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A NEW SPECIES OF SIMOCYBE FROM NORTH AMERICA

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ABSTRACT

A new species of Simocybe is described from the wood of Populus tremuloides in Alberta, Canada. The relationship of this taxon to other species in the genus is discussed.

Key Words: aspen, Ramicola, Simocybe, Alberta.

INTRODUCTION

A small laterally attached, nearly sessile agaric was found on an aspen log in southern Alberta, Canada. This occurred during field work with a class from Flathead Lakes Biological Station of the University of Montana. The specimens were photographed in place, fresh notes taken, and the two collections noted below represent the preserved specimens. It was determined following microscopic examination to be a Simocybe by the authors. The senior author has extensively studied the species of Simocybe Karsten, also described as Ramicola Velenovsky, from various parts of the world (Horak, 1968, 1979a, 1979b, 1980). The taxon treated here differs from the known species and is described below.

TAXONOMY

Simocybe americana sp. nov. E. Horak and O. K. Miller

Illustrations: Figs. 1-5. Icones: Plate p. 32 as Ramicola, Mushrooms of North America in Color, Bessette et al. 1995.

Pileus 4-12 mm, convexus dein planus, olivaceo-luteus vel argillaco-brunneus, minute velutinus, siccus. Lamellae adnexo-ventricosae, distantes, pallide olivaceae dein argillaceae, fimbriatae. Stipes 0.5-4 x 0.5-1 mm, cylindricus, centralis vel eccentricus, albo-velutinus. Odor acidulosus. Sapor nullus. Caro molis, cremeo-argillacea. Basidiosporae 7-10 x 5-6.5 μm , ovoideae vel pruniformes, pallide brunneae, leves, poro indistincto instructae. Basidia 20-25 x 7-9 μm , 4-sporae. Cheilocystidia 21-57 x 3-7 μm , conspicuae, pedicellato-capitatae, hyalinae. Pileipellis ex cellulis cylindraceis vel subcapitatae palisadam formatibus, 22-38 x 3-5 μm , pigmento brunneo impletae.

Fibulae adsunt. Ad lignum putridum Populi tremuloides. Canada, Alberta, Kananaskis Valley, 20 vii 1989, E. Horak (ZT 4382, holotypus).

Pileus 4-12 mm broad, convex, flat to broadly umbonate in age, dry, mealy to velvety pruinose, olive-yellow, olive-brown, pale argillaceous to pale brown; margin minutely striate. **Lamellae** deeply adnexed, ventricose, distant (16-20 reach stipe), buff young to olive-yellow in age. **Stipe** 0.5-4 mm long, 0.5-1 mm wide, curved, central or eccentric, equal to clavate, dry, white pruinose over an olivaceous-buff ground color.

Context soft, cream to buff. **Odor** strongly acidulous. **Taste** not distinctive.

Pileipellis a trichodermial palisade of hyphal-like, often capitate end cells 22-38 x 3-5 μm thin-walled, often incrustated, brown in 3% KOH, with a basal clamp connection.

Pileitrama of interwoven, thin-walled hyphae 4.2-10.5 μm diam with a clamp at each

septum, hyaline in 3% KOH and Meltzer's solution. **Lamellar trama** interwoven,

similar to pileitrama. **Cheilocystidia** very abundant, 21-57 x 3-7 μm , narrowly clavate, hyphal-like with or without capitate apex (-8 μm diam), thin-walled, with a basal clamp connection, hyaline in 3% KOH and Melzer's solution. **Pleurocystidia** similar but scattered, usually near the gill edge. **Basidia** 20-25 x 7-9 μm diam, clavate, thin-walled, 4-spored, hyaline in 3% KOH. **Basidiospores** 7-10 x 5-6.5 μm , pip-shaped to ovoid, thin-walled, pale brown with a very small distinct apical pore.

Spore print brown.

Habit, habitat, and distribution: gregarious on aspen logs (*Populus tremuloides*) in the summer, known only from Alberta, Canada.

Material examined: CANADA: Alberta; Kananaskis Valley, north of Racecourse Campground, 4800' elev, 20. VII. 1989,

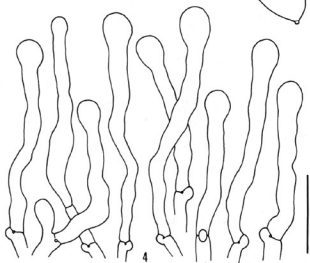
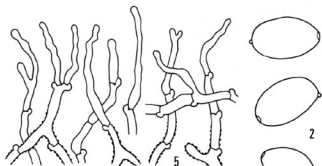
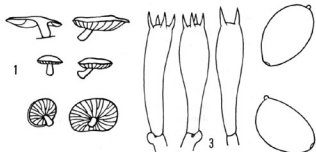
E. Horak, ZT 4382 (holotype) (ZT), C. L. Cripps, July 20, 1989 (VPI).

Observations: The small, convex, pruinose fruiting body with the curved pruinose stipe, on wood, combined with the trichodermial pileipellis and brown, thin-walled spores with a germ pore are characteristics of the genus *Simocybe*. The long, clamped cystidia, clamped trichodermial cells, 4-spored basidia, and pip-shaped to ovoid spores are a distinctive combination of characteristics which separate *S. americana* from other species in the genus. It is very possible that it has been misidentified as a *Crepidotus* or *Naucoria* and may be much more common in North America than records show to date.

In Europe the closely related *Ramicola rubi* (Berk.) Watl. (Watling, 1988) has been reported on oak and birch. *Simocybe* is placed in the Crepidotaceae (Imai) Sing., a family characterized by pale brown smooth to verrucose basidiospores often with an apical pore. It is also typified by a pileipellis with a trichodermium, often hymeniform, and pleurotoid, sessile to laterally stipitate, often small fruiting bodies. The majority of the species are decomposers on the wood of Angiosperms and Gymnosperms or on humus (Henson and Knudsen, 1992, Moser, 1983).

Simocybe americana Fig. 1-5. 1. sporocarps. 2. basidiospores. 3. basidia with clamp connection at base. 4. cheilocystidia with clamp connection at base. 5. trichodermium a palisade of hyphal-like to capitate end cells with clamp connections.

Fig. 1. bar = 3 cm. Fig. 2. bar = 10 μm . Figs. 3-5. bar = 20 μm .



Notes: *Simocybe* was described by Karsten in 1879 but has not always been accepted as a genus. Recently *Simocybe* P. Karst. was proposed for and approved as a nomen conservandum with *S. centunculus* (Fr.:Fr.) P. Karst. as the conserved type. ICBN (Tokyo Code) App. IIIa, p. 163 (Greuter, 1994). Some *Simocybe* species have been placed in *Naucoria* and *Crepidotus*. One of us (EH) has re-examined many of the North American holotypes of *Naucoria* but none represent the present taxon. In 1992, Dossing, in *Nordic Macromycetes*, recognized the genus *Ramicola* Vel. and transferred several species of *Simocybe* to it. This results in synonymy of the closely related *S. rubi* (Berk. apud Hooker) Sing. under *R. rubi* (Berk.) Watl. It has been known as *Naucoria effugiens* Quél. and is illustrated in *Flora Agaricina Danica*, plate 125, fig. c., and is closely related to *Ramicola haustellaris* (Fr.:Fr.) Watl. which was made a new combination by Watling in 1988. Both of the taxa above have also been placed in the genus *Crepidotus*. Hesler and Smith (1965) placed *C. haustellaris* (Fr.:Fr.) Kummer in the genus *Crepidotus*, subgenus *Dochmiopus* (Pat.) Pilát and described it from Michigan "on hardwood logs." It seems to be closely related to our species but the spores are different and are described as ellipsoid to subovoid with "no germ pore." Kauffman (1918) placed 15 species in the genus *Crepidotus* and only *C. versutus* (Pk.) Sacc. is similar to the taxon reported here. Hesler and Smith restudied it and described the spores as "very minutely punctate" without a germ pore and clamp connections in the fruiting body which places it in the subgenus *Crepidotus*. The color illustration in Bessette et al. (1995) as *Ramicola americana* adequately illustrates the new taxon and was in press prior to the distribution of ICBN (Tokyo Code) containing *Simocybe* as a nomen conservandum (Greuter, 1994).

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