

A NEW SPECIES IN SECTION HYDROPHILAE OF THE GENUS
PSATHYRELLA

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A new species of *Psathyrella* (Section *Hydrophilae*) is described from a mediterranean coastal pine forest (*Pinus pinaster*, *Pinus pinea*) in Italy, that was burnt on July 31st, 1989. It is dedicated to Dr. E. Kits van Waveren.

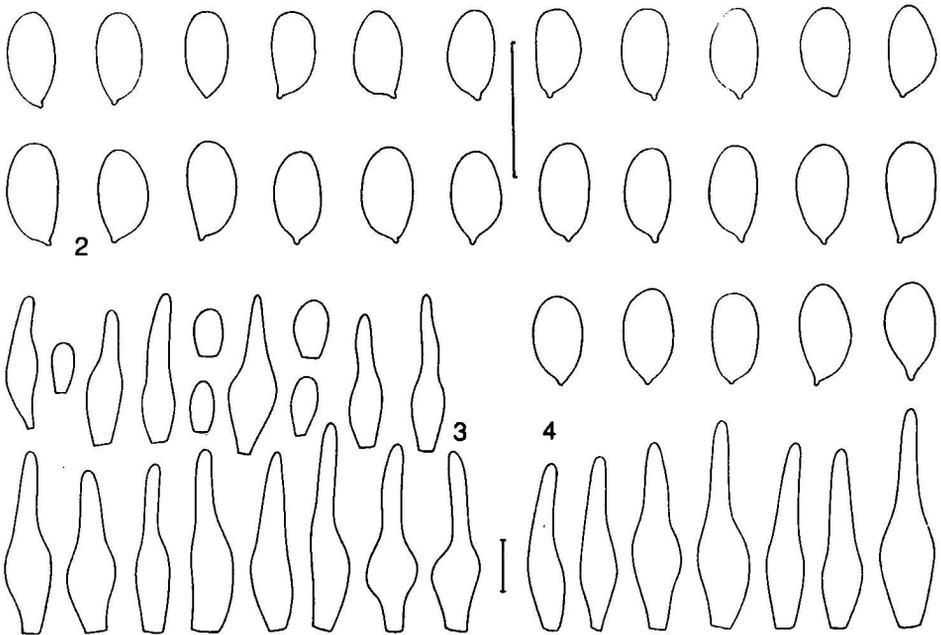
Psathyrella wavereniana M. Marchetti, *spec. nov.* — Figs. 1–4

Pileus primo 10–20 mm latus, globoso-parabolicus, badius, maturitate 20–40(–50) mm latus, campanulatoconvexus, badio-aurantiacus, subumbonatus, laevis, estriatus, tenui margine, hygrophanus, in sicco pallide-brunneus, manifeste roseotinctus. Velum album, fibrillosum atque floccosum, initio efficiens marginem pilei copiose appendiculatum, dein pruinose et marginem versus parvis floccis. Lamellae 3–5 mm latae, confertae, adnatae, subventricosae, brunneae et purpureofuscae, rubea linea sub acie integra. Stipes 30–40(–50) × 2–4 mm, cylindraceus, aequalis, cavus, eradicatus, haud bulbosus, albidus signis violaceis infra velum, annulo haud striato munitus. Caro pilei centro 2–3 mm crassa, in margine tenuis, rubro-vinosa, rubro-ochracea in stipite, rubro-vinosa ad basim. Sporae 6.3–7.2 × 3.6 µm, ellipsoideae, poro germinativo destitutae, nec opacae, in aqua observatae rubro-brunneae. Basidia 12.5–16 × 5.5–7 µm, clavata, 4-sporigera. Pleurocystidia 40–52.5 × 7.5–12.5 µm collum (× 4–7.6 µm latum), lageniformia, tenuitunicata, sine colore. Cellulae marginales: cheilocystidia pleurocystidioidea 30–40(–50) × 7.5–12.5 µm, numerosa, cellulae spheropedunculatae et clavatae 12.5–15 × 6–7 µm intermixtae, omnes tenuitunicatae et sine colore. Trama lamellarum colorata. Pileipellis e cellulis formata. In locis deustis, in terra sabulosa, gregaria, subcaespitosa, hieme.

Holotypus: *M. Marchetti s.n.*, 3.II.1990, Calambrone (Pisa), Italia (L).

Pileus in early stages 10–20 mm diam., globose, hemispherical to paraboloid with narrow incurved margin, reddish brown, with white veil forming fibrils and circularly arranged flocci reaching up to almost 3/4 of pileus and an appendiculate uninterrupted fringe at margin, also connecting margin of pileus with stipe, covering it with velar fibrils and fine flocci. At maturity pileus 20–40(–50) mm, gradually expanding via paraboloid to campanulate convex, vaguely umbonate, smooth, not striate; with even margin; with pruinose veil, reduced to small flocci at margin; hygrophanous, when moist reddish brown orange (Séguy, 1936: 186); pallescent on drying to pale brown with a distinct pink tinge. Lamellae 3–5 mm broad, crowded, segmentiform to subventricose, brown to slightly purplish brown (Séguy, 1936: 178–177); with entire edge that becomes red underlined at maturity. Stipe 30–40(–50) × 2–4 mm, cylindrical, equal, hollow, white with violaceous tinge, covered with velar zones, with a non-striate annular zone halfway; not rooting, not bulbous. Context of pileus fleshy, 2–3 mm thick at centre, thin at margin, reddish-vinaceous; context of stipe ochraceous-reddish, in base reddish-vinaceous as in pileus.

Spores 6.3–7.2 × 3.6 µm (mean values of 20 measured spores: 6.8 × 3.6 µm), ellipsoid, adaxial flattened, without germ pore (at most a callus present), with distinct hilar



Figs. 1-4. *Psathyrella wavereniana*. 1. Habit; 2. spores; 3. cheilocystidia; 4. pleurocystidia (bar = 10 μ m).

appendix, not opaque, in water reddish brown (Mu 2.5 YR 3/4–5 YR 4/4), in 10% NH₄OH warm brown (Mu 7.5 YR 4/4). Basidia 12.5–16 × 5.5–7 µm, clavate, 4-spored. Pleurocystidia 40–52.5 × 7.5–12.5 µm (neck 4–7.5 µm thick), lageniform, thin-walled, colourless, scarce. Marginal cells: pleurocystidioid cheilocystidia 30–40(–50) × 7.5–12.5 µm (neck 4.5–7.5 µm thick), abundant; spheropedunculate and clavate cells only very few seen, 12.5–15 × 6–7 µm, in between these cells some primordial basidia and undefined tissue. All cells thin-walled and colourless. Hymenophoral trama observed in NH₄OH 10% under binocular lens against well lit white background: pale greyish brown with many distinctly fairly pale brown tissue strands, running from base of gill to edge and mutually merging near base of gill. Hyphae of the hyphal strands pale brown from membranous pigment, without encrustations and only a few yellow septa; very distinct red underlining of edge. Pileipellis a 3–4 cells deep layer of globose and subglobose cells, 30–55 µm in diam.

Habitat. Gregarious (12 specimens), subcaespitose, in coastal pine forest (*Pinus pinaster*, *Pinus pinea*) burnt on July 31st 1989, on sandy soil around stumps of *Pinus pinaster* with *Funaria hygrometrica* together with *Tephroclybe atrata*, *Plicaria endocarpoides*, and *Geopyxis carbonaria*. The pH of the soil slightly basic, 7.30–7.70.

Collection examined. ITALY: Calambrone (Pisa), 3.II.1990, *M. Marchetti* (holotype, L).

On account of the very small spores (average size of the spores 6.8 × 3.6 µm) *Psathyrella wavereniana* by definition belongs to *Psathyrella* section *Hydrophilae*. Accordingly, as in many species of that section, its spores have no germ pore and it has in the lamellae, running through the hymenophoral trama from base to edge, tissue strands of which the pigmentation is stronger than in the tissue between the strands. *Psathyrella wavereniana* is distinguished from the other taxa within section *Hydrophilae*, in particular from *P. rannochii*, that also has a strongly developed veil, forming an annular zone on the stipe, and growing in coniferous woods, by the presence of subhymenial red underlining of the edge of the lamellae, and a striking vinaceous coloration of the context of pileus and stipe.

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