



1, Apothecium arising through bark (ca $\times 10$); 2, section through margin of apothecium ($\times 125$); 3,4,5,6, asci ($\times 375$), 5, showing paraphyses, 6, with emerging ascospores; 7, ascospore ($\times 375$); 8, ascospore ($\times 500$); 9, ascospores; 10, asci and paraphyses. All from DAOM 89966.

Therrya fuckelii (Rehm) Kujala, Comm. Inst. Forestry Inst. 38: 4. 1950.

≡ *Coccophacidium pini* var. *fuckelii* Rehm, Rabenhorst's Krypt.-flora, I(3): 99. 1888.

≡ *Coccophacidium fuckelii* (Rehm) Krieger, Fungi saxonici No. 735. 1891.

APOTHECIA single or in small groups, erumpent through irregular splits of periderm of dead or dying branches, saucer-shaped, 1-3 mm diam., with a pale yellow to brown disc encircled by a dark brown, nearly black excipulum. **HYMENIUM** pale yellow to brown, usually 145-160 μ deep. **ASCI** inoperculate, IKI-ve, INK-ve, cylindrical to narrowly clavate, widest near middle, apex truncate, stipe short, regularly containing a fascicle of four spores, (105-)120-150(-165) \times (10-)11.5-15.5(-17) μ . **ASCOSPORES** filiform, straight, curved or rarely sigmoid, parallel in the ascus or rarely helically coiled, initially one-celled with an aculeus (9-)12-18 μ long at each end, becoming 7- to 11-septate with slightly inflated cells, the apex sometimes losing the aculeus and appearing rounded, light brown, terete, without sheath or gelatinous appendages, (65-)90-135(-145) \times (3.0-)3.5-4.5(-5.5) μ . **PARAPHYSES** numerous, exceeding the asci, hyaline and filiform below, 1.5-2.0 μ diam., septate at intervals of 12-25 μ , apically swollen to a 3.5-6.0 μ dark brown or rarely hyaline globe coated with mucilage that agglutinates tips of paraphyses into an epithecium 20-30 μ deep. **SUBHYMENIUM** hyaline to yellowish brown, about 20 μ thick. **SUBICULUM** lacking. **MEDULLARY EXCIPULUM** hyaline, 40-80 μ thick, of polygonal cells containing crystals 20 μ diam., disintegrating at maturity. **ECTAL EXCIPULUM** dark brown to black, of thick-walled *textura angularis*, 10-16 μ thick at base, 20-60 μ thick at sides, usually with sections of the host bark adhering to the outer portion.

SUBSTRATE: On dead and dying branches of *Pinus resinosa* Ait. and (in DAOM 116611, 146670, and 146672) *P. sylvestris* L.

DISTRIBUTION: Quebec, Ontario.

COLLECTIONS: Que., St. Chrysostome, 28.VIII.1964, DAOM 146667 (G. Bard); Park Reserve Kamouraska, 30.VI.1961, 146668 (G. Ouellette), 23.VIII.1961, 146669, 146672, 146673 (G. Ouellette and G.B.); Berthierville, 5.XI.1970, 146670 (J. Bard); La Vérendrye Park, 14.IX.1961, 146671 (G.O. and G.B.); Pont-Rouge, 29.IX.1973, 146675 (A. Carpentier); Gatineau, 8.VII.1971, 146674 (A. Lavallée and G.B.). Ont., Bear Is., L. Temagami, 20.IX.1935, 86410 (J.W. Groves), 4.VIII.1937, 86409, 117613 (H.S. Jackson); Petawawa, 25.IX.1944, 124673 (J.W.G.); Port Elgin, 14.VIII.1962, 89966 (R.A. Shoemaker); Lisle, L. Simcoe Dist., 10.VII.1967, 116611 (R.L. Bowser).

NOTES: The species is most readily distinguished by the characteristic four spores per ascus and the conspicuous acerose tips on even the youngest ascospores. It is found on the shaded lower dead or dying branches of *Pinus resinosa* and *P. sylvestris* or on recently fallen branches and is particularly evident after the apothecia have swollen following rainfall.

Reid and Cain (Can. J. Bot. 39: 1117-1129. 1961) in their illustrated account of the genus *Therrya*, recorded a number of collections from Ontario as well as listing foreign collections (U.S.A., Sweden, Hungary, France, Germany, Finland).

Gremmen (Nova Hedwigia 1: 252-288. 1960) reported that cultures obtained from ascospores produce floccose, white or cream mycelium without a conidial state.

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