Hydnotrya Berk. et Broome emend.

Ascocarp subglobose, surface generally folded or with projections into exterior; gleba penetrated by hollow chambers or labyrinthine canals opening to surface usually between folds or into inward extending projections of surface; canals lined with hymenium; asci forming palisade with paraphyses or more or less irregularly imbedded in tissue below; asci cylindrical, club-shaped, or long-ovoid, 6–8-spored; spores globose or ellipsoid, minutely or very coarsely papillose; paraphyses more or less swollen at tips, at external openings of chambers continuing into surface of ascocarp as swollen-tipped hyphae.

No typical species of *Hydnotrya* have thus far been reported from California; but the two anomalous species referred to this genus differ as widely from each other as from the type, and consequently can be disposed of only by establishing two new genera or by enlarging the original genus. The latter method is chosen at present; first, because only one preserved specimen of each exists, so far as I have been able to discover; and, second, the dissimilar characters of the two in relation to the type species of the genus seem less important than the characters which are similar. Further collection and study of these plants, however, may make another arrangement necessary.

Ascocarp of loose folds, forming large chambers; paraphyses scarcely swollen; spores ellipsoid, minutely papillose. *H. ellipsospora.*

Ascocarp containing narrow labyrinthine canals; paraphyses conspicuously swollen; spores globose, minutely papillose. *H. cerebriformis.*

Hydnotrya ellipsospora sp. nov.

Plate 30, fig. 38

Ascocarp purplish brown, 1.5 cm. in diam., subglobose, composed of loose folds occasionally joined; surface of ascocarp minutely villose; interior of large, hollow, connected chambers opening without at various points; wall of ascocarp 1 mm. thick, lined with hymenium, the transition of hymenium to cortex at external openings plainly visible; hyphae of wall somewhat connected immediately below external surface; hyphae at surface distinctly separated, somewhat swollen at tips, 9–18μ thick, continuing into hymenium as slender paraphyses; asci cylindrical, not constricted between spores, 10 by 260μ, 8-spored; spores 1-seriate, ellipsoid, 10 by 14μ, minutely papillose; paraphyses not produced beyond asci, little swollen, 2–5μ thick.

"Under *Quercus agrifolia,* Pacific Grove, Calif., Dec. 1909."
No. 316, U. C. Col. *Type.* N. L. Gardner and M. B. Nichols.

This species differs from the descriptions of the genus *Hydnotrya* in having mostly large, open, connected chambers, regularly cylindrical, closely crowded asci, and ellipsoid, minutely papillose spores; rather than labyrinthine canals, mostly club-shaped or long-ovoid, 6–8-spored asci, and globose spores with very thick, coarsely papillose epispore, described for *Hydnotrya.* The spores are much smaller, also, than reported for any described species of which I have found record, those of *H. Tulasnei,* for instance, cited as 25–35μ and those of *H. jurana,* 30–40μ. However, the ascocarp is of the general structure of *Hydnotrya,* i.e., irregularly folded, forming empty cavities between, which open to the surface; the surface is covered with crowded separate hyphae, more or less swollen, which continue into the hymenium as paraphyses; and the structure between the hymenium and the outer surface of the wall is hyphal. It has seemed best at present, therefore, to extend the genus *Hydnotrya,* rather than to establish a new genus for this species.