

THE  
**PHYTOLOGIST:**  
A  
**POPULAR**  
**BOTANICAL MISCELLANY.**

CONDUCTED BY  
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**VOLUME THE FIRST,**  
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giving off branches generally dichotomous. They varied in diameter from  $\cdot 01$  to  $\cdot 02$  of a millimetre, and appeared to spring without any root from an amorphous, soft, finely granular mass. They gave off at their extremities numerous oval, round or oblong corpuscles, arranged in bead-like rows, which were considered reproductive spores. The same appearances were found in the soft cheesy matter lining some of the tubercular cavities after death." — *From the 'Annals and Magazine of Natural History,' March, 1842, p. 66.*

154. *Note upon the Fungus parasitical on fishes.* Having seen that Mr. Goodsir of Edinburgh has described the parasite which infests the bodies of gold carp and other fishes, I imagined that the following incident concerning it might not prove uninteresting to your readers. About a month since I placed six newts in a tank of water in which there were some aquatic plants, and three small fish commonly called sticklebacks. One of these, the largest of the three, had the hinder part of its body covered with the plant. The newts had not long been in the tank, when my brother, Mr. Edwin Quekett, and myself, saw one of them in the act of nibbling away at the parasite, whilst the fish remained perfectly quiet: on disturbing them the same thing was repeated by another newt; the fish appeared much pleased, and even moved its tail frequently towards the newt, as though it were anxious to get rid of the parasitic growth. Whether the act of the newt were dictated by kindness I cannot say; probably these animals perform (as tench are said to do) the office of physicians to the diseased portion of the finny race.—*John Quekett: 50, Wellclose Square, May 23, 1842.*

155. *Note on the Oxlips from Bardfield, &c.* The oxlips kindly sent to me by Mr. H. Doubleday from Bardfield (Phytol. 204), and concerning which you enquire, appear to me to be the species intended by the figure in 'English Botany' (513), and also to be identical with Swiss and German specimens in my herbarium, which were sent to me under the name of "*Primula elatior, Jacq.*" The Bardfield specimens differ slightly from the figure in 'English Botany,' but not importantly, except in having the calyx decidedly shorter than the tube of the corolla. They are unlike any other English oxlips in my herbarium (all of which may be gradually traced either to the primrose or to the cowslip, by intermediate links), and, as appears to me, they may be safely pronounced the real representatives of *Primula elatior*. The dubious oxlip, gathered last year at Claygate, and mentioned in your first number (Phytol. 9), has this year flowered in my garden. It there grows in a much drier and a less shaded situation than that in which the wild root was found. In the form of the calyx, corolla, and leaf, it is now decidedly a primrose, although the umbel is elongated on a stout scape of five inches in height. In the deep colour of the corolla and the tint of the leaves, it has more nearly the cowslip hues: the pubescence is intermediate, but nearer that of the primrose. I consider the plant to be an umbelled primrose, but cannot account for the cowslip colours. Preparations for a botanical tour to the Azores (for which I expect to sail in two or three days) have prevented my giving attention to the subject of the oxlips this spring; and sundry experiments bearing upon the question of their relations to the cowslips and primroses that had been commenced will be interfered with by my absence, which I anticipate will continue for the whole summer and autumn. As far as my observations go, there is not any one point in the specific characters ordinarily given for the primrose and cowslip, which is constant in either. Each characteristic of the primrose may be seen in specimens that otherwise would be called cowslips, and *vice versa*. The least variable, perhaps, are the very short and close pubescence of the cowslip, and the long weak hairs of the primrose. I have

never seen the primrose with obtuse sepals, however, though the cowslip has the sepals acute, obtuse, or quite rounded at the apex. The experiments on which Professor Henslow lays so much stress, are certainly of great value in relation to the distinctions of species, not merely in the genus *Primula*, but for systematic Botany generally. Still, they may be said to require confirmation; and one confirmation which appears to be requisite, is, that the experiment should be repeated by some botanist who would studiously avoid letting his gardener or any other party know the object of his experiment. I was once told by a gardener, that he had *helped* his master's horticultural experiments, during the absence of the latter, so as to produce the results which he supposed would gratify his master.—*Hewett C. Watson; Thames Ditton, May 1, 1841.*

156. *On the immersion of Specimens of Plants in Boiling Water, (Phytol. 189).* Having been induced from a report in 'The Phytologist' to try the effect of boiling water in preserving the colours of botanical specimens, I was much disappointed to find that it was, with me, quite ineffectual. *Lathræa squamaria*, one of the plants mentioned in the report, turned completely black on remaining in boiling water ten seconds; and in one specimen which was but partially immersed, that part only turned black, whilst the remainder has preserved its colour in a slight degree. By the same treatment the colour was extracted from the flowers of *Orchis mascula*, leaving the petals of a dirty brown hue; whilst specimens dried by the usual method partially retained their colour, and certainly their *form*, which the *boiled* ones did not. Specimens of other plants which I tried were all acted upon in a similar manner. It certainly appears very strange to me that others should succeed so perfectly, whilst I, using exactly the means prescribed, could not succeed in the least; and I think there must be something more than has yet appeared, either in the water or the subsequent treatment, in order to preserve the colour of such plants as *Lathræa squamaria* &c.—*Joseph Sidebotham; 26, York St., Manchester, May 5, 1842.*

157. *True office of the Earth in relation to Plants.* As the article 'On the true office of the earth in relation to plants' (Phytol. 173), seems to have been penned for the purpose of exciting discussion, I am surprized that you have as yet had no communications on the subject. I take the liberty of sending you a few remarks, as I cannot subscribe to the opinion which, in that article, Mr. Newman has endeavoured to maintain. The feeding of plants in order that they may afford food for man, is an important subject at this time; and if I understand Mr. Newman rightly, he maintains that the earth or soil in which they grow has nothing to do with the supplying this food. He makes this inference from the fact that hyacinths grow in water; and to this instance he might have added those of floating water-plants, of most of the *Orchidææ*, and a number of mosses, lichens, &c., which evidently derive their nutriment from sources independent of those constituents of the earth or soil in which they do *not* grow. But this does not at all prove Mr. Newman's position, that those plants which grow in the earth do not derive their sustenance from the soil in which they are placed. The fact is that plants, like animals, require different kinds of food, and they are always naturally placed in those positions in which they are best supplied with their peculiar food. All plants, it may perhaps be stated, require for their growth water and carbonic acid, and they obtain these from the soil or the atmosphere, according to their structure, which is adapted to the peculiar localities in which they live. The plants of the deep sea, and most of the lower forms of *Cryptogamia*, obtain these agents by their whole surface; but in the higher forms of *Phanerogamous* vegetation, the function of absorption is exceedingly localized, and these plants seem to be almost con-

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