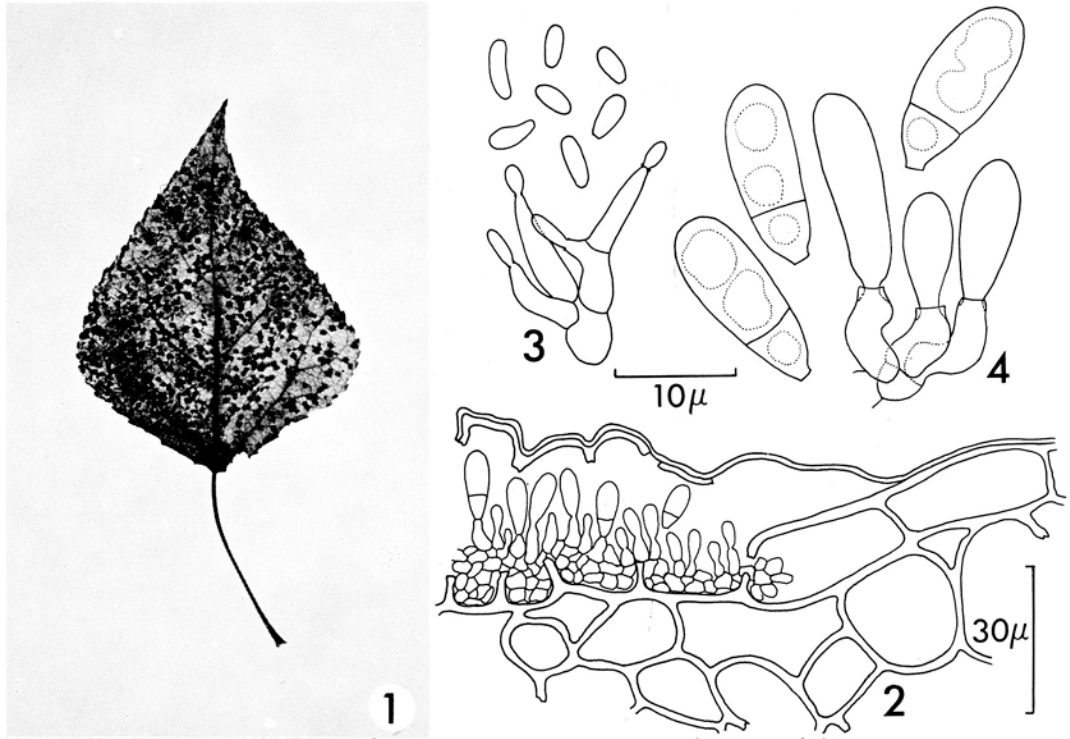


MARSSONINA BRUNNEA



1, Habit (ca \times 1) from DAOM 144348; 2, portion of acervulus (vertical section) from DAOM 88057; 3, conidiogenous cells and microconidia from DAOM 92822; 4, conidiogenous cells and macroconidia from DAOM 144348.

Marssonina brunnea (Ell. & Ev.) Magn., Hedwigia 45: 89. 1906.

\equiv *Gloeosporium brunneum* Ell. & Ev., J. Mycol. 5: 154. 1889.

\equiv *Marsonia brunnea* (Ell. & Ev.) Sacc., Syll. Fung. 10: 478. 1892.

SPOTS punctiform, brown, angular, usually about 1 mm across, discrete, sometimes gregarious, but not confluent to form large necrotic blotches. ACERVULI amphigenous but mostly hypophyllous, intraepidermal, up to 400 μ diam., with accumulated conidia lifting host cuticle to form yellow-orange blisters. CONIDIOGENOUS CELLS phialidic, cylindrical and usually twisted, 6-13 \times ca 3 μ . CONIDIA hyaline, granular, obovoid, straight or somewhat curved, with a single septum dividing the conidium into a smaller lower cell, usually 1-guttulate and bearing a flat scar at the base, and a larger, rounded and usually 2-guttulate upper cell, (11-)13-18(-21) \times (3.5-)4.5-5.7(-7) μ .

Microconidial pustules which sometimes accompany the macroconidial fructifications from which they are indistinguishable or into which they are incorporated, contain narrowly conical to ampulliform, sometimes branched phialides 7.5-12 \times 1.5-2.5 μ , producing 1-celled, ellipsoid or allantoid, colourless microconidia 3.3-5.5 \times 1.2-1.8 μ .

SUBSTRATE: living leaves of *Populus* \times *canadensis* Moench, *P. deltoides* Bartr., *P. grandidentata* Michx. and *P. tremuloides* Michx.

DISTRIBUTION: Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan, Alberta, British Columbia, Yukon Territory.

COLLECTIONS: On *Populus* × *canadensis*, N.S., Paradise, Annapolis Co., 30.VIII.1956, DAOM 55660 (W.R. Newell); Que., St. Bruno, 13.VIII.1958, DAOM 59793 (R. Reeves & J. Benazet); Ont., Ottawa, 13.VII.1973, DAOM 144348 (R. Prudhomme); B.C., Agassiz, 23.VIII.1963, DAOM 106002 (D.H. Ruppel); on *P. deltoides*, Ont., Guelph, 13.VII.1913, DAOM 130529 (J. Dearness); on *P. grandidentata*, N.S., Kentville, 19.VIII.1952, DAOM 35049 (D. Creelman); N.B., Young's Cove, Queen's Co., 31.VIII.1956, DAOM 55661 (W.R. Newell); Ont., London, 28.VIII.1913, DAOM 130531 (J. Dearness); on *P. tremuloides*, N.B., Cameron Mills, Kent Co., 26.VII.1956, DAOM 43051 (W.R. Newell); Que., Elgin Rd., L'Islet Co., 12.IX.1945, DAOM 15559 (I.L. Conners); Ont., Highland Park, Ottawa, 19.VIII.1945, DAOM 15560 (D.B.O. Savile); Sask., Melfort, 23.VIII.1945, DAOM 19966 (P.M. Simmonds & B.J. Sellans); Alta, Longhead, IX.1918, DAOM 144838 (H.T. Güssow); B.C., Babine Lake, 29.VIII.1957, DAOM 63249 (D.G. Collis); Yukon T., Whitehorse, 28.VIII.1962, DAOM 92824 (J. Holms).

Thirty-four additional specimens were examined including a British Columbia collection (DAOM 88055) on *Populus alba* which is the usual host of *Marssonina castagnei* (Desm. & Mont.) Magn. This probably represents an accidental development initiated under optimal conditions from inoculum derived from an adjacent infected *P. tremuloides*. According to D.B.O. Savile (pers. comm.) comparable situations occur in otherwise host specific rusts and smuts, but the fungi are probably not capable of perpetuation on unusual hosts.

NOTES: The pathogen was recently treated by Rimpau (Phytopath. Z. 43: 257-306. 1962) and Gremmen (Nova Hedwigia 9: 163-176. 1965; Ned. Bosb. Tijdschr. 37: 196-198. 1965) who described the perfect state as *Drepanopeziza tremulae* Rimpau and *D. punctiformis* Gremmen respectively. In view of the discrepancies in the original descriptions, particularly regarding the size of ascospores, a critical reassessment is needed before the earlier name is established as correct for the species. The *Drepanopeziza* state of *M. brunnea* had not yet been found in Canada.

M. brunnea was recorded from Prince Edward I. as occurring on *Populus eugenei* and *P. tremuloides* (Magasi, Inform. Rept. M-X-7, Part 1, 127 pp. Can. Dept. For. 1966).

The microconidial state of *M. brunnea* is not to be confused with *Phyllosticta brunnea* Dearn, & Barth. which was originally collected on *Populus angustifolia* in Colorado. The fungus collected on *P. balsamifera* in Saskatchewan and on *P. tremuloides* in Manitoba and identified as *P. brunnea* (Bisby et al., Fungi of Man. and Sask., Ottawa, 1938) is a different fungus altogether.

Leptothyrium tremulae Lib. which Rimpau (l.c.) placed in synonymy with *M. brunnea* is *Titaeosporina tremulae* (Lib.) v. Luyk.

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