

method for some years previously, and had communicated it to several mathematicians, but omitted it from my elementary "Geometry of Conics" (1872), hoping that I might soon have leisure to develop it more fully in a larger work. Shortly before the publication of my article in the *Messenger*, Mr. R. W. Genese rediscovered the circle and its properties. Mr. Day uses this circle in his work on the Ellipse (1868), but has overlooked one of its characteristic properties.

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#### Destruction of Flowers by Birds

"P. B. M.," in NATURE for April 1, refers to the destruction of the crocuses in a garden at Burton-on-Trent, by birds. This may also be observed in the flower-beds in Hyde Park, near Park Lane. It is remarkable, however, that while the yellow flowers are very extensively destroyed, the white ones remain uninjured. The reason for this is not very evident, and I should be glad to see it explained.

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#### OUR ASTRONOMICAL COLUMN

RED STARS, &c.—We lately referred to the incompleteness of the first catalogue of isolated red stars formed in 1866 by Prof. Schjellerup of Copenhagen. In the last part for 1874 of the *Vierteljahrsschrift der Astronomischen Gesellschaft* is a second and much extended catalogue by the same astronomer. The first list, which was published in *Astron. Nach.*, No. 1,591, with additions in No. 1,613, contained 293 stars; in the new catalogue the number is upwards of 400. The notes attached have also been considerably extended. The author remarks that his first list was instrumental in the discovery of a number of variable stars, and that Secchi found in it many stars of his Type III. and the whole of Type IV. Those who are interested in the discovery and observation of variable stars will do well to provide themselves with Schjellerup's new catalogue. The same part of the *Vierteljahrsschrift* (which accidental circumstances have delayed in publication) contains an ephemeris of most of the variable stars for the year 1875; also a notice of Prof. Schönfeld's researches on S-Canceri from observations to April 1872; the period is found to be 9d. 11h. 37m. 45s., and the epoch of minimum is fixed to 1867, August 31, at 14h. 12m. 15s. Paris mean time. This star has long been known to resemble Algol in its law of variation; the diminution of light commences somewhat suddenly,  $8\frac{1}{2}$  hours before minimum, and about 13 hours after minimum the star recovers the brightness at which it continues to shine for the greater part of its period.

THE COMET OF 1812.—Of those comets discovered during the present century which appear to have periods of revolution approximating to that of Halley's Comet, it is probable that the one detected by Pons at Marseilles on the 20th of July, 1812, will be the first to revisit these parts of space, and this visit may be looked for within a few years' time. We are indebted for our knowledge of the elliptical form of this comet's orbit to Encke, who, working when assistant at the Observatory of Seeberg under the guidance of his "great tutor Gauss," discovered early in the year 1813 that no parabola would represent the observations, and that an ellipse with a period of revolution rather exceeding seventy years was very far preferable. His further and definitive investigation of the elements is found in *Zeitschrift für Astronomie*, ii. p. 377. He made use of observations between July 23 and Sept. 27, taken at Paris, Marseilles, Vienna, Milan, Seeberg, Bremen, Berlin, and Prague, 110 in number, and finally arrived at an elliptical orbit, with a period of 70.69 years, the probable uncertainty of this result allowing of it being as short as 66.54 years, or as long as 75.27 years. Encke does not appear to have had the advantage of the original observations taken at Paris, which appear in the folio volume of observations 1810-20, nor yet of the original observations by Flaugergues at Viviers, which

were not printed until the end of the year 1820, when they found their way into Zach's *Correspondance Astronomique*. Mr. W. E. Plummer, of the University Observatory, Oxford, has reduced the Paris and Viviers observations with every care, and, making use of Leverrier's Solar Tables, has deduced an ellipse quite verifying Encke's computations; he has hopes of being able to assign limits to the period of revolution. We are also informed that the return of this comet is engaging attention at the Observatory of Strassburg, and that under Prof. Winnecke's superintendence sweeping ephemerides will be prepared there to facilitate the rediscovery of the comet. It approaches nearer to the orbit of Venus than to that of any other body in the planetary system, but there could have been no material perturbation from this cause during the last appearance. The comet was detected by Bouvard at Paris on August 1, 1812, and it was also independently discovered on July 31 by Wisniewski (the last observer of the great comet of 1811), at Novo Tcherkask, as stated in a letter from Von Fuss to Bode, though he is not credited with this discovery in our cometary catalogues. The other comets which appear to have periods of revolution of similar length are the comet of 1815, usually known as Olbers' Comet, which is the subject of a masterly investigation by Bessel in the Berlin Memoirs, 1812-15; the comet discovered by De Vico at Rome, 1846, February 20, of which the best orbit is by Van Deuse, in his "Inaugural Dissertation," Leyden, 1849; and the comet detected by Brorsen at Altona, 1847, July 20, which has been calculated by D'Arrest and Gould, but may yet admit of further investigation.

#### METEOROLOGY IN ENGLAND

THE address of the President and Report of the Council of the Meteorological Society of England for the present year will be read with a lively interest, awakened and strengthened by a growing conviction that the Society has reached a critical turning point in its history. Hitherto the Society has been regarded as little more than an association of amateur meteorologists,—the national work, falling properly within the province of such a society, of collecting the data of observation for the elucidation of the laws of the weather and climate of England, having been independently carried out by their late energetic, able, and popular secretary, Mr. Glaisher, whose great and in many respects valuable labours in this department are somehow passed over in the documents before us.

The Society, however, has now resolved to undertake the work of collecting meteorological statistics, and in carrying out this resolution has already established ten stations pretty well distributed over different districts of England. It is fitting that on private observers should fall the labour of investigating Climatic Meteorology, leaving the Government to look after the physical side of the science. In making it imperative on all their observers that verified instruments alone be used, consisting of at least a barometer, dry and wet bulb thermometers, maximum and minimum thermometers, and a rain gauge; that the adoption of Stevenson's Thermometer Box be a *sine quâ non*, and that it be not placed within ten feet of any wall; that the rain gauge has its rim placed one foot above the ground; and that the hours of observation be 9 A.M. and 9 P.M.—the Society deserves our hearty commendation.

We must, however, point to a serious omission in the system of observation which has been adopted. No imperative condition is laid down, and no recommendation made, so far as we can see, with reference to the vital question of the height of the thermometers above the ground. If this point be not definitely settled and made an imperative condition of observation, the Society will collect materials on which no scientific inquiry into the climate of England can be based, and on which little, if any, scientific value can be placed. The