

and since that time he has organized no fewer than three important expeditions, in the third of which he succeeded in reaching the top of Kilimanjaro. It is this third expedition of which an account is given in the present work. The broad results of the journey were soon made known; but of course it is only from the explorer's full narrative that an adequate idea can be formed of the interest and importance of his achievements. The mountain mass of Kilimanjaro towers up to a height of nearly 20,000 feet, and Dr. Meyer describes well the feelings with which he saw it after his arduous march across the steppes. "It was a picture," he says, "full of contrasts—here the swelling heat of the equator, the naked negro, and the palm-trees of Taveta—yonder, arctic snow and ice, and an atmosphere of god-like repose, where once was the angry turmoil of a fiery volcano." The story of the ascent is told most vividly, and there are few readers who will not sympathize with the delight with which he speaks of the moment when he set foot on the culminating peak. Although the record of his experiences at Kilimanjaro forms the centre of the book, he has much to say about what he saw both on his way to the mountain and on his way back; and in appendices various writers present classifications of his collections, and the conclusions at which they have arrived in working out his astronomical and meteorological data. The book is admirably translated, and its value is greatly increased by illustrations and maps.

Chemistry in Space. From Prof. T. H. van 't Hoff's "Dix Années dans l'Histoire d'une Théorie." Translated and Edited by J. E. Marsh, B.A. (Oxford: Clarendon Press, 1891.)

We have already reviewed the monograph of which this is a translation (*NATURE*, vol. xxxvii. p. 121), and need not therefore, at present, say anything of the subject with which it deals. The translator has done his work carefully, and "the invaluable assistance and advice" of the author have enabled him to make his rendering "a considerable extension of the French edition." Mr. Marsh advises those to whom the question is new to leave the first chapter till the end, as it contains a translation of the earliest memoirs on the subject, and the ideas are incompletely developed, obscure, and sometimes erroneous.

LETTERS TO THE EDITOR.

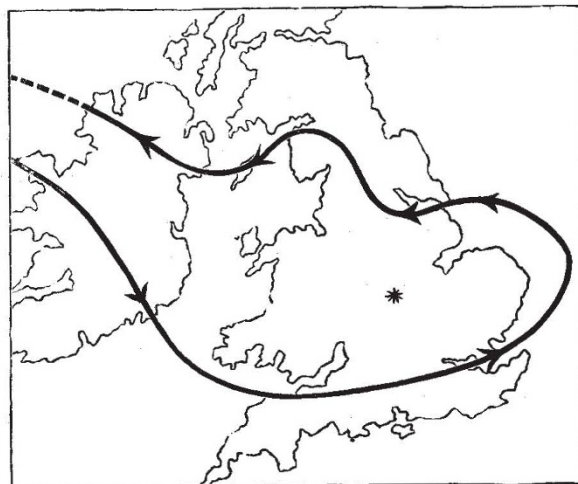
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Erratic Track of a Barometric Depression.

THE singular course of the cyclonic system which has, during the week terminating on May 29, circulated round and across the British Isles, deserves more attention than can be thus early given to it. I wish here, with your permission, first, to describe the path of its centre as correctly as can be done with the data at present in my hands, mentioning at the same time the principal modifications of the isobars and of the weather in the neighbourhood of the centre; secondly, to mention some remarkable facts in relation to the upper currents as observed by myself in its neighbourhood; and finally, to indicate the nature of those questions an examination of which will, I believe, in the instance before me, prove to be of most scientific value.

(1) The accompanying chart shows the course of the centre of depression, so far as we have yet been able to follow its track, the arrow-heads marking the position at 6 p.m. of each day. At 8 a.m. of the 23rd, the centre appears to have lain about 60 miles to the west of Erris Head, with a barometrical pressure of a little below 29.4. By 6 p.m. it had advanced south-eastwards into Connaught with a velocity of 6.5

English miles per hour, and by 8 a.m. of the 24th to a little west of St. Anne's Head. During the above period the depression was elongating itself, the position of its major axis changing from N.W.-S.E. into W.-E. The weather in the meantime was becoming rainy in the English Channel and home counties, while continuing fair in the north. At 6 p.m. of the 24th the eastward elongation of the whole system had become very marked; and at this hour the centre lay over the mouth of the Thames, after a somewhat lengthened thunder-storm over London, Woolwich, &c. The velocity of transit during the twenty-four hours had been 22 miles per hour, and the path of the centre was beginning to curve towards the left. By the morning of the 25th the centre had advanced to N.N.E., and lay about $53^{\circ} 2' N.$ lat., $0^{\circ} 24' W.$ long., with wet and cloudy weather over our eastern and midland districts. By 6 p.m. of that day the centre had begun to move slightly to the westward, having moved during the twenty-four hours with a velocity of 10 miles per hour. By the morning of the 26th the centre was near the mouth of the Humber, rainfall continuing over the north-east and north midland counties; at 6 p.m. of that day the centre lay over north-west Lincoln, having moved only with a velocity of about 3.8 m. per hour. The centre now moved to the neighbourhood of the Solway, with a velocity of about 10 miles per hour, and on the evening of the 27th began to recurve again a little to the left, the system at the same time becoming more circular in form, and the central pressures slightly decreasing. During this day rain and cloud prevailed on the west of the system, while in its rear there were some scattered thunder and hail



showers of the type prevalent in summer in the rear of cyclonic systems travelling to north-east. At 6 p.m. on the following day the central area had passed into Ulster, with a velocity of 5.5 miles per hour. The thunderstorms in the rear were on that day more pronounced. During the following night the centre travelled with increased velocity across Donegal to the Atlantic, and by 6 p.m. of the 29th the exterior isobars of the system had almost left our shores, finer weather setting in over Great Britain generally.

(2) The point marked with an asterisk on the chart marks the position of the writer during the progress of the depression, a position of vantage for the observation of upper currents, the value of which was much diminished by the predominant thickness of low cloud, and by the fact that there was little moonlight. Over the Midlands outlying threads of "cirro-filum" advanced with great velocity from north-north-west at noon of the 23rd, soon after which a great sheet of frozen veil-cloud rapidly overspread the sky, the exterior edge of which soon disappeared over the north-east horizon. A brilliant solar halo was completely eclipsed before 5 p.m. Meanwhile the lower cloud-current backed from south-west to south. At 7.32 p.m. there was a squall of wind from south-east with rain, and a "jump" in the barograph. About noon of the following day, when the centre was about 118 miles to the south-south-west a glimpse of the upper clouds was obtained; they were then moving from south. Further opportunities of observation were obtained in the