

zon (though she is not visually larger in one place than another), therefore we must infer that she is approaching us when she nears the horizon, thus showing us her size looming larger as she gets nearer. The arguments cut each other's throats, and can be of no use whatever.

Ilford, E., May 1

C. M. INGLEBY

#### Cross Fertilisation

THE following peculiarities in the flowers of *Helleborus niger* bear upon the same subject as Mr. Hartog's observations on hazel catkins (NATURE, No. 23), and may be worth noticing.

The tubular nectaries by which the petals are replaced are more or less completely hidden by the stamens. The sepals remain for some time half open, and I found that in every case, while the flowers were in this state, pollen readily adhered to the stigmas; and on account of the curved shape of the latter, reaching almost to the half-closed sepals, an insect visiting the nectaries must generally touch them. In such flowers, though the nectaries were full, the anthers had not burst, while in those more fully open, pollen did not so readily adhere to the stigmas, so that in most cases the flowers would be fertilised by pollen from older ones, and probably from distinct individuals. In old and widely-opened flowers, whose anthers had burst, an insect could hardly reach the nectar without being dusted with pollen, while it would probably not touch the stigmas. I may as well mention that I saw a bee visiting these flowers in February last, and in the same month I found a spider in a half-opened flower of *H. fœtidus*.

Mr. Darwin has noticed a case (*Spiranthes autumnalis*, "Fertilisation of Orchids," ch. iii.) in which older flowers are generally fertilised by pollen from younger ones.

CHRISTOPHER J. HAYDEN

Trinity College, Cambridge, April 25

#### Chamounix

MANY of the readers of NATURE are no doubt preparing for a visit to Mont Blanc; permit me to say to them that the season for making the ascent will, in all probability, be earlier this year than usual, on account of the remarkably fine and hot weather; it is two months within a day or so since any rain fell; but to-day we have had a refreshing shower of three hours' duration, which will prove of infinite service to the little farms in the valleys of Chamounix, St. Gervais, and Sallanches.

Early yesterday morning, accompanied by a guide and my daughter, a nimble girl of 15, I crossed the Glacier de Boissons, at an elevation of 3,000 feet; there was comparatively little snow, the blue ice being repeatedly visible. We made the best of our way up the moraine, and descended through the forest into the valley of Chamounix, where the heat of the sun was oppressive; beetles on the earth and butterflies in the air were numerous.

The cherry, plum, and pear trees, so plentiful near Sallanches, are all in full blossom and doing well—the bees know it.

The ice grotto at the foot of the Glacier de Bois is already diminishing, and a serious-looking crevasse appears at the portal; the *Arve*, which rises from this glacier, is already considerably swollen. Perhaps the most gratifying news to send is the intelligence that the new road from Sallanches to Chamounix is all but finished—a mighty work, worthy of the new ruler of Haute Savoy.

S. P.

April 23

#### PHYSICAL SCIENCE AT CAMBRIDGE

A MEETING of members of the Senate took place here on Saturday last, which is likely to have a considerable influence on the fortunes of Physical Science in this University. About a year ago a Syndicate, or committee of members of the Senate, was appointed to consider in what manner the funds could best be raised requisite for maintaining a Professor of Physical Science, and for providing suitable buildings and apparatus, also for certain other University objects. As the revenues of the University are known to be not more than adequate to maintain the educational machinery already in operation, the appointment of the Syndicate was a tacit adoption of the principle that *College* endowments ought to be made available in order to extend the area covered by professional instruction the advantages of which are open to the members of every college. The Syndicate's

report, issued at the end of last term, formed the subject of discussion at the meeting called on Saturday.

The Syndicate informs the Senate that after estimating the sum which would be required to carry out the objects which it was desired to attain, they "decided upon addressing a communication to the several colleges of the University to inquire whether they would be willing, under proper safeguards for the due appropriation of any moneys which might be entrusted to the University, to make contributions from their corporate funds for these objects." The answers to this communication received from the governing bodies of the Colleges are considered as private by the Syndicate, and are not printed in this report. In the opinion of the Syndicate, however, "they indicated such a want of concurrence in any proposal to raise contributions from the corporate funds of Colleges by any kind of direct taxation, that the Syndicate felt obliged to abandon the notion of obtaining the necessary funds from this source." Accordingly they propose another plan for providing the needful funds, or at any rate a portion of them, with which I need not trouble your readers, as it involves technical details, and moreover is in itself so unjust and objectionable that it has not the slightest chance of being adopted.

The one point of real importance on which the discussion on Saturday turned, was whether the Senate ought to acquiesce in the conclusion of the Syndicate, and abandon the notion of obtaining contributions from the corporate funds of the Colleges for University objects. I am glad to be able to inform you that the opinion of the meeting was very decidedly expressed in favour, not of abandoning, but of carrying out this notion. The Master of St. John's said it was a settled matter that the funds requisite for the efficient teaching of Physical Science must be provided by the Colleges, and that the only question was whether they could arrange among themselves some plan for contributing in proportion to their means. Failing this, he held it to be quite certain, that they would be compelled to part with some portion of their corporate revenues for these objects by parliamentary coercion. The Master of Trinity insisted, in the strongest terms, on the urgent necessity of immediate action, if the University was to retain its position in the van of educated opinion. The Vice-Master of Trinity College disputed the statement made by the Syndicate, that the replies of the Colleges were on the whole opposed to making contributions out of their corporate revenues. He said that his own College had at once announced its willingness to contribute, and expressed his belief that a majority of Colleges were in favour of a College contribution, though they were not, as yet, agreed as to the proper principle of assessment. On this point, as the Syndicate has thought fit to withhold from the Senate the answers returned by the governing bodies of the several Colleges to the communication addressed to them, we have no means of forming an independent judgment. Every speaker seemed thoroughly to recognise the urgent and paramount claims of Physical Science to be placed on an effective footing in the University, except indeed the registrars, who urged the superior claims of ecclesiastical history and pastoral theology, and Mr. Perowne, of Corpus, who deprecated exaggerated statements in favour of Physical Science as a disparagement of classics and mathematics, and spoke with effusion of the gratitude which would be earned by "some rich College," which should make a present to the University of the funds required, and so save the other Colleges (not so painfully poor after all) the pang of putting their hands into their own pockets—a sentiment which drew from Mr. Blore, of Trinity, an amusing sally as to the want of similar benefactors of the common race in the matter of the *Income-tax*.

It seems to be the general impression at Cambridge that the Council will have to appoint a fresh Syndicate to