they did not venture to name, consists of ripe sclerotia of the same species, and Thwaites 1013, *Tuber zeylanicum*, is another sclerotium. The latter is much larger, about one centimetre in diameter; it is quite common on rubbish heaps, and when planted in damp sand, it produces a white mycelium which runs along the top of the sand and forms sclerotia of the same size as those of *Sclerocystis coremioides*. It may, however, be a different species.

Up to the present it has not been possible to develop a fructification from these sclerotia: in pure sand, the larger develop a mycelium which produces the sclerotium stage again, while the smaller have not yet produced anything. It seems, however, worthy of record that the description of *Sclerocystis coremioides* was based on a complete misapprehension of the nature of the specimen sent from Ceylon by Thwaites, and that the genus *Sclerocystis*, as described, has no real existence.

Cesati established a new genus *Xenomyces*, on a similar production collected by Beccari in Sarawak. He states that it is 'Genus affine *Sclerocystidi* B. & Br., nec minus enigmaticum.' The description suggests that it is another sclerotium, if not the same species as Berkeley and Broome's.

PERADENIYA.

T. PETCH.

THE CYTOLOGY OF RHOEO DISCOLOR.—At the suggestion of my teacher, Prof. Marcus Hartog, I made a preliminary study of the cytology of *Rhoeo discolor*, Hance (*Tradescantia discolor*, Hortt.), in 1905. Its inflorescence is a compact double scorpioid cyme, which facilitates the assemblage of sets of consecutive stages. Many fixatives were tried; but Tellyesniczky's mixture (potassium bichromate, 3 grms.; glacial acetic acid, 5 cc.; water to 100 cc.) proved most satisfactory.

Much preliminary work was done; but other duties make it probable that my complete results may long await publication. The two essential points of interest are (a) the small number of chromosomes (4–8); (b) the small size of the cells, which enables a considerable number in various stages to be seen in a single field under a magnification of 500 diameters. This may make the plant a very useful object to the cytologist—all the more as it is usually in flower all the year round, in hothouses.

W. J. GALLAGHER

(From the Biological Institute of Queen's College, Cork).

KUALA LUMPUR, Federated Malay States,
May, 1907.

A PHOTOELECTRIC THEORY OF PHOTOSYNTHESIS.—The following is a preliminary abstract of an investigation into the nature and mode of formation of the primary products in photosynthesis which has been carried out in my laboratory at intervals during the past three years. Although the general hypothesis underlying this research was formulated some twelve years ago, various circumstances interfered with all but preliminary experiments until 1905, when the investigation was resumed.

Gallagher, W. J. 1908. "The cytology of *Rhoeo discolor*." *Annals of botany* 22, 117–117. <https://doi.org/10.1093/oxfordjournals.aob.a089158>.

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