pepsine?"* as follows :—"Kölliker erwähnt zuerst das Vorkommen von zweierlei Zellen in den Pepsindrüsen des Hundes." On referring to Kölliker I find, "Bei Thieren sind, wie Todd-Bowman zuerst beim Hunde, *ich* und Donders bei vielen andern Säugern gezeigt haben, die Magendrüsen überall doppelter Art," &c. In Todd and Bowman, published some years before this, the two kinds of glands are figured (the drawings being better than those of Kölliker), the difference between them in anatomical characters, the difference of the two parts of the gland, and the difference in the function discharged by the two kinds of cells of each of the two kinds of glands, pointed out. Friedinger does not even mention the names of the English observers. L. S. B.

New Zealand Forest-Trees

In your paper of Nov. 9 I observed a letter about New Zealand Forest-Trees, signed by Mr. John R. Jackson of Kew.

Mr. Jackson refers to several of the magnificent varieties of forest trees belonging to the natural order of Coniferæ, which are widely distributed in New Zealand; omitting, however, some of the most common and most valuable, especially the Kahikatea or "white pine" of the settlers. This tree affords timber of a white colour, much like yellow deal in appearance and quality, which is admirably adapted for use as weather-board, flooring-boards, and scantling for all in-door work as well as for ordinary furniture. It is most extensively used for all those purposes. The "Totara" is particularly used for making shingles, which form a good substitute for slates as a covering for roofs.

The Rimu is used for such work as requires a more durable wood, and for the making of superior furniture, the wood being much harder and more difficult to work, than that of the Kahikatea, while its beautiful colour renders it very suitable for ordinary cabinet work.

Varieties of the acacia, called Kowai by the natives, supply timber which is specially adapted for the making of pales and fencing, and which is as durable as English oak; and there are many varieties of trees suitable for all purposes.

It is, however, in reference to that which is mentioned as the "Makia" that I think it worth while to trouble you, as I believe that I may be able to suggest what the word so referred to really is. I know of no tree or shrub so called, but Manuka, pronounced Manooka, is the name of the tree from which the natives in former times used to make all sorts of implements, especially the spears, which formed at once the weapons and the sceptres of the chiefs. That hardly deserves to be called a forest-tree, as it rarely attains any great size.

It belongs, I believe, to the family of "Diosma," and its wood is used to make axe-handles, ramrods for guns, &c. The leaves have a pleasant aromatic odour, and an infusion of them forms a passable substitute for tea, to which we were frequently glad to resort in the early times of New Zealand settlements. The fresh twigs form an elastic couch, which constituted our favourite bed on exploring parties and in temporary dwellings.

Braintree, Nov. 20 WILLIAM DAVISON

The Food of Plants

YOUR reviewer takes exception to my empirical description of carbonic acid in "Notes on the Food of Plants," p. 23. I readily admit—and I should have thought it was unnecessary to do so—that to describe carbonic acid as "carbon dioxide combined with water" is not *strictly* correct; but I think it is much more likely that I should have led my unscientific readers astray, had I explained, in more accurate language, the supposed composition of this acid. CUTHBERT C. GRUNDY

The Germ Theory of Disease

IN NATURE, October 5, p. 450, Prof. Bastian, *versus* the Germ Theory, says:—"Such germs when present would be sure to go on increasing until they brought about the death of their host." Now, is it not well known that the larvæ of *Trichina spiralis* become encysted in the muscles of the animal infested by them, and are then perfectly harmless to their host, the fever, sometimes with fatal results, being produced by the migration of the parasites from the alimentary canal through the tissues to their favourite muscles.

Is it necessary, for the support of the germ theory, that the organism must be found in the *blood?*

GEORGE DAWSON

Balbriggan, Ireland, Nov. 20

The Origin of Species

SOME months since a letter appeared in NATURE, asking the author of the article on "The Origin of Species," published in the *North British Review*, 1867, to explain the following passage which occurs in the article :—"A million creatures are born; ten thousand survive to produce offspring. One of the million has twice as good a chance as any other of surviving, but the chances are *fifty to one* against the gifted individuals being one of the *hundred* survivors." There is an error in this passage; the word "hundred" should be altered to "ten thousand." I presume that with this correction the writer of the letter will have no difficulty in following the argument. I am much obliged to him for drawing my attention to the slip.

THE AUTHOR OF THE ARTICLE

NEW VOLCANO IN THE PHILIPPINES

THE island of Camiguin is situated to the north of Mindanao, at some six or eight miles from the coast, is only a few miles in circumference, and consists principally of high land. On the slopes and in the valleys is grown a large quantity of one of the most important staples of the Archipelago, the well-known Manila Hemp—the fibre of the *Musa textilis*.

On the first of May, 1871, after a series of violent earthquakes, a volcano burst out in a valley near the sea. The earth is said to have swelled, cracked, and then opened, ejecting large quantities of stones, sand, and ashes, but no liquid lava. The mischief done by the eruption was limited to a small area of two or three miles in extent, and the loss of life did not exceed eighty or ninety persons, who might have escaped if they had been less anxious to save their little property.

As the eruption and volcanic disturbances continued for some time, the alarmed natives abandoned the island in great numbers, and took refuge in the neighbouring islands of Mindanao, Bohol, &c., from which, after some weeks, the eruption having subsided, most of them returned. During the month of June the volcano ejected smoke and scoria, which latter are said to have been slowly pushed up as it were out of the crater, sliding down the sides over an underlying mass of fine grey ashes which were thrown out in the first instance; and a feeble action has continued by the latest accounts (August).

The eruption, instead of bursting from the top or sides of the higher hills, occurred in a valley between two spurs of high land near the sea and in the immediate neighbourhood of one of the principal villages, which the inhabitants abandoned, and do not seem disposed to re-occupy, though the damage done there was trifling.

As is usual here, the stories circulated were of the most exaggerated kind, and it is only by sifting and comparing the accounts of reliable eye-witnesses that I have been able to write an account at all worthy of attention. The observations made by two intelligent persons, who visited the island expressly for the purpose, have furnished the materials for this memorandum. The accounts as to the height of the cone are mere guesses—from 300 to 1,500 feet. H.M. surveying steamer *Nassau*, Captain Chimmo, is said to have visited the island in June, and we may therefore hope for a careful and scientific account of this phenomenon.

The present year has been remarkable for the extent and frequency of earthquakes over the whole of the Archipelago, though, with the exception of the case of Camiguin, they were not followed by any very serious consequences.

Manila, Sept. 25 WM. W. WOOD

* Aus dem lxiv. Bande der Sitzb. der k. Akad. der Wissensch. II. Abth. Oct.-Heft. Jahrg. 1871.