

of artificial instead of natural selection further increases the rapidity of the results.

It must be borne in mind, too, that plants under cultivation are not necessarily grown for successive generations under the same conditions. While the change from the wild state to cultivation is as slight in some cases as it is profound in others, plants under continued cultivation are frequently subject to a succession of changes of environment as to soil, locality, water, manure, &c.; and we should therefore, according to well-known laws, expect to obtain a greatly increased number of variations in them. And these variations, as elsewhere, are coupled with a strong hereditary tendency, thus producing many new varieties.

Lastly, as regards the quotation from Mr. Herbert Spencer's essay, its terms are not at all inimical to natural selection, but apply to it equally well—a remark which, I cannot but feel, also applies to the bulk of Prof. Henslow's work. C. A. B.

A Remarkable Discharge of Lightning.

[THE following letter was sent to the Royal Society, and has been forwarded to us by the Secretary.—ED. NATURE.]

I THINK it may interest you to know that an extraordinary flash of lightning was witnessed from this place, this evening, at 7.38 p.m. It has been raining in torrents nearly all day long; the heavens seem heavy and saturated with rain, but we have had no thunder at all.

Now the undersigned were seated round a table in a room in Fife Street, and only one of us had his eyes turned in the direction of the door, which was open. Suddenly he exclaimed, "Good heavens! just look at that lightning; it's standing still!"

All of us promptly went to the door, whence we witnessed a truly extraordinary sight in the shape of three ribbons of a greenish white lightning, which hung in the sky, motionless, for what must have been fifteen to twenty seconds. It seemed to be a long way off (in a north-westerly direction), as we heard no report of thunder whatever. We put some questions to our Makalaka boy, who said that he had never seen anything like it in all his life.

There could be no mistake about it—it was as distinct as possible; and it must have lasted fifteen seconds at least (I should say twenty myself). I can refer you (should you desire to know more of me) to John Chumley, Esq., Manager of the Standard Bank of South Africa, Limited, 10 Clement's Lane, London, E.C.; Major W. E. Gilbert, Warleigh Lodge, Upper Tulse Hill; or John Heal, Esq., Hertford Lodge, Church End Finchley, London, N.

ROB. GODLONTON.

The undersigned were witnesses of the stroke of forked lightning described in the letter to you, written by Mr. Godlonton, and consider his description accurate in every detail.

CHAS. HONEY (care of F. A. Purdon, Esq., Buluwayo).

OTTO BERTRAM (Standard Bank, Buluwayo).

ROB. GODLONTON (Secretary Matebeleland Printing and Publishing Company, Limited, Buluwayo).

December 2, 1895.

Lecture Experiments on the Nodes of a Bell.

I WAS much interested in the communication from Mr. Osborn on the above subject (see NATURE, January 9). For some years I have been in the habit of showing these nodes in the following way. An ordinary glass bell-jar, eight or ten inches high, with a moderately broad, flat, ground edge, is held with the edge upright, and fine sand scattered all over the flat edge. It is comparatively easy to excite the edge with a bow in such a way that the sand will be driven off everywhere except at the four nodes. I have never been able, however, to obtain more than four nodes in this way.

I have also employed a similar method for showing the nodes of a tuning-fork. If the fork is a moderately large one, it is held horizontally in the hand, and the upper prong is covered with sand. By bowing sharply near the middle and near the root of the prongs, two overtones can usually be obtained, the nodes of which are clearly marked by the sand.

Central School, Manchester. R. L. TAYLOR.

THE STATUS OF LONDON UNIVERSITY.

PROF. S. P. THOMPSON'S lecture to the Society of Arts on the 15th inst. will greatly assist the scheme for the reform of the University of London. The statistics brought forward by him show how hope-

lessly inadequate the equipment of the present University appears when compared with that of almost any other University in the world. It can hardly be believed that while Strassburg receives State aid to the extent of £44 per annum for each student, the University of London actually *pays the State* ten shillings for each student. As the lecturer remarked, a University which has no professors, no museums, no laboratories for research, whose library is practically unused and unusable, and whose sole function is to examine, cannot be called a *great* University, if, indeed, it be rightly entitled to be called a University at all. Limits of space prevent us from reprinting Prof. Thompson's paper, but we give, on the following page, a table prepared by him to exhibit the material and financial aspects of different Universities. This information, and Lord Reay's remarks upon the paper, should do much to controvert dialectic denunciations, and to show the true position of London University among the Universities of the world.

Prof. Thompson considered in succession the points upon which information is given in the different columns of his tabulated statement. He showed that not only is the educational position of the existing University entirely anomalous, but the financial position is still more extraordinary.

In closing the discussion which followed the reading of Prof. Thompson's paper, the Chairman, Lord Reay, remarked that the statistics which it included could not be too much impressed on the public mind, as an indictment against the country for leaving waste resources unparalleled in the civilised world. He was quite convinced that, if there were in any other country the treasures we had in London, both in the way of museums and libraries, and of men who were prepared to teach, it would not take ten, twelve, or twenty years to bring about the result required; but that whoever was the director of public instruction in that country would at once say to the Minister that it was his duty to lay on the table of the Legislature a Bill for the establishment of a teaching university. Among the many extraordinary symptoms which this controversy had brought to the surface, there was one of a very curious nature. Whenever they read an argument against the creation of such a university they found, either outspoken or in a latent form, this accusation: "Such a scheme will hand us over to the tender mercies of the London teachers." Now to the tender mercies of the teachers higher education was left in all the countries of Europe. He was not yet acquainted with the constitution of the University of Tokio, but he should be much surprised if they found there the slightest jealousy of leaving to the teachers the management of that which they must understand better than others. As a member of the Cowper Commission, he had been agreeably surprised to find that amongst all those on whose opinion the Commission set most store, there had been hardly a dissentient voice. In the case of every former report or scheme, those who would have had to put it in operation, and on whose labours its success depended, were in doubt, not about details, but about some leading feature; but this last scheme had been accepted not only by the teachers in London, but by the staffs of those very provincial schools whose students, they were told, in some questions had not been sufficiently considered. The best answer to the difficulty about external students was that given by Prof. Thompson when he said that learning, not teaching or examining, was the primary essential. That meant that, in a teaching university, the individuality of the teacher should be allowed its full scope, and also that each individual student should be allowed to work for the sake of learning, not for the sake of the examination. There might be as much difference between two internal students as between an internal student and an external, and in the examination the individual character of each student would be allowed for. The external students would not only have the same guarantees of a fair examination as at present, but perhaps even better; but if further guarantees were wanted, by all means let them be given. The great point was that internal students of London should, at least, have that to which they had a right—a teaching university of their own. It was nothing less than a scandal that London, with a greater population than Scotland, or than many of the countries of Europe, which had two or three universities, should not have a university of its own.