Rhodocollybia giselae, a new species from the Mediterranean region in Europe

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Rhodocollybia giselae Neville & Antonín is described as a new species from the Mediterranean region of Europe (Italy, France). It grows in thermophilous forests with Quercus ilex, Arbutus unedo and Pinus. Its features and differences from other members of the R. butyracea group are discussed.

Key words: Basidiomycetes, Tricholomataceae, Rhodocollybia, Italy, France

During an excursion of the 4th Congress of C.E.M.M. (Confederatio Europaea Mycologiae Mediterranensis) held in Poggibonsi near Siena (Tuscany, Italy) on November 4-9, 1996, Gisèle Riousset found carpophores of a fungus resembling a small Rhodocollybia butyracea. They grew on strongly decayed wood in a Quercus ilex forest with Pinus near Cala Violina (Livourne distr.), at a distance of c. 500 m from the sea coast, at an altitude of c. 10 m. Later on, another three specimens from the Hyères Islands (Var, France) were send to us by Pierre Roux (Sainte-Sigolène, France). All specimens were studied by both of us, confirming that such a combination of features (see below) is not present in any known European and extra-European Rhodocollybia species. Therefore, we decided to describe it as a new species named after the collector, the well-known French mycologist Gisèle Riousset.

Microscopical features are described from material mounted in Melzer’s reagent, Congo Red, and NH₄OH. For the basidiospores the following symbols are used: x (average of spore size), E (quotient of length and width in any one spore), and Q (mean of E-values).
Rhodocollybia giselae Neville & Antonín, sp. nov.

Pileus 6–40 mm latus, subsemiglobatus, deinde convexus vel plano-convexus, hygrophanus, humidus et sublubricus, primum atrobrunneus usque nigrobrunneus, adultus rubrobrunneus. Lamellae liberae vel plus minus late adnatae, albidae vel cremeae. Stipes 16–66 × 3–10 mm, cylindricus, basim versus incrassatus, basi acutatus, striatus, colore pileo simili, sed dilutiori (brunneolo, apicem versus albido-brunneolo). Basidiosporae 6.9–9.6(-10.5) × 3.5–5.0(-5.4) μm, ellipsoideae vel sublacrymiformes, tenuitunicatae et simul non dextrinoideae vel leviter crassotunicatae et dextrinoideae. Cheilocystidia conspicua, 31.0–70.0 × 3.8–6.9 × 1.5–3.8 μm, anguste lageniformia vel subcylindrica. Pileipellis admodum ixocutis constructa, e hyphis cylindraceis. Caulocystidia cylindrica vel clavata, 11.5–32.5 × 4.6–9.2(-15.5) μm, tenui- vel leviter crassotunicata.

Holotypus: Italia, Tuscia: Cala Violina, 7. XI. 1996, leg. G. Riousset, in herbario P. Neville, No. 96.11.05.18 asservatur; isotypi in herbaria P. Neville, No. 96.11.05.19 et BRNM, No. 612543 asservatur.

Pileus 6–40 mm broad, subhemispherical when young, later convex to aplana-te-convex, slightly reflexed when old, hygrophanous, not or only slightly translucently striate at margin when wet, slightly greasy when wet; very dark brown, sooty brown to blackish-brown (Kornerup & Wanscher, 7–12F2–4), sometimes with some paler patches, pallescent to sooty brown or reddish-brown (7D5–7, as much as 9C8) with paler patches when old. Lamellae almost free to broadly adnate, rather close, slightly ventricose, up to 4 mm broad at centre; whitish to creamy, with pubescent, non-serrulate edge; reaction with FeSO₄ slightly pinkish (similar to R. butyracea) or none. Stipe 16–66 × 3–10 mm, subcylindrical, distinctly broadened at base, distinctly longitudinally striate, with white basal tomentum, hollow, singly growing carpophores often with a small sharp appendix at base, carpophores growing in small groups (of 2–4) seemingly form a joint base; colour similar as pileus but paler, slightly brownish to brownish-whitish at apex. Context whitish, or slightly sooty-brownish to brownish-reddish under pileus and stipe surface; smell and taste fungoid.

Spores 6.9–9.6(-10.5) × 3.5–5.0(-5.4) μm, x = 8.3 × 4.3 μm, E = 1.7–2.1(-2.4), Q = 2.0, ellipsoid to sublacrymoid, hyaline, thin-walled and non-dextrinoid or slightly thick-walled and then mostly dextrinoid, smooth. Basidia 21.5–31.0(-34.0) × 6.2–8.1 μm, 4-spored, clavate; sclerobasidia present. Basidioles 13.0–34.5 × 3.0–9.2 μm, cylindrical to clavate. Cheilocystidia 31.0–70.0 × 3.8–6.9 (at base) × 1.5–3.8 (neck) μm, narrowly lageniform, awl-shaped to subcylindrical, sometimes septate, sometimes subcapitate or with clavate top, obtuse, thin- to slightly thick-walled. Hyphae cylindrical to subinflated, thin-walled, non-dextrinoid, hyaline, up to 15 μm wide. Pileipellis an ixocutis, made up of radially arranged,
Rhodocollybia giselae Neville et Antonín: spores and cheilocystidia. Scale bar = 10 μm.

±cylindrical, ±thin-walled, non-dextrinoid hyphae, smooth or dark brown incrusted (in NH₄OH), up to 7 μm wide; terminal cells appressed to erect, cylindrical to clavate, simple or slightly coralloid, obtuse, up to 9.5 μm wide. Subpileipellis coarsely dark brown incrusted. Stipitpellis a cutis, of parallel, cylindrical, slightly thick-walled, finely incrusted, non-dextrinoid, up to 6.5 μm wide hyphae. Caulocystidia 11.5–32.5 × 4.6–9.2(–15.5) μm, in form of lateral projections of stipitpellis hyphae or appressed to erect cylindrical to clavate terminal cells, thin- to slightly thick walled, obtuse. Clamps common in all tissues.

Ecology. Single or in poor clusters; on soil, litter or strongly decayed wood; in thermophilous Mediterranean forests with Quercus ilex, Arbutus unedo and Pinus, at an altitude of c. 10–100 m. It fructificates in late autumn to early winter (November to December).

Specimens revised. ITALY: Tuscany, Cala Violina, 7 Nov. 1996 leg. G. Rioussset (Holotype: herb. P. Neville no. 96.11.05.18, Isotypes: herb. P. Neville no.
Having a dark coloured pileus, a pileipellis in the form of an ixocutis, and at least partly ellipsoid to sublacrymoid dextrinoid spores, \textit{Rhodocollybia giselae} belongs to the \textit{R. butyracea} group. However, it distinctly differs especially in having small carpophores (which seems to be a constant feature), a very dark brown to black brown coloured pileus when young, that turns red-brown when old, and distinct narrowly lageniform, awl-shaped or subcylindrical cheilocystidia. The form of the cheilocystidia is rather unique in this group (Antonín & Noordeloos 1997; Halling 1983; Lennox 1979).

\textit{Rhodocollybia butyracea} (Bull.: Fr.) Lennox f. \textit{butyracea} represents the only similar European taxon. It differs especially in having larger carpophores, a paler, dark brown to red-brown coloured pileus and rather inconspicuous, clavate, irregular, lobate to subcoralloid, 15–35 \times 3–10 \, \mu \text{m} large cheilocystidia.

\textit{Rhodocollybia giselae} is known from three localities in Italy and France, and may represent a Mediterranean species.

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\section*{References}


