CZECH MYCOL. 50 (3), 1998

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

VLADIMÍR ANTONÍN[1] and PIERRE NEVILLE[2]

[1]Moravian Museum, Dept. of Botany, Zelný trh 6, CZ–659 37 Brno, Czech Republic

[2]Université d'Aix-Marseille III, Laboratoire de Morphogenèse Végétale, Av. Escadrille Normandie-Niémen, F-13397 Marseille Cedex 20, France

Antonín V. and Neville P. (1998): Rhodocollybia giselae, a new species from the mediterranean region in Europe.– Czech Mycol. 50: 181–184

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

Antonín V. a Neville P. (1998): Rhodocollybia giselae, nový druh z mediteranní oblasti Evropy. – Czech Mycol. 50: 181–184

Druh *Rhodocollybia giselae* Neville & Antonín je popsán jako nový pro vědu z mediteranní oblasti Evropy (Itálie, Francie). Roste v teplomilných lesích s *Quercus ilex, Arbutus unedo* a *Pinus*. Jsou diskutovány jeho znaky a rozdíly od dalších druhů z okruhu *R. butyracea*.

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 NH_4OH. 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 dilutiore (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 applanate-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 $FeSO_4$ 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,

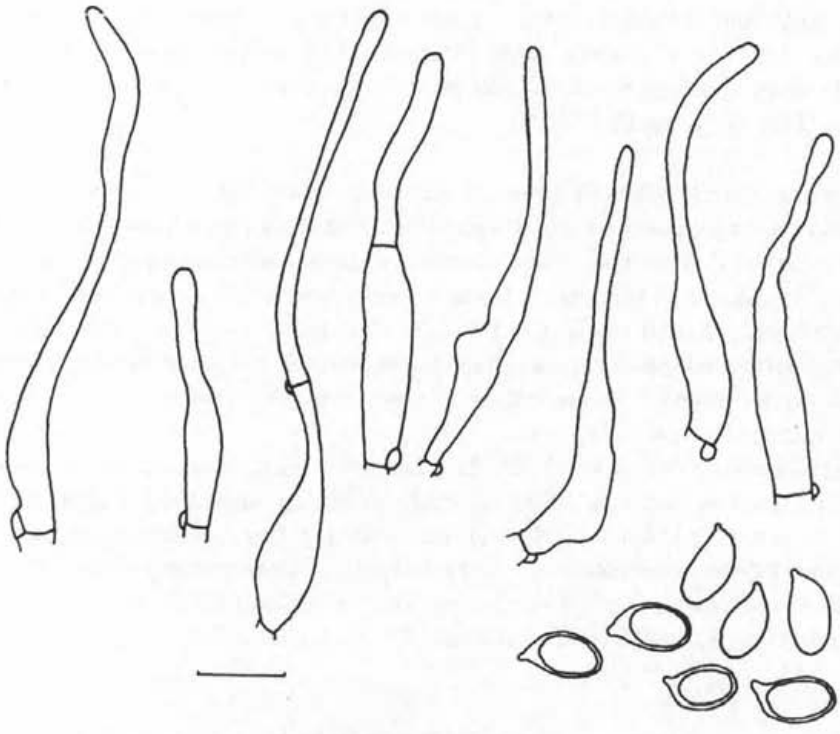

Fig. 1 *Rhodocollybia giselae* Neville et Antonín: spores and cheilocystidia. Scale bar = 10 μm.

±cylindrical, ±thin-walled, non-dextrinoid hyphae, smooth or dark brown incrusted (in NH_4OH), 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. Stipitipellis 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 stipitipellis 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. Riousset (Holotype: herb. P. Neville no. 96.11.05.18, Isotypes: herb. P. Neville no.

96.11.05.19 and BRNM 612543). – FRANCE: Hyères Islands, Var, Porquerolles, 11 Nov. 1993 leg. D. Salvat (herb. P. Roux 93.11.18.79). – ditto, 27 Dec. 1995 leg. J. Astier (herb. P. Roux 95.12.24.99). – ditto, Port-Cros, 12 Nov. 1993 leg. D. Salvat (herb. P. Roux 93.11.18.91).

Having a dark coloured pileus, a pileipellis in the form of an ixocutis, and at least partly ellipsoid to sublacrymoid dextrinoid spores, *Rhodocollybia giselae* belongs to the *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).

Rhodocollybia butyracea (Bull.: Fr.) Lennox f. *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 × 3–10 μm large cheilocystidia.

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

AKNOWLEDGEMENTS

The authors would like to thank Dr. Josef Herink (Mnichovo Hradiště, Czech Republic) for the correction of the Latin diagnosis, and Mr. Pierre Roux (Sainte-Sigolène, France) for sending us additional collections of *R. giselae*.

REFERENCES

ANTONÍN V. and NOORDELOOS M. E. (1997): A monograph of Marasmius, Collybia and related genera in Europe. Part 2: Collybia, Gymnopus, Rhodocollybia, Crinipellis, Chaetocalathus, and additions to Marasmiellus. – Libri Botanici 17. Eching.

HALLING R. E. (1983): The genus Collybia (Agaricales) in the northeastern United States and adjacent Canada. – Mycol. Mem. 8: 1–148.

KORNERUP A. and WANSCHER J. H. (1967): Methuen handbook of colour. 2. Ed. – London.

LENNOX J. W. (1979): Collybioid genera in the Pacific northwest. – Mycotaxon 9: 117–231.

Plate 1. *Rhodocollybia giselae* Neville et Antonín: France: Hyères Islands, Var, Porquerolles, 11 Nov. 1993 leg. D. Salvat (P. Roux 93.11.18.79). Photo P. Roux.