

less resistance. New lines might indeed be opened out by fragments of metal, such as nails, &c., scattered by the explosions.

In the case mentioned above, it was difficult, without some such theory, to account for the breaks in the courses followed by the electricity.

E. H. PRINGLE

Bath, October 1

Gyno-Dioecious Plants

DURING the past summer I have found the following species in a gyno-dioecious condition, namely, *Ranunculus acris*, *R. repens*, *R. bulbosus*, and *Stachys germanica*, all of which have the corolla considerably reduced in size, and the stamens in *R. acris* and *S. germanica* either absent or reduced to scale-like bodies devoid of pollen. In *R. repens* and *R. bulbosus* the stamens are not so much reduced, but so far as I can judge they produced little or no pollen. The female form in *R. acris* is very common in Lancashire, but I failed to find any on the Lincolnshire coast although I searched carefully for it. In *R. repens* the female form is very rare, having seen only about thirty plants in all. I have also found the *Geum rivale* to be andro-monoecious. So far as I can ascertain these plants have not been noticed in the state described above.

Ashton-under-Lyne

THOMAS WHITELEGGE

Wasps Under Chloroform

A FEW days ago a friend told me that she had often placed a bee under chloroform, and that the victims when they found they must die invariably brought their stings to their mouths and sucked the little drop of poison into their mouths. She offered to show me the experiment and endeavoured to catch a bee, but failing to do so she caught a wasp, an insect upon which she had not previously experimented in this way, and we both eagerly watched to see if the wasp would behave as the bees had done under the influence of the narcotic.

The wasp being put under an inverted tumbler in company with a piece of paper saturated with chloroform, in a very few seconds the insect fell on its back and almost immediately afterwards curled up the tail with the sting protruded and a drop of clear fluid on the end of the sting. The sting was brought to the mouth and the drop of fluid disappeared. The wasp then became motionless. After a few seconds the tumbler was removed and the air allowed to play freely on the insect, but no sign of life appeared, except once a slight twitch of the wing. To test whether the insect was really dead my friend placed it in a butterfly cage and left it out of doors all night. Next morning the wasp had disappeared; having perhaps crawled out by a little chink in the cage door.

Can you tell me whether so curious an action of these insects when subjected to chloroform is well known? Does it fulfil any good purpose? Is the poison a narcotic itself and taken by the insect to dull its pains when death seems inevitable? The revival of the wasp appears to show that neither the chloroform nor the poison of its own sting is deadly to the insect.

W. M.

Cleveland, September 21

"Mercator" the Geographer

IN Prof. Huxley's "Physiography" it is stated that the real name of "Mercator," of "projection" fame, was Gerard Kauffmann. In a recent number, however, of the popular German journal, the *Gartenlaube*, there is a woodcut of Mercator, taken from an old sketch, under which is the legend—*Gerard Kremer genannt Mercator*. Now, as the word Kremer, or Krämer, means a small retail shopkeeper, the Latin pseudonym is equally applicable, although there is an appreciable difference, meaning excluded, between the two German surnames.

J. C. G.

Our Natural History Collections

IN your recent articles on "Our Natural History Collections," in which you criticised the Act of Parliament just passed authorising the removal of the natural history collections in the British Museum, I was surprised not to find any mention of the third clause, which inaugurates a new and enlightened policy in the disposal of duplicates. The clause was inserted at the instigation of Mr. A. J. Mundella, M.P., and

Mr. J. Chamberlain, M.P., and is as follows:—"The trustees of the British Museum may also give away any duplicate works, objects, or specimens not required for the purposes of the museum, provided always that the powers hereby conferred shall not extend to any duplicate works in the royal library of King George IV., or in the Crackerode, Grenville, or Banksean libraries, or to any objects presented to the museum for use or preservation therein."

This important departure from the previous holdfast policy of the British Museum will be hailed with delight by all provincial students of natural history, as will also the paragraph in Prof. Sir C. Wyville Thomson's report to the British Association, referring to the disposal of the *Challenger* collections (*vide* NATURE, vol. xviii, p. 534).

Public museums are springing up all over the country, and any one acquainted with them knows well the difficulty of forming a natural history collection properly suited to educational requirements. If the power now conferred on the trustees of the British Museum is wisely and liberally used, I think as much material will be found stored away as will furnish provincial museums with the specimens required to make them educationally valuable.

E. H.

Sheffield, September 26

OUR ASTRONOMICAL COLUMN

BIELA'S COMET.—The great swarm of meteors through which the earth passed on the evening of November 27, 1872, and which were found to be moving in the orbit of Biela's comet, must have been descending to a perihelion passage one month later, or about December 27.6 G.M.T. The comet not having been observed as such since the autumn of 1852, when both parts into which it was separated in 1846 were recovered, we may take this date as a new point of departure, assuming for the present that in following the great assemblage of meteoric bodies seen in November, 1872, we are following what now remains of the comet.

Hubbard's elements of the S. F. nucleus of 1852, with Miché's perturbations by Jupiter and Saturn, give the following elements for 1866, the latest year to which perturbations have been calculated:—

Perihelion Passage, 1866, January 27.6968 G.M.T.

Longitude of perihelion	109 39 48
" ascending node	245 43 42
Inclination	12 22 3
Angle of eccentricity	48 46 19.4
Log. semi-axis major	0.5505333

We know that the comet did not arrive at perihelion at or near the above date in 1866, and hence that disturbance of its motion from an undiscovered cause must have taken place some time in the interval 1852-66. The period of revolution belonging to this orbit is 2445.67 days. There is no reason to suppose that the swarm of meteors is revolving in a shorter period, and we may consequently assume that it will not be again in perihelion before the date, which this period will give, if reckoned from December 27.6, 1872, or September 8, 1879; how much later the perihelion passage may fall it is impossible to foresee. We refer to this point on the present occasion with the view to suggest that a close watch for meteors of the Biela-comet stream should be instituted when the earth again passes the descending node of the comet's orbit on November 27 next. With perihelion passage on September 8, 1879, the main cometary body would be in a true anomaly of $-135^{\circ} 15'$. On December 6, 1798, when Brandes witnessed a great meteoric display, as the earth traversed the comet's orbit, it was in a true anomaly of about -103° , but in 1838, when under similar conditions meteors were observed in large numbers in Europe, Asia, and America, December 5-8, the comet's true anomaly was about -128° .

As regards the recovery of the comet in 1879, though perhaps not hopeless, a very strict examination of the