

# Notes on the genus *Helvella*, including the merging of the genus *Wynnella*

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HARMAJA, H. 1974: Notes on the genus *Helvella*, including the merging of the genus *Wynnella*. — *Karstenia* 14: 102—104.

It is concluded that the few macroscopic features which alone separate or are commonly claimed to separate the genus *Wynnella* Boud. from *Helvella* Fr., are not valid at generic level, especially as all the microscopic characters, the anatomy of the excipulum and the spores, are commonly known to be exactly alike in these two genera. *Wynnella* is consequently merged with the older genus *Helvella*. For similar reasons the genus *Underwoodia* Peck is also considered congeneric with *Helvella*, which accords with the opinion of ECKBLAD (1968). The differences between the variety *Helvella macropus* (Fr.) Karst. v. *brevis* Peck and the typical *H. macropus* are considered to warrant the recognition of the variety at specific level. Three new combinations are made: *Helvella silvicola* (Beck in Sacc.) Harmaja, *Helvella beatonii* (Rifai) Harmaja, and *Helvella brevis* (Peck) Harmaja.

## I. *Wynnella* Boud.

The monotypic genus *Wynnella* Boud. is acknowledged by all the present authorities on *Pezizales* (e.g., NANNFELDT 1966, ECKBLAD 1968, DISSING 1972, SMITH WEBER 1972, KORF 1972). The only species of this genus, *W. silvicola* (Beck in Sacc.) Nannf. (*Otidea auricula* auct.), whose correct specific epithet was discovered by NANNFELDT (1966), was for a long time previously generally referred to *Otidea*, solely on account of its ear-shaped apothecia. As it was found that all its microscopic characters, the spores (including their number of nuclei) and the excipulum were widely different from those of *Otidea*, Boudier's decision to remove it from that genus was generally approved. It might have been expected that this time more importance would be accorded to the microscopic than to the macroscopic characters, and that the species would be included in *Helvella*, since all are agreed that microscopically nothing separates *Otidea silvicola* from *Helvella*.

However, the microscopical features were once more underestimated in favour of a few slight macroscopical differences; the species was considered to deserve a genus of its own and kept apart from *Helvella*.

Three reasons for maintaining *Wynnella* are given in the papers mentioned at the beginning of this article. The first is the shape of the apothecium. However, in the present-day taxonomy of the *Pezizales* it is widely and, to my mind, correctly believed that a natural classification is best achieved by giving the microscopic characters preference over the macroscopic ones (especially the ascocarp shape). Indeed, this principle is exemplified by the present widely approved concept of *Helvella*! Why could not *W. silvicola* be included in that genus, where the apothecium shape already shows wide variation? Furthermore, the apothecium of *H. leucomelaena* is known to be often somewhat irregular in shape and even split into lobes (see e.g.

DISSING 1966). WICHANSKÝ (1959) has studied this variation which led him to describe one new variety with six forms (fortunately none of these unimportant taxa has been published validly since that author fails to designate type specimens for them). One of these forms he even named f. *otidea* as its apothecium was split like that of most species of *Otidea*! In *Otidea* species with regularly cupulate apothecia (e.g. *O. indivisa* Vel.) are commonly included along with species with split more or less ear-shaped apothecia, since the spores and anatomical characters in both groups of species are of exactly the same type (see e.g. HARMAJA 1974).

Secondly, the red-brown colour of the ascocarp of *W. silvicola* is often considered to prevent its transfer to *Helvella*. Colour differences should be used most carefully at the generic level (*Helvella* comprises already black, brown, grey and white species!), and the colour difference between *W. silvicola* and e.g. *H. leucomelaena* and *H. acetabulum* is not great. In this connection, great interest attaches to DISSING's (1972) observation that the colours of *W. silvicola* are similar to those of *Acetabula aestivalis* Heim & Remy, which he intends to transfer to *Helvella*, in a joint paper with Dr. A. Raitviir.

The third difference said to exist between *Wynnella* and *Helvella* is the consistency of

the dried ascocarps, which have been described as »horny» in the former genus (e.g. by NANNFELDT 1966 and DISSING 1972). I have seen dry fruit bodies of *W. silvicola*, and I am not at all sure whether they differ in consistency from those of e.g. *H. leucomelaena* and *H. acetabulum*. In no case can the difference be considered distinct or significant. Nothing can be observed in the anatomical characters of *W. silvicola* that could account for this supposed of true hardness; the hyphae are of the same type as those of *Helvella*, reviving easily and not being agglutinated or collapsed. This point does not strike me as having any relevance at generic level.

The base of the apothecium of *W. silvicola* is usually slightly grooved as in *H. leucomelaena*.

I am convinced that *Wynnella silvicola* has such close affinities to *Helvella* that it is best included in that genus. It is perhaps most closely related to *H. leucomelaena* (and probably even closer to *Acetabula aestivalis*). The following new combination is accordingly proposed: *Helvella silvicola* (Beck in Sacc.) Harmaja, n. comb. (*Otidea silvicola* Beck in Sacc., Sylloge Fungorum... 8: 97. 1889. — *Wynnella silvicola* (Beck in Sacc.) Nannf., Ann. Bot. Fennici 3: 309. 1966.)

## II. Underwoodia Peck

Following the principle that at generic level most diagnostic value should be accorded to the sporal and anatomical characters, and not to the ascocarp shape, I also consider that the genus *Underwoodia* Peck is unnecessary, and should be merged with *Helvella*. This view agrees completely with that of ECKBLAD (1968). The clavate, internally chambered *Underwoodia* ascocarp, with the hymenium appressed to the upper part, can fairly readily be seen to differ comparatively little in principle from the *Helvella lacunosa* type of ascocarp. The famous sparassoid form of *Peziza proteana*, repeatedly described as a new genus, as well as certain other cases, prove convincingly that in the *Pezizales* very

small genetic changes may very radically affect the ascocarp shape, resulting in superficially very different fruit bodies, not only in the same genera but even within the same species. *Helvella* contains very different types of ascocarp as already stated above, and as regards the subdivision of the genus, it should not be forgotten that, although not used in e.g. the commonly approved subdivision of DISSING (1966), the subgeneric category is fully available. The following new combination is proposed: *Helvella beatonii* (Rifai) Harmaja, n. comb. (*Underwoodia beatonii* Rifai, Verh. Koninkl. Nederlandse Akad. Wetensch., Afd. Natuurh. II: 57(3): 69. 1968 — Holotype [K] studied.)

### III. *Helvella macropus* v. *brevis* Peck

In her excellent study on *Helvella* SMITH WEBER (1972) has shown that the variety *brevis* differs distinctly from the typical *H. macropus* in its macroscopic, microscopic (the spores are shorter and broader) and ecological characters. She accepted Peck's original opinion and treated the taxon as a variety, but I consider that these differences warrant a separation from *H. macropus* at the specific level. (The same may apply to some other races of the apparently collective species *H. macropus*, e.g. the Jamaican collection cited in DISSING & NANNFELDT 1966.) When studying Peck's type I found it possible

that a careful study on larger material might unmask slight differences also in the paraphyses and the ectal excipulum. The following new combination is accordingly proposed: *Helvella brevis* (Peck) Harmaja, n. comb. (*Helvella macropus* (Fr.) Karst. v. *brevis* Peck, Bull. Torrey Bot. Club 29: 74. 1902. — Holotype [NYS] studied.)

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