

Pseudobaeospora pyrifera, a new species found in southern Germany and The Netherlands

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Summary: *Pseudobaeospora pyrifera* is described as a new species from southern Germany and The Netherlands. It is well characterized by the presence of pyriform cheilocystidia, very small, globose to subglobose spores (2.8-3.7 x 2.6-3.5 µm), an in fresh material greenish blue and in exsiccatae pale blue-green to brownish green colour reaction in KOH 5% of the pileipellis, which is composed of repent chains of inflated short cells. It has been found in moist woods (*Pruno-Fraxinetum*), grassland (*Cirsio tuberosi-Molinietum*) and a *Juniperus* stand and is frequently accompanied by *Hygrocybe*, *Geoglossum* and *Entoloma* species.

Zusammenfassung: *Pseudobaeospora pyrifera* wird als neue Art anhand von Funden aus Süddeutschland und den Niederlanden beschrieben. Sie ist gut charakterisiert durch birnförmige Cheilozystiden, sehr kleine, kugelige bis subglobose Sporen (2,8-3,7 x 2,6-3,5 µm) und eine in frischem Zustand deutlich (grünlich) blaue, im Exsikkat blass blaugrüne bis braungrüne KOH-Reaktion der Huthaut; letztere ist aus kriechenden Ketten von kurzen, angeschwollenen Zellen zusammengesetzt. Die neue Art wurde in Unterfranken in feuchten Wäldern (*Pruno-Fraxinetum*, Tendenz zum *Carpinion*) und in Pfeifengraswiesen (*Cirsio tuberosi-Molinietum*) und in den Niederlanden in einer Wacholderheide gefunden. Vergesellschaftungen finden sich u.a. mit Arten der Gattungen *Entoloma*, *Geoglossum* und *Hygrocybe*.

Introduction

In the course of fieldwork for his dissertation the second author discovered a species of *Pseudobaeospora* that differed considerably from the other species of that genus known at that time. The first author, working on a little monograph of *Pseudobaeospora* in Europe (BAS 1999) confirmed that an undescribed species was involved and found another collection of it from The Netherlands, among material kindly sent on loan by the Director of the Biological Station Wijster.

As mentioned before (BAS et al. 1997) there are several more species of *Pseudobaeospora* in Europe than the five described so far: *P. pillodii* (Quél.) Wasser, *P. oligophylla* (Sing.) Sing., *P. argentea* Bas, *P. frieslandica* Bas and *P. pallidifolia* Bas, Gennari & Robich.

It turned out that there is a great diversity of pileipellis structures in the genus, viz. from a simple cutis to a true hymeniderm and that the pileipellis is sometimes layered. Moreover, it was found

that in some (undescribed) species the pileipellis turns red, blue, green or yellow-green in KOH 5%. In addition, the presence or absence of cheilocystidia and clamp-connections and the size and habit of the basidiocarp are useful characters.

It has to be mentioned here that only fully ripened spores have a thickened, weakly dextrinoid wall and that the measurements given here relate only to such spores. When fragments of lamellae are examined, mature spores are sometimes very rare. In such cases one should look for mature spores at the apex of the stipe or on the pileipellis.

***Pseudobaeospora pyrifera* Bas & L. Krieglst., spec. nov.**

Figs. 1–5

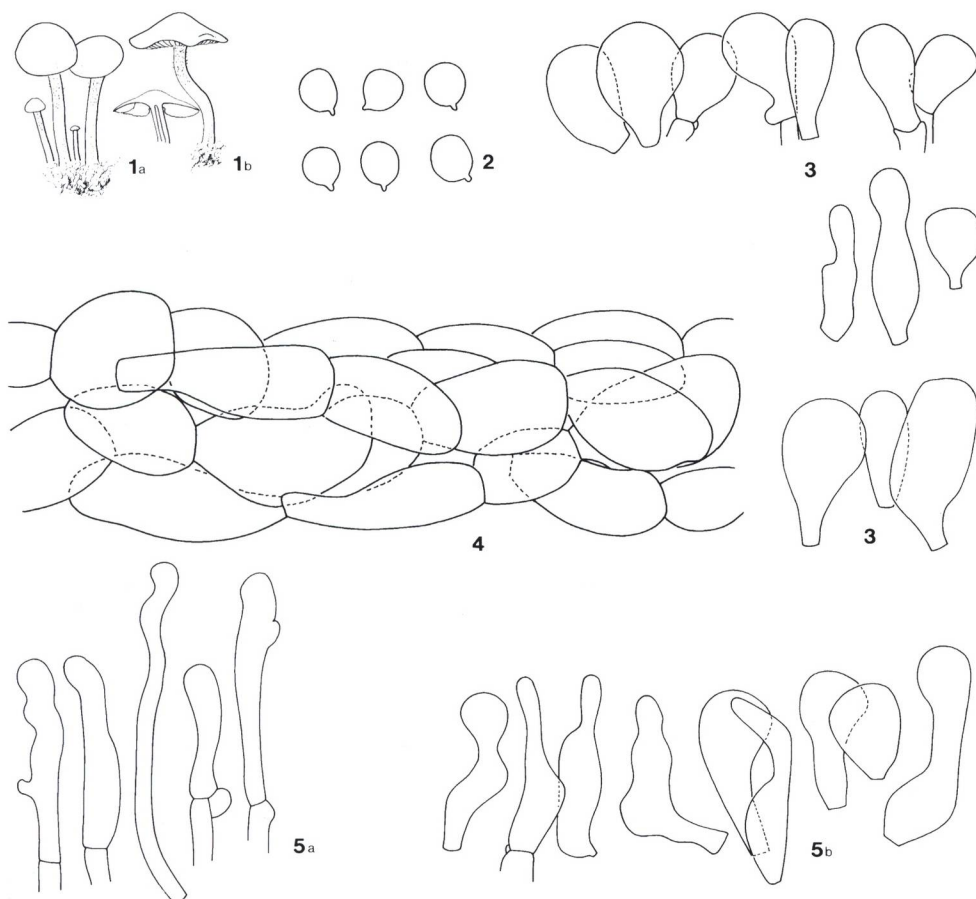
Latin diagnosis: Pileus 5–23 mm latus, initio hemisphaericus vel obtuse conicus, demum plano-convexus vel plano-conicus, interdum obtuse umbonatus, postremo applanatus vel subumbilicatus, vix hygrophanus, margine estriatus, obscure purpureo-brunneus vel vinaceo-brunneus vel roseo-brunneus, margine pallescens, leviter roseo-pruinosis vel subincanus. Lamellae paulo confertae, valde emarginatae vel subliberae, primo satis obscure rubro-violaceae vel violaceo-roseae, demum lilacino-ochraceae vel griseo-ochraceae. Stipes 11–35 x 1.5–3 mm, obscure vinaceo-brunneus vel moderate obscure rubro-brunneus, pruinoso-flocculosus, basi glabrescens. Sporae 2.8–3.7 x 2.6–3.5 μm , Q 1.0–1.15, globosae vel subglobosae, leviter dextrinoideae. Cheilocystidia 10–30 x 4–13 μm , vulgo late clavata, infrequenter anguste clavata, subcylindrica, subutriformia vel versiformia. Pileipellis ex catenis cellularum inflatarum (10–35 x 6–17 μm) repentibus constans. Fibulae praesentes.

Holotypus: L. Krieglsteiner, 10.9.1995, Germany, Bavaria, Kitzinger, Klosterforst (holotypus L., isotypus REG).

English description:

Basidiocarps relatively sturdy. Pileus 5–23 mm in diam., 5–10 mm high, from obtusely conical or hemispherical to plano-conical or plano-convex, with or without obtuse umbo, with margin at first somewhat inflexed and slightly crenulate, finally more or less flattened to sub-umbilicate, not or only slightly hygrophanous, not striate at margin, from very dark purplish brown (Munsell 5YR 3/3 to 10YR 4/4) to moderately dark vinaceous brown to pinkish brown at centre, but paler brownish pink at margin, somewhat pinkish pruinose to minutely granular-subfelted (overall impression: a pruinose sordid pink, 10YR 5/4 to pruinose brownish vinaceous pink, $\pm$ 5YR 7/4). Lamellae deeply emarginate with slightly decurrent tooth to almost free, moderately crowded ($L = 20\text{--}24$, $l = (1\text{--})3\text{--}7$), rather narrow to ventricose, rather dark reddish violaceous to violaceous pink, becoming lilacinous ochraceous to greyish ochraceous, with concolorous, entire to slightly irregular edge. Stipe 11–35 x 1.5–3 mm, cylindrical, solid to narrowly hollow, dark vinaceous red-brown (2.5YR 3/4) to moderately dark reddish brown, at first minutely, whitish pruinose-flocculose, later lower part subfibrillose to almost glabrous, with whitish felt at base. Context violaceous red, darkening when bruised. Smell indistinct. Taste mild. Spore print colour not recorded.

Microscopical characters: spores 2.8–3.7 x 2.6–3.5 μm , Q = 1.0–1.15, Q av. = 1.05–1.1, globose to subglobose with abrupt apiculus, colourless to somewhat yellowish-brownish, becoming thick-walled, weakly dextrinoid, cyanophilous, congophilous, at least some with metachromatic inner wall in Cresyl blue, smooth. Basidia 19–23 x 5.0–5.6 μm , 4-spored, with clamp-connection; some with strongly thickened wall. Cheilocystidia abundant, 10–30 x 4–13 μm , mostly broadly clavate,



Figs. 1–5: *Pseudobaeospora pyrifera* – 1: Basidiocarps x 1; 2: Spores x 1500; 3: Cheilocystidia x 1000; 4: Pileipellis in radial section x 1000; 5: Caulocystidia from apex of stipe x 1000. All figs. from type, but 1b and 5a from De Vries 1869.

but also narrowly clavate, more rarely subcylindrical, subutriform or irregularly shaped, thin-walled, colourless. Hymenophoral trama regular, composed of 3–15 μm wide hyphae; subhymenium 7–10 μm thick, densely ramose to subcellular. Pileipellis made up of loosely deposited repent chains of inflated cells, 10–35(–42) $\times$ 6–17 μm , disorderly arranged at centre, more radial towards margin, pale blue-green to brownish green in KOH 5% in dried material, deeper greenish blue in fresh material. Trama of stipe regular, consisting of 3–20 μm wide, frequently septate, thin- to slightly thick-walled hyphae. Caulocystidia (at apex of stipe) 12–31 $\times$ 3–10 μm , in dense tufts, filiform to clavate or lageniform, sometimes irregularly shaped. Clamp-connections abundant but often inconspicuous.

Ecology: Found in southern Germany in *Pruno-Fraxinetum* woods (with tendency to *Carpinion*), with *Alnus*, *Prunus padus*, *Fraxinus*, and *Carpinus* and in *Cirsio tuberosi-Molinietum* grasslands, in both habitats accompanied by many species of the genera *Entoloma*, *Geoglossum*, *Clavuli-*

nopsis, *Hygrocybe* and *Ramariopsis*. In the Netherlands found in a *Juniperus* stand with *Erica tetralix*, *Cladonia* spp., small *Entoloma* spp. and *Hygrocybe* spp. (etc. - see also L. Krieglsteiner 1998, in print).

Collections examined:

- Germany, Bavaria, Lower Franconia, Kitzingen, „Klosterforst“, s. „Schlegelsbrünnlein“ (MTB 6227/1), *Pruno-Fraxinetum* (variant of *Carex acutiformis*, tendence to *Carpinion*) 10.9.1995, L. Krieglsteiner (holotype L, isotype REG and PH Schwäbisch Gmünd); dito 16.9.1995 (cum G. Wölfel), 30.7.1996, 13.8.1996, 17.7.1997, 30.7.1997).
- Germany, Bavaria, Lower Franconia, Gerolzhofen, Alitzheim, nature reserve „Hörnau-Wald“ (MTB 6027/4), *Pruno-Fraxinetum* (variant of *Carex acutiformis*, tendence to *Carpinion*), 13.8.1996 and 11.9.1996, L. Krieglsteiner.
- Germany, Bavaria, Lower Franconia, Kitzingen, nature reserve east of Grosslangheim (MTB 6227/1), *Cirsio tuberosi-Molinietum*, 9.9.1996, 24.9.1996, 30.7.1997, L. Krieglsteiner.
- Germany, Bavaria, Lower Franconia, Grettstadt, nature reserve „Wüstgefüll“ (MTB 6027/2), *Cirsio tuberosi-Molinietum*, 17.10.1995, 24.9.1996, 3.10.1996, L. Krieglsteiner.
- The Netherlands, prov. Overijssel, between Rijssen and Markelo, 26.7.1974, B. de Vries 1869 (WBS).

Observations:

Pseudobaeospora pyrifera can be rather easily recognized by the predominantly clavate cheilocystidia, the relatively sturdy basidiocarps, the greenish blue to brownish green reaction of the pileipellis in KOH and the pileipellis of more or less repent chains of inflated cells. Moreover the globose to subglobose spores belong, together with those of *P. chilensis* Horak, to the smallest in the genus. The latter species differs, however, from the present one by tiny, very slender basidiocarps, inconspicuous, narrow cheilocystidia and narrower pileipellis elements.

Acknowledgements

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