

XVI. *On two New British Fungi.* By the Rev. M. J. BERKELEY, M.A., F.L.S.

(Plate LV.)

Read April 5th, 1866.

IN January last I received from Mrs. Holme Sumner, of Great Bookham, Surrey, a notice of a beautiful Fungus which was then growing abundantly under a Cedar tree in the neighbouring park at Fetcham; and numerous specimens were sent to me on the 12th of February. As it is of peculiar interest, from its appearing so early in the year, as well as from its very close relation to one figured by Bulliard, which has not recently occurred to any mycologist either in this country or on the continent, I venture to submit a drawing and short notice of it to the Linnean Society. Though hitherto unrecorded in our flora, it has been observed by Mrs. Sumner for many years, always appearing in the same spot and at the same early season.

Peziza lanuginosa, Bulliard, tab. 396. fig. 2, is referred by Fries as a variety to *Peziza hemisphærica*; but its broad, barren, colourless, distinct margin and large size seem to separate it, not to mention its reflected border. The species of which I now present a drawing agrees exactly with it in colour and clothing; but the trace of anything like a barren margin is comparatively very faint, there being nothing more than a slight groove, which is only visible under a magnifier, but when so seen is sufficiently distinct. It attains a much larger size, and is distinguished from both *Peziza hemisphærica* and *Peziza lanuginosa* by the cup splitting at an early stage of growth into several large segments, which are at length so deeply separated that the fungus looks like the outer peridium of a *Geaster*. Its close affinity with the genus *Hydnocystis* of Tulasne, like which it is at first almost subterraneous, is very striking; but the hymenium in that genus is never perfectly exposed, and the structure of the wall is somewhat different. In *Hydnocystis* the threads which clothe the surface are quite the same, and spring from little warts; but the whole of the substance beneath the hymenium is vesicular, the outer vesicles being darker-coloured, while in our *Peziza*, between the hymenium and outer layer, there is a thick stratum consisting of threads whose joints are often swollen, or the articulations constricted. The fruit of the *Peziza* is highly developed, and agrees very nearly with that of *Peziza hemisphærica*. The paraphyses are slightly branched, with clavate tips, the asci cylindrical, each containing a single row of broadly fusiform sporidia from $\frac{1}{1000}$ to $\frac{1}{700}$ of an inch long, and $\frac{1}{2000}$ to $\frac{1}{1666}$ broad, and containing one or two large nuclei, with a number of minute globules. In *Peziza hemisphærica* the sporidia are more obtuse, and about $\frac{1}{1000}$ of an inch long. The pointed ends are a very uncommon feature in the genus *Peziza*. I have never seen a specimen of *Peziza lanuginosa*, and can therefore say nothing about its fruit; but the present fungus is most probably only a variety of that species, altered a little in external appearance from its being so much immersed in the soil. The hymenium is at first white, but changes to cream-colour, or to a slight shade of tawny, in decay.

There is a *Peziza*, figured by Jacquin in the 'Miscellanea Austriaca,' with a very similar habit, which is referred by Fries to *Peziza repanda*, but which is probably nearly related to the present fungus.

The variety may be thus characterized:—

PEZIZA LANUGINOSA, Bulliard.

Var. *Sumneri*, Berk. & Br., cupula subhypogæa globosa profunde fissa.

The species has been observed in abundance since the above date by Mr. Edmonds under Cedars at Chiswick House, and by Mr. W. Wilson Saunders under a Larch near Reigate.

The second fungus to which I wish to call the attention of the Society is a *Peziza*, which appears to be identical with *P. pygmæa* Fr., and is remarkable for the extraordinary varieties of form which it exhibits. Figs. 7, 8, and 9 (Plate LV.) show the natural size and normal form of the plant, which has been found by Mr. Broome at Ascot and Wimbledon in Surrey, and on the Blackdown Hills near Taunton. Figs. 10 and 11 represent proliferous forms magnified. Fig. 12 is a more highly magnified figure of one of the cups of fig. 10; and fig. 13 represents the fruit, which is the same in the proliferous as in the normal form. Mr. Broome's notes of the Blackdown plants are as follows:—

"Stipitate about $\frac{1}{4}$ inch high, the stem often splitting or branching out into several divisions, each of which is terminated by a minute cup, giving the plant the appearance of a *Ditiola* or a *Tympanis*. Each of these cups produces other smaller cups on its surface; the branched and young cups resemble the genus *Solenia*. The colour of the mature plant was a bright apricot, whitish and tomentose at the base of the stem. It occurred in swampy places on rotten gorse, frequently coming through the ground, on mosses."

Mr. Broome informs me that in one of the Wimbledon specimens the surface of a cup, was one mass of minute secondary cups, giving the plant almost the appearance of a small *Gyromitra*.

EXPLANATION OF PLATE LV.

Fig. 1. *Peziza lanuginosa*, var. *Sumneri*, natural size.

Fig. 2. Section through cup, slightly magnified.

Fig. 3. Filamentous portion of cup, more highly magnified.

Fig. 4. Branched paraphysis, ditto.

Fig. 5. Ascus, ditto.

Fig. 6. Sporidia, still more highly magnified.

Figs. 7, 8, 9. *Peziza pygmæa*, Fr., the normal form, natural size.

Figs. 10, 11. Proliferous forms of *P. pygmæa*, magnified.

Fig. 12. One of the cups of fig. 10, more highly magnified, showing the secondary cups.

Fig. 13. Fruit of *P. pygmæa*, magnified.

