



1, habit (ca \times 1); 2, fructification (vertical section) and 3, portions of conidiophores and conidia from DAOM 145234.

Ramularia coalescens (J.J. Davis) Pirozynski comb. nov.

■ *Cercospora coalescens* J.J. Davis, Trans. Wis. Acad. Sci. 15: 780. 1907.

= *Graphiothecium vinosum* J.J. Davis, l.c. 18: 90. 1915.

SPOTS more or less angular and vein-limited, 2-8 mm diam., reddish brown and bordered by a narrow, darker zone above, paler, greenish or greyish brown beneath, scattered or crowded to form mosaic-like pattern but rarely coalescing. **FRUITING** hypophyllous, tufts punctiform, about 50 μ diam., scattered over the entire area of leaf spot, usually more or less distinctly pink and bearing a whitish fluff of conidia when profusely sporulating. **STROMATA** substomatal, about 30 μ diam., plectenchymatous, composed of hyaline, thin-walled, irregular cells 5-8 μ diam. bearing up to 20 conidiophores which emerge in a tight fascicle through stomatal opening. **CONIDIOPHORES** in form of simple conidiogenous cells which elongate through repeated sympodial proliferation and become subdivided by a single septum, thin-walled, colourless, flexuous and geniculate, up to 60 μ long and 3-4 μ wide, bearing along the upper half up to 8 conspicuously thickened, ring-shaped, refractive scars. **CONIDIA** arise terminally but may also persist in a lateral position on the conidiophore, develop acropetally to form branched chains, with individual conidia germinating in situ into lateral conidia or anastomosing with neighbouring conidia, narrowly ellipsoid but more typically cylindrical, sometimes simple but usually becoming subdivided by a median septum, very rarely developing a second septum following germination or anastomosis, thin-walled, colourless, bearing a thickened, annular refractive scar at the base, rounded or bearing one or two somewhat protruding scars above, 20-50 \times 3-5 μ .

SUBSTRATE: living leaves of *Ribes bracteosum* Dougl. ex Hook.

DISTRIBUTION: British Columbia.

COLLECTIONS: B.C., Tasu Sound, Moresby I., Queen Charlotte Is., 16.VIII.1957, DAOM 145234 (J.A. Calder & R.L. Taylor).

NOTES: In the United States *R. coalescens* is known from the type locality in Oregon (Davis, 1907 l.c.), from Washington where it also occurs on *Ribes bracteosum* (Shaw, Wash. Agric. Exp. Sta., Bull.765. 1973), and from Wisconsin where it was found on *R. americanum* Mill. (Davis, 1915 l.c.). It is quite probable that the "*Ramularia* sp." recorded from *Ribes bracteosum*, *R. hudsonianum* Richards., *R. lacustre* (Pers.) Poir. and *R. sanguineum* Pursh in the Pacific Northwest (Shaw, 1973 l.c.) and possibly also that reported from both the native and cultivated *Ribes* in Michigan (U.S.D.A. Handb.165. 1960) is *Ramularia coalescens*.

The somewhat similar *Ramularia mitellae* Peck var. *heucherae* Dearn. on *Heuchera glabra* Willd. ex R. & S. in Washington differs in several respects including continuous conidia $9-23 \times 1.5-2 \mu$. *R. mitellae* Peck appears to be quite distinct on account of its strongly fasciculate brown conidiophores. The latter is also known as "*Cercospora mitellae* Hicks" (*nom. nud.*).

The concept of *Ramularia* Unger is based on features exhibited by the fungus in its actively parasitic phase on living leaves of a particular host species to which it is supposed to be confined. Consequently little attention has been paid to different stages in the life cycle despite the fact that pleomorphism involving size, configuration and the type and intensity of pigmentation has long been suspected. In the case of *R. coalescens* such pleomorphism was reported by Davis (1915 l.c.). As a parasite of living leaves *R. coalescens* behaves like a typical *Ramularia* as described above, but on overwintered leaves it forms heads of conidia which remain 1-celled and only 10-18 μ long. The heads - according to Davis - assume purple colour and dimensions of up to 250 μ diam., and become raised on blackish synnemata up to 150 μ high, each "springing from the summit of plectenchymatous pseudopycnidium". The "pseudopycnidium" may represent a developing sporo- or ascocarp, and appears to be analogous to the "bulbous base" diagnostic for *Graphiothecium* Fuckel.

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