

the same weight has to fall through a distance 2·78 before it explodes the crystalline substance.

An explanation of the origin of the manganiferous red clay, which I mentioned last month as occupying such a large tract of the sea-bottom, has been offered by Mr. Hardman, of the Irish Geological Survey (\*). The globigerina-shells are formed chiefly of carbonate of lime, but also contain carbonates of iron and manganese, and silicate of alumina. In falling to the bottom the carbonate of lime is dissolved, and retained in solution by the water, the other carbonates are oxydized and sink to the bottom with the silicate of alumina. The red clay is composed of the latter, coloured with peroxide of iron, and the manganese takes the nodular form owing to the same molecular law which determines the form in which the carbonate of iron appears in clay ironstone.

A new enemy to the vine seems to have appeared in the vineyards of the Department of the Côte-d'Or in France. (‡) No traces of Phylloxera have been detected either in foliage or roots, and yet little fruit, and that acid, is obtained, and the plants are rapidly dying off. It has been noticed that this is especially the case in porous soil, whereas plants grown on compact soil have yielded a well-coloured fruit, with plenty of sugar. This has suggested a remedy to M. du Mesnil, which, indeed, he proposed before (†) for Phylloxera. He uses a beetling-machine provided with a flat iron plate, and worked by handles. This is used on perfectly dry soil, the surface of which by light, quick blows is rendered so hard that the insects are arrested in their passage from the earth to the leaves, and thus cannot pass through the transformations necessary for their life. This treatment does not succeed with moist soil, which gives under the blows, and would thus be rendered unfertile.

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## Notes on Education.

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DR. DAWSON, the distinguished President of McGill University, Montreal, chose for his inaugural lecture at the recent opening of the University, the subject of "*Student Life in Canada.*" Dr. Dawson has the happy faculty of combining an earnest and pleasant manner in his address to students. Instead of repelling by a cold and professional style of inculcating "wise saws and modern instances," (which students so instinctively abhor), he seeks to win them by his earnest persuasions. The lecture is characterized by wise practical counsel and suggestions.

The Ontario Minister of Education, by invitation, still continues, with great advantage, his official visits to various parts of the Province. He is to

\* Darwin—Insectivorous Plants.

† Comptes Rendus v. 83 p. 813.

‡ Ann. der. Phys. v. Chem. No. 9, 7876.