

NOTES ON THE GENUS *PSATHYRELLA* – IX
Psathyrella umbrina Kits van Wav. and *P. galerooides* Romagn.

E. KITS VAN WAVEREN

Rijksherbarium, Leiden

It is pointed out that *Psathyrella umbrina* Kits van Wav. (1982) and *P. galerooides* Romagn. (1986) are conspecific and that intermediate variants exist between *P. umbrina* var. *umbrina* and *P. umbrina* var. *utriformis* Kits van Wav.

Psathyrella umbrina Kits van Wav. (see full description and figures, 1982: 506 and 1985: 187) was described as a *Conocybe*-like small species, its characteristic features being: rather conical brown cap, brown gills, small and pale brown spores (6.5–)7–8 × 4.5–5 μm (mean values 6.9–7.3 × 4.6–4.8 μm) without germ pore, fusoid and often mucronate pleurocystidia, numerous pleurocystidioid cheilocystidia, distinctly pigmented hymenophoral trama, terrestrial growth in moss. Our original description was based on only one specimen (Scotland, 1968). Later we discovered having already found this species in 1965 in the Netherlands near Eindhoven; in 1980 Bendixsen found it in Norway (exsiccatum examined).

The Eindhoven collection consisted of four specimens (a, b, c and d) all growing at a distance of some two meters from each other. In 1983 we studied each of these separately and restudied the Scottish type specimen, making as always pleurocystidio- and cheilocystidiograms (= white cards, measuring 15 × 15 cm, on which of both kinds of cystidia, usually some 15–25 of these cells, taken at random from a squashed gill, are drawn at magnification of 1150 ×).

Both macro- and microscopically (size, shape, and colour of spores, absence of germ pore, pigmentation of hymenophoral trama) the four specimens were fully identical except for the shape of the cystidia. In specimen a the pleurocystidia (35–52.5 × 9–12 μm) were fusoid (-sublageniform) about half of them mucronate, the numerous pleurocystidioid cheilocystidia following suit (Fig. 1). In specimens b and c to our great surprise all pleurocystidia (35–60 × 9–17 μm) and all pleurocystidioid cheilocystidia were distinctly utriform (Figs. 8–11), almost all of the former cells even with a subapical constriction and none of them mucronate. Altogether 35 cells, obtained from two gills from specimen b and 43 cells from two gills from specimen c were drawn. The specimens b and c were described as *Psathyrella umbrina* var. *utriformis* (Kits van Wav. 1985: 189).

Out of the 71 pleurocystidia, obtained from two gills from specimen d, 43 were rather broadly (up to 15 μm) fusoid with subobtuse to subacute apex, while 28 were utriform; none of these cells were subapically constricted and none were mucronate. But among the many pleurocystidioid cheilocystidia (also broadly fusoid or utriform) we came

across one mucronate cell. It was therefore concluded that specimen d was to be regarded as an intermediate variant between *P. umbrina* var. *umbrina* and *P. umbrina* var. *utriformis*, represented respectively by the type + specimen a and the specimens b + c.

A specimen found in 1985 by Örstadius in Sweden (exsiccatum examined) with on its gills numerous utriform pleurocystidia, none of them subapically constricted but many with a very obtuse forked apex (as so often seen among the utriform cystidia in *P. spadiceogrisea*) could also be ranked with *P. umbrina* var. *utriformis* because far and away most pleurocystidia were utriform. But because of the presence of, be it only very few, broadly fusoid mucronate cells (Fig. 12) it could also be regarded as an intermediate form.

Going by Romagnesi's description of his *P. galerooides* (1986: 189) in which he called the pleurocystidia lageniform and stated his species to differ from *P. umbrina* in only two respects i.e. smaller size of the carpophores and different shape of the cystidia, we regard these two taxa to be conspecific. The smaller size of the carpophores lies within the range of the variability of this obviously very rare species and on examination of the holotype Mr. Romagnesi very kindly sent us, we found the pleurocystidia (Fig. 6) to be fully identical with those of the type of *P. umbrina* fusoid(-sublageniform), many of them mucronate (even depicted by Romagnesi with 2 cells but not described!). Sizes (mean values $7.1 \times 4.5 \mu\text{m}$), shape, and colour of the spores and pigmentation of the hymenophoral trama also turned out to be the same as in *P. umbrina*. In his description of his *P. galerooides* Romagnesi did not mention the presence of utriform pleurocystidia, but he obviously must have found them as in his fig. 1 he depicted one large utriform pleurocystidium and one utriform cell with an obtuse and forked apex (cf. our Fig. 12 from the Swedish specimen) and in his fig. 2 four pleurocystidia, two of which slightly subapically constricted. Having found three collections of his *P. galerooides*, his observations are explained away by the presumption that his description is based on the holotype which he sent us for examination and that his figs. 1 and 2 were taken from the other two collections (no date or locality mentioned under the figures), which have to be interpreted as intermediate variants between *P. umbrina* var. *umbrina* and *P. umbrina* var. *utriformis* by analogy with the intermediate variants Romagnesi (1975: 220) and we (1971: 270) described for *P. gracilis* and *P. microrrhiza*.

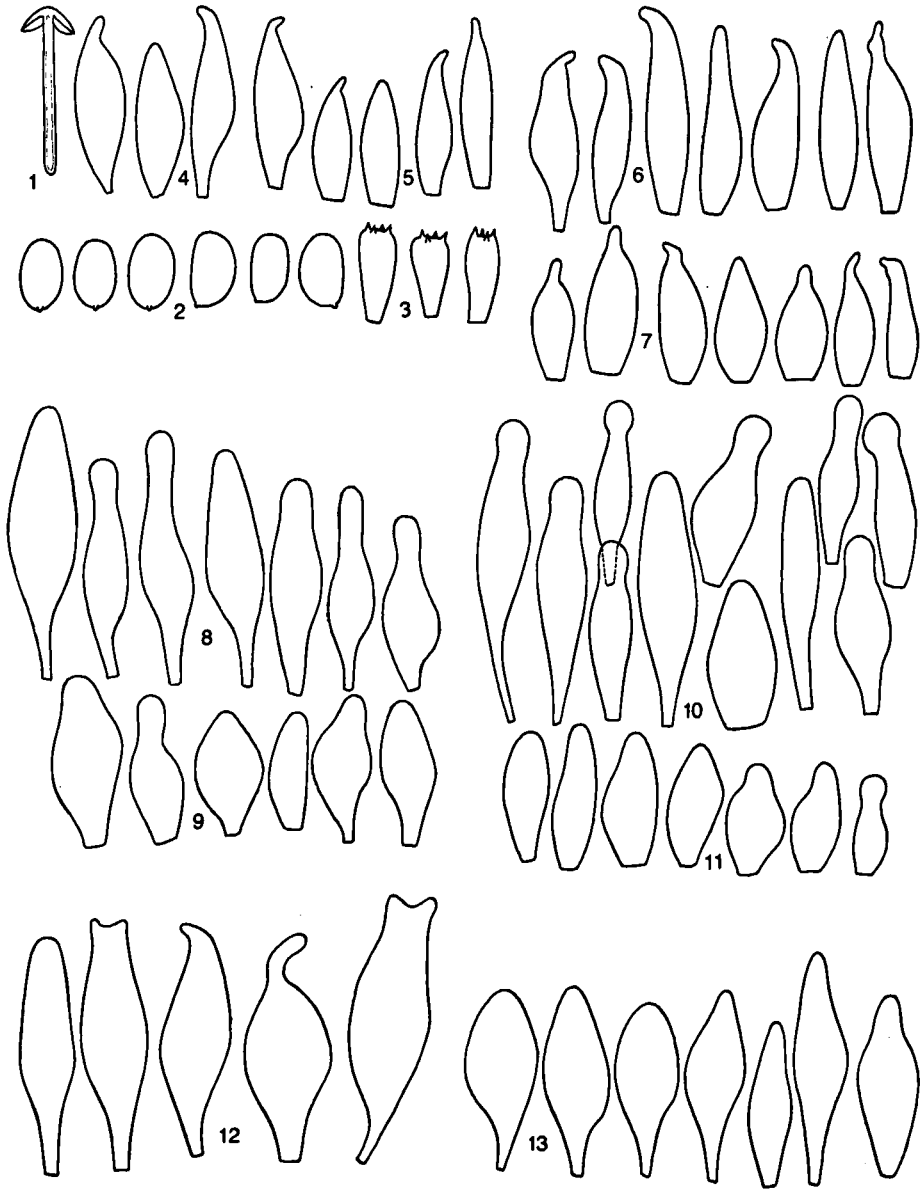
Figs. 1–5. *Psathyrella umbrina* var. *umbrina* (type). — 1. Carpophore ($\times 0.5$). — 2. Spores ($\times 1210$). — 3. Basidia ($\times 575$). — 4. Pleurocystidia ($\times 575$). — 5. Pleurocystidioid cheilocystidia ($\times 575$).

Figs. 6–7. *Psathyrella galerooides* (type). — 6. Pleurocystidia ($\times 575$). — 7. Pleurocystidioid cheilocystidia ($\times 575$).

Figs. 8–9. *Psathyrella umbrina* var. *utriformis* (type, Eindhoven specim. b). — 8. Pleurocystidia ($\times 575$). — 9. Pleurocystidioid cheilocystidia ($\times 575$).

Figs. 10–11. *Psathyrella umbrina* var. *utriformis* (type, Eindhoven specim. c). — 10. Pleurocystidia ($\times 575$). — 11. Pleurocystidioid cheilocystidia ($\times 575$).

Figs. 12–13. Pleurocystidia of variants intermediate between *P. umbrina* var. *umbrina* and *P. umbrina* var. *utriformis*. — 12. In Swedish specimen ($\times 575$). — 13. In specimen d from Eindhoven ($\times 575$).



REFERENCES

- KITS VAN WAVEREN, E. (1971). Notes on the genus *Psathyrella*-I. *Psathyrella gracilis* and *Psathyrella microrrhiza*. In *Persoonia* 6: 249–280.
- (1982). Notes on the genus *Psathyrella*-VIII. Description and key to the European species of section *Hydrophilae*. In *Persoonia* 11: 473–508.
- (1985). The Dutch, French and British species of *Psathyrella*. In *Persoonia* Suppl. 2: 1–300.
- ROMAGNESI, H. (1975). Description de quelques espèces de *Drosophila* Quélet. (*Psathyrella* ss. dilat.). In *Bull. trimest. Soc. mycol. Fr.* 91: 137–224.
- (1986). Études complémentaires de quelques espèces de *Psathyrella* ss. lato (= *Drosophila* Quélet).-II. In *Bull. trimest. Soc. mycol. Fr.* 102: 189–197.