

over the country, lose themselves in the "steep Atlantic." No bones have been found of the larger animals, so that the kraken and sea-serpent might sleep their last sleep, and leave not a bone or a vertebra to tell the tale. Not a mast or anchor, nor a block or strand, not a coin or keepsake, has been found to testify of the countless gallant ships and more gallant men who have gone down amid the pitiless waves.

V. Papers on the New Comet, &c.

1. THE COMET.

J. R. Hind, Esq., an eminent English astronomer, has written to the *Times* in regard to the comet as follows :

Having obtained observations of the splendid comet now visible on three successive evenings, I have been enabled to calculate the elements of its orbit, which I now transmit, together with a few particulars founded upon them.

The comet arrived at its least distance from the sun about one o'clock in the morning of June 10th, in heliocentric longitude 244 degrees 35 minutes, being then separated from him by 76,000,000 miles. It crossed the plain of the earth's orbit from the south to the north side, in longitude 279 degrees 1 minute on June 28, in a path inclined 85 degrees 58 minutes to the ecliptic. The true orbital motion is direct.

Its distance from the earth on Sunday evening, June 30, was rather over 13,000,000 miles, and a little less than 15,000,000 at eleven o'clock on the evening of July 2. It is therefore receding slowly from us, as well as from the sun. The apparent length of the tail on the above evening was 70 degrees, corresponding to a true length of 16,000,000 miles. The nucleus, which is extremely brilliant, was about 400 miles in diameter.

The comet has a very striking and interesting appearance in the telescope ; but it would be difficult to describe it without the assistance of a diagram. It is certainly not the comet of Charles V. (1556), the return of which has been anticipated about this epoch.

I subjoin a few places, calculated from my elements, which will sufficiently define the track in the heavens from the 3rd to the 10th of July :

FOR MEAN MIDNIGHT AT GREENWICH.

	Right ascension. h. m.	North declination. deg. min.	Dist. from the earth in miles.
July 3	9 47.8	66 3	16,500,000
" 4	10 57.7	66 54	18,400,000
" 5	11 53.7	66 8	20,500,000
" 6	12 34.8	64 40	22,700,000
" 7	13 4.7	63 0	25,100,000
" 8	13 26.5	71 22	27,500,000
" 9	13 43.0	50 51	30,000,000
" 10	13 55.6	58 28	32,500,000

THE FRENCH ACADEMY OF SCIENCE ON THE NEW COMET.

This new visitor, which has taken even astronomers by surprise, shone with great brilliancy last night, exciting universal admiration. The reason why it was not observed before is, that, up to the 30th ult., its distance from the pole was such as to make it set together with the sun ; whereas, from that date, it has approached so near the pole that it cannot set at all. Its size does not at present exceed that of 1858, and it differs from it materially in this respect, that its tail is straight instead of being curved. The observations taken by MM. Lépassier and Lœvy, on the 30th ult., were as follows :

Mean Time, Paris.	Right Ascension.	Distance from Pole.
h. m.	h. m. s.	
9 5	6 37 40	44 11 1
11 27	6 40 37	43 20 9
11 44	6 41 1	43 13 5

Yesterday its distance from the pole was not more than 35 degrees, it having thus performed nearly eight degrees northward in the course of twenty four hours. It is composed of a very brilliant nucleus, a luminous aureola of considerable breadth, a tuft on the side turned towards the sun, and a large tail in the opposite direction. According to M. Clacornac the tuft is eccentric, and composed of six curved and radiant branches, each not more than a minute in length ; they are all curved in the same sense.

As might have been expected, the comet gave rise to an animated discussion at yesterday's sitting at the Academy of Sciences. M. Elie de Beaumont read a letter from M. Goldschmidt, the amateur astronomer, in which he stated that the comet was 35 degrees in length, and between three and four in breadth, so that it measures 17,000,000 of leagues. M. Babinet remarked that Mr. Hind's ephemerides of Charles the Fifth's comet, give it the precise position

of the present one. M. Bomine had predicted its return in 1858 ; and Mr. Hind admitted that it might return between 1856 and 1860. Considering the imperfect manner in which observations were taken three centuries ago, it would surprise no one that a difference of six months should exist between the time of its appearance and the time calculated. If this were so, the present comet was the same that had been observed in 1556, and caused the abdication of Charles V. It had previously appeared, according to Pingre, in 1264, when it was supposed to announce the death of Pope Urban IV. ; and its appearance had been recorded even earlier,—in July, 975, by the Chinese. M. Leverrier was not of M. Babinet's opinion. Mr. Hind's table showed different positions which Charles the Fifth's comet might occupy in the event of its return, and the question was so undetermined that it was no wonder to find a position in the table answering to that of the present comet. And, indeed, there was one corresponding to the position of the 30th June, but the motion of the present comet in the course of 24 hours was so different from that given in the table, that the identity of the two comets could no longer be admitted.—*Galvani's Messenger*.

PROFESSOR MITCHELL ON THE NEW COMET.

Professor O. M. Mitchel has made an observation of the new comet at the Dudley Observatory, and offers the following explanation of its sudden appearance :—"If it be permitted to hazard a conjecture, we may account for the sudden splendor of this grand object by supposing that during its approach to the sun it has been above the horizon only during daylight, and hence escaped detection ; that on passing its perihelion, or nearest point from the sun, the direction of the orbit was such as to sweep it rapidly from that luminary and to bring it in a very few days to the region of the heavens now occupied. This conjecture is based on the general fact that comets do not commonly throw off such immense trains of light until after their perihelion passage. Until a sufficient number of observations have been obtained to render it possible to compute the elements of its orbit, it will be impossible to decide whether this is its first appearance or whether it be the return of a comet that may have startled the world ages ago."

LIEUT. ASHE, OF QUEBEC, ON THE NEW COMET.

Lieutenant Ashe of the Quebec Observatory writes as follows in regard to the recent comet :

The comet that has just emerged from the sun's rays, and burst upon our view, I take to be no other than the celebrated comet of 1264—that comet which was recorded in terms of wonder and astonishment by the historians of that age.

It was at the height of its splendor in the month of August ; the tail was upwards of 100 degrees in length ; both Chinese and European writers testify to its enormous length. It continued visible until the beginning of October. Historians generally agree in dating its last appearance on the 2nd of October, on the night of the death of Pope Urban IV., of which event it seems to have been the precursor.

In 1556 at the latter end of February, or early in March, a comet became visible in the constellation of Virago. It was closely watched at Vienna by Paul Fabricus, astronomer at the Court of the Emperor Charles V., but it was not really so conspicuous as that of 1264, but still described as a "great brilliant star."

Our countryman, Dr. Halley, the second Astronomer Royal, calculated the elements of the comet of 1556, but owing to the imperfect nature of three observations, his elements were not considered so exact as of other comets he had calculated, but sufficiently so to identify it with the comet of 1264.

The distinguished mathematician, "Hind," has calculated the orbit of this comet, and after making some allowance for several disturbing forces, came to the conclusion that it might be expected between August, 1858 and August, 1860.

Now, although it is nearly a year behind time, I am of opinion from its position that it is the expected comet.

2. THE WEATHER AND THE COMET.

Almost ever since the appearance of that unexpected ranger of the heavens—the comet—the weather has been extraordinarily varied and changing. We had a regular tornado, which did considerable damage, on Tuesday about noon ; and last night the wind blew a perfect hurricane, while the rain fell in torrents. While we write (11 o'clock, A.M.) it is still raining ; but the clouds appear as if they were brightening, and the sun striving to force itself into sight.—*Montreal Pilot*.