

A new *Simocybe* from Canada

S. A. REDHEAD¹ & R. CAUCHON²

¹ Biosystematics Research Centre, Agriculture Canada, Research Branch, Central Experimental Farm, Ottawa, Ontario, K1A 0C6, Canada

² Centre de Recherches Forestières des Laurentides, Forêt Canada, 1055 rue P.E.P.S., C.P. 3800, Sainte-Foy, Québec, G1V 4C7, Canada

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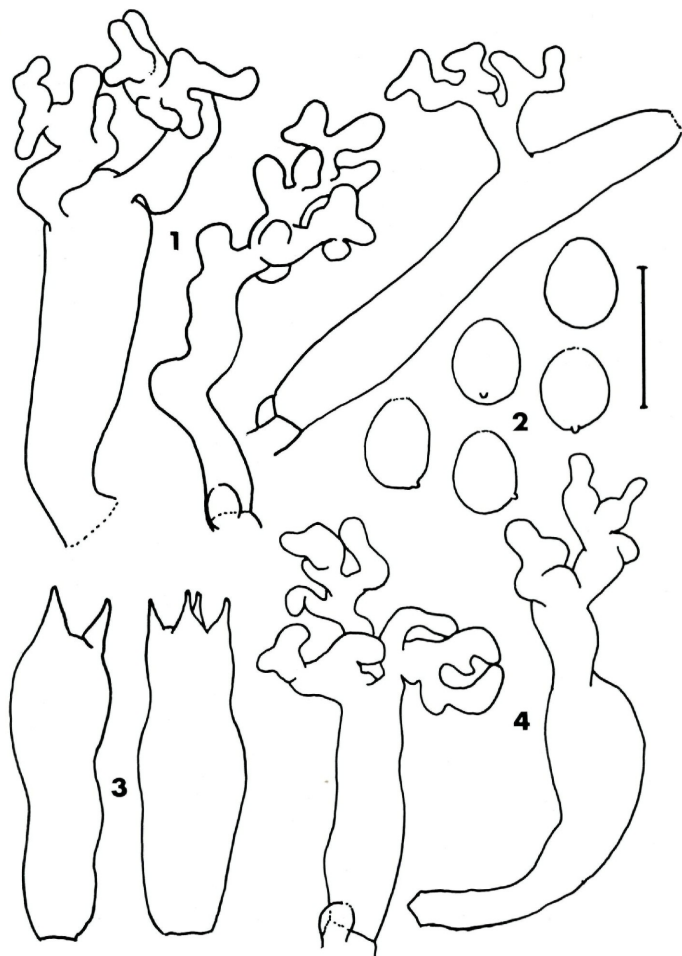
A new species, *Simocybe quebecensis* REDHEAD & CAUCHON, on oak bark, from Québec, Canada, is distinguished primarily by its coralloid pileocystidia.

An undescribed species of *Simocybe* with unusual, coralloid pileocystidia was found fruiting on the dead bark of an oak tree near Québec City, Canada. No other species of *Simocybe* has such highly branched pileocystidia, although *S. citrinipes* (MURR.) SINGER reportedly has a few forked pileocystidia (SINGER, 1973). The Canadian fungus is here described as new from exsiccata.

Simocybe quebecensis REDHEAD & CAUCHON, sp. nov. – Figs. 1–4.

Pileus 1–2 mm latus, albus, convexus, micaceus, pruinosus. Lamellae 6–10, adnatae, distantes, ventricosae, cinnamoneae, albomarginatae. Lamellulae 6–10. Stipes 1–2 mm longus, 0.1–0.2 mm diam., albus, pruinosus, +/- curvus, +/- excentricus. Pileus pellicula coralloidi tectus. Pleurocystidia nulla. Cheilocystidia coraliformia, hyalina. Basidia 21–22 × 7–7.5 µm, tetra- vel bispora, clavata vel ventricosa. Basidiosporae 5.6–6.1 × 4.4–5 µm, ovoideae vel ellipsoideae, brunneolae, leves. Stipes pellicula coralloidi tectus. Ad corticem arborum (*Quercus*). Typus QFB 8768.

Pileus up to 2 mm diam., convex, at first with inrolled margins, white, tinted very pale cinnamon centrally only on the largest specimen, micaceous, pruinose, central or eccentric. – Lamellae moderately broadly ventricose, slightly attached, pale cinnamon when mature, with pruinose, white margins; lamellulae 6–10, present in 1 tier. – Stipe 1–2 mm long, 0.1–0.2 mm diam., often curved to one side, white, pruinose, micaceous, equal or slightly tapered upwards, often with an appressed, delicate weft of white mycelium radiating out from the base. – Pileipellis composed of a turf of erect to suberect coralloid pileocystidia or cystidioid diverticulae arising from repent hyphae, these cells being hyaline to pale yellowish brown, 10–37 µm long, up to 7 µm wide, with convoluted, branched structures mainly towards the apices; the branches 1.5–3 µm diam.; the walls refringent. – Trama composed of loosely arranged, thin-walled, smooth, acyanophilic, clamped hyphae



Figs. 1-4. *Simocybe quebecensis*. - 1. Pileocystidia. - 2. Basidiospores. - 3. Basidia. - 4. Cheilocystidia. - Scale = 10 μ m.

3–9 μm diam., many with broadly ellipsoid cells. – Lamellar trama bidirectional, but mainly radially arranged hyphae similar to those in the pilear trama.

Basidiospores 5.5–6.1 \times 4.4–5 μm , broadly ovoid to nearly broadly ellipsoid, smooth, pale yellowish brown, with relatively thin walls which are thinner and less pigmented apically but not definite enough to be a germ pore, frequently collapsed in wet mounts. – Basidia 21–22 \times 7–7.5 μm , 2- and 4-spored, clavate to slightly ventricose, hyaline. – Pleurocystidia absent. – Cheilocystidia abundant and forming a sterile margin, similar to the pileocystidia. – Caulocystidia covering the entire stipe, similar to those of the pileipellis.

Gregarious under the outer bark on peeling inner bark and *Hypoxylon* sp. stroma on a dying oak (*Quercus? rubra*).

Holotype. – CANADA, Québec: Montmorency Co., Beauport near Québec City, Aug. 23, 1983, J. CREPEAULT (QFB 8768); Isotype: DAOM 199927.

Simocybe is largely a tropical to subtropical, lignicolous genus associated with hardwood debris. Out of 15 species known from North America, 9 only occur as far north as Florida or Mexico (SINGER, 1973). Fourteen others occur in South America (SINGER, 1973; HORAK, 1979 c), 6 in New Zealand (HORAK, 1980), 4 in Papua New Guinea (HORAK, 1979 a), one each in southern Australia and Malaysia (HORAK, 1979 b), 8 in Great Britain and Europe (REID, 1984; PEGLER & YOUNG, 1975; MOSER, 1983; SINGER, 1988), and one possibly taxonomically misplaced species in Antarctica (PEGLER & al., 1980).

Five species are now known from Canada. These are: *Simocybe centunculus* (FR.) KARST. and *S. serrulatus* (MURR.) SINGER (REDHEAD, 1984), *S. haustellaris* (FR.) WATLING (GINNS, 1986), *S. reducta* (FR.) KARST. (DAOM 175717, from Manitoba), and *S. quebecensis*. *Simocybe tiliophila* (PECK) SINGER, known from New York and Massachusetts on *Tilia* wood (SINGER, 1943; HESLER & SMITH, 1965) probably occurs in Canada too. Similarly, *S. obscura* (ROMAGNESI) REID, *S. rubi* (BERK.) SINGER, and *S. laevigata* (FAVRE) ORTON, known from Great Britain and Europe, will probably be discovered in Canada or the USA.

Simocybe quebecensis differs from all other species by the highly developed coralloid pileipellis elements. Other unusual features are the spore shape and presence of a germ pore like apical thinning, and the whitish coloration. *Simocybe* species often have olivaceous tinted pilei and vaguely reniform shaped spores. Macroscopically, *S. quebecensis* is most similar to *S. haustellaris*, a species commonly found on the dead bark of standing or fallen poplars in Canada (GINNS, 1986), the USA (HESLER & SMITH, 1965), and Europe

(PILÁT, 1948). These similarities include the small size, central to eccentric attachment, and a pruinose coating to the pileus and stipe. *Hemimycena tortulosa* (ORTON) REDHEAD, *Pleuroflammula minutula* (SMITH & HESLER) HORAK, *Phaeomarasmius rimulinicola* (RABENH.) ORTON, and *Mycena meliigena* (BERK. & COOKE) SACC., other bark inhabiting agarics, all share these features which must be advantageous adaptations to the habitat.

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Autor(en)/Author(s): Redhead S. A., Cauchon R.

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