 and 1700.

The earliest journal of the weather extant is that kept by William Merle at Driby, in Lincolnshire, England, between the years 1337 and 1344. The Latin MS. was reproduced in fac-simile, with a translation, about ten years ago by the late Mr. Symons, but, as the edition was limited and hardly went outside of England, Dr. Hellmann has thought it worth while to reprint a portion. The next oldest record (1439) is also English, and then come German, Austrian, Italian, Swiss, Belgian, Spanish and Danish observations. It is certainly not known generally that observations in Brazil preceded

those in this country, and that the first weather observations in North America were by a Swede, Johann Campanius, on the Delaware River, near Philadelphia, during 1644 and 1645, a summary of the weather for each month being given. The first observations with instruments were readings of the barometer each day during the years 1649, 1650 and 1651 in Clermont (Auvergne) and at the same time at Paris and at Stockholm. Of these only M. Périer's observations in Clermont have been preserved and they are reproduced. The original log-book of Christopher Columbus's first voyage (1492-93) no longer exists, but an extract relating to the change of weather on this side of the Canary Islands, and an account of a West India cyclone encountered on the return voyage, and which is the first description of such a storm, are quoted. There are nine other extracts from logs of early voyages, making, with the observations on land, 36 rare journals. Even if known to students, hitherto these have been practically inaccessible, but now they are presented as nearly as possible in the original form and enriched with copious notes by the best authority on the subject. These reprints have not been put on sale in America, but one or two copies of the current volume may be had at the publisher's price, viz., \$4.50, from the Blue Hill Observatory, Hyde Park, Mass.

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*Die Pflanzen-Alkaloide.* Von JUL. WILH. BRÜHL, Professor an der Universität Heidelberg; in Gemeinschaft mit Edward Hjelt und Ossian Aschen Professoren an der Universität Helsingfors. Mit Eingedruckten Abbildungen. Braunschweig, F. Vieweg und Sohn. 1900. Mk. 14.00.

The discovery of plant alkaloids belongs to the early part of the nineteenth century, and their subsequent study and investigation rank among the important achievements of modern chemistry. In 1803, Derosne, a French apothecary, obtained impure morphine from opium. In 1805, Sertürner, a German apothecary, isolated the pure alkaloid and, in 1817, recognized its basic character and showed it to be the active principle of opium. Since that time the study of alkaloidal chemistry has been steadily pro-