papers, but the people were very full of it in Graaff Reinet. It is now about a month since we first noticed it."

M. CAREY-HOBSON

Pons' Comet and Meteors.—The Quadrantids

I SEE in Greg's list of possible cometary radiant points there is one given for Pons' Comet, the date December 6, radiant point R.A. 200°, N.D. 68°·5. The radius-vector of the comet at its descending node is 0·77, so that the likelihood of a shower of meteors seems very small; but it might be worth while to look out for one on the 6th of next month.

Pons' comet was just visible to my naked eye on the evening of the 19th—visible only by rare glimpses. On the 20th it was easily visible with the naked eye, almost steadily, so that it would be about of the 7th magnitude. Its tail is still very faint with a 4¼-inch refractor, and grows very slowly.

I would call the attention of observers of meteors to the favourable circumstances attending the next shower of quadrantids, as regards absence of moonlight and the convenient time at which the maximum will be reached. On the other hand, the radiant point will be low at that time, thus diminishing the number of meteors visible. I have examined my observations of this shower in 1859, and from 1872 to 1883, and find that the maximum takes place when the sun's longitude is nearly 282°. This will correspond at the next apparition to the middle of the night of January 2. The duration of the activity of this shower is short compared with that of some other periodical showers, and I am making a more minute calculation of it, the result of which I purpose sending to the *Astronomical Register*.

Sunderland, November 27 THOS. WM. BACKHOUSE

Meteor

A REMARKABLE meteor appeared in the eastern sky this evening at about 8.30. Coming out of *Cetus* it travelled slowly towards *Orion*, being visible for five or six seconds. The head was rounded in front, about one-eighth of a degree wide, tapering backwards to the length of half a degree, distinctly bluish in colour, and leaving an indistinct trail of about twice its own length behind it. It was so bright and seemed so near that I took it at first for a firework of some kind. But it was undoubtedly a meteor. It died out silently, and without breaking up, at about 15° from the horizon. F. T. MOTT

Birstal Hill, Leicester, November 20

Some Habits of Bees and Humble-bees

HAVE any of your readers noticed, or can any account for, a curious practice which I observed on several fine days this autumn among the humble-bees that frequented a bed of blue salvia, viz. that in piercing the calyx and upper end of the tube within it, they would invariably attack it on its *right-hand side, i.e.* the right side of the flower as it looks straight out from the stem. After having several times counted fifty or sixty such attacks in succession, I gathered a number of flowers at random and, carrying them indoors, requested my brother to lay each on its side, so as to show the hole uppermost; twenty-five out of twenty-six were without hesitation placed with the *right* side exposed, the remaining one was considered doubtful. The apparent rule of proceeding was this:—The bee alights on the under midrib or keel of the calyx, with her head towards the stem, then turning her head and fore feet slightly round to the right, inserts her proboscis just clear of the rib, the process being visible only to a person standing on that side of the flower. Whether the flower was on the north or south side of the bed, in shade or sunshine, made no difference, nor did it matter in which direction the bee was making her circuit round the bed. Where two flowers hung so close together as to touch, after piercing the right-hand one on its outer side, and satisfying herself that she could not conveniently push her way in between the two, she would fly off to another, losing the honey rather than attempt to reach it through the left side of the flower. This occurred repeatedly.

Is there anything in the structure of the calyx or in the position of the nectar that can explain this? Or is there a right and left-handedness in some families of humble-bees? Or can it be that a habit, perhaps accidentally established, may be rigidly pursued for a time, at the risk of occasional small losses, to be afterwards abandoned when the impulse is worn out, or when the results are found to be not worth the trouble of forming the habit? That small gains are sometimes neglected in obedience to a habit of quite recent formation, I had an instance a few summers ago, when watching a number of hive bees on a plant of common fuchsia. The greater part of its flowers had been pierced in the upper tube (probably by humble-bees), and my attention was drawn by the regularity and exactness with which the bees were flying straight to the tube, contrary to their usual practice of entering from below. But the flowers were not *all* pierced; and this was the curious part: when a bee had run round the tube and ascertained that there was no hole, she would give it up at once and fly to another, as though the pressure of the new habit would not permit any occasional recurrence to the good old-fashioned plan of entrance from below. Can blind obedience to an *order* given out by a superior have any place in apiary economy?

In this instance it was clear that the habit was fully formed, as regarded that particular plant: I tried to witness its commencement on another, and accordingly pierced as many flowers as I could reach on a fuchsia growing at some distance from the first. A few bees discovered my holes and made use of them, after which they showed considerable hesitation and confusion in their mode of attack, losing much time in hovering up and down as though thrown out of their usual routine; while on unpierced neighbouring plants the customary precision of aim at the lower opening of the corolla prevailed without interruption.

Reverting to the humble-bees on the blue salvias. That their piercing the flower *at all* is an occasional and not universal practice I am inclined to believe, from the totally different behaviour of a set *of apparently the same species* (though of this I cannot be certain) on the same plants during the early part of last autumn. Alighting on the lower lobe of the corolla and advancing inwards, the bee's weight forced open the throat of the flower, into which she then easily inserted her head. This plan was pursued with as much regularity as the opposite one was this autumn. On the same days it was amusing to observe the many fruitless attempts of hive bees to effect an entrance in the same manner. Their bodies being too light to weigh down the floor of the corolla, they would try in vain to force their heads in and always had to fly away disappointed, except when one more fortunate than the rest discovered a flower that had dropped from its calyx, when she would eagerly insert her proboscis into the open end of the tube.

Seeing their great anxiety to obtain salvia honey, I eventually expected to find them taking advantage, this year, of the holes ready made for them by the humble-bees, but strange to say they appeared to have quite deserted the plants, though swarming on a neighbouring bed of yellow Tagetes, an occasional wanderer only passing amongst the blue flowers, and without alighting.

ISABELLA HERSCHEL

Collingwood, Hawkhurst, November 21

Rudolphi's Rorqual

IN a communication made to the Zoological Society on the 20th inst., when describing a specimen of Rudolphi's Rorqual (*Balænoptera borealis*), lately captured in the River Crouch, Essex, I said that this was the first well authenticated example of this species taken in British waters. My friend, Mr. J. E. Harting, has kindly called my attention to a paper which had for the time escaped my memory, published by Prof. Turner in the *Journal of Anatomy and Physiology* for April, 1882, in which a specimen is described which was captured near Bo'ness in the Firth of Forth in September, 1872, and of which the skeleton is now preserved in the Anatomical Museum of the University of Edinburgh. W. H. FLOWER

November 22

Reflection of Light

AS showing how far under favourable conditions the reflection of light from a cloudy sky is visible, I may perhaps be allowed to mention that last night at nine o'clock the reflection of the London lights was remarkably strong. The sky was uniformly covered by a dense canopy of moderately high cloud, and the air very moist (humidity 95). Under such circumstances I have frequently seen at the same time the reflection of the London Brighton, Eastbourne, Hastings, and Tunbridge Wells lights, but last night this reflection in the case of London was peculiarly strong. In former years the light was of a reddish yellow, as is still the case with the lights of the other places named. But