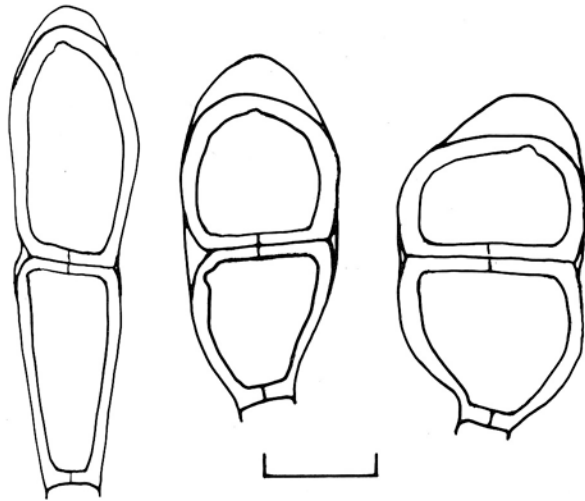


Representative teliospores in optical section. Scale = 10μ .



Puccinia fergussonii Berk. & Br., Ann. Mag. Nat. Hist., IV, 15: 35. 1875.

PYCNIA, AECIA and UREDINIA lacking. TELIA hypophyllous (to amphigenous) and petioliculous, pulverulent, dull chestnut brown, small, round, in large circular groups (or scattered along petioles). TELIOSPORES $(24-)26-48(-52) \times 10-19\mu$, slightly (or not) constricted at septum, very variable in shape; walls $(0.8-)1.0-2.2\mu$, yellow to deep yellow-brown, smooth; germ pores apical (to slightly depressed) with light yellow cap ca. $2-5\mu$ high, and septal (to slightly depressed) with smaller cap; pedicels hyaline, generally cleanly deciduous, basal to slightly (or moderately) offset. Mesospores rare.

HOSTS: *Viola epipsila* Ledeb. ssp. *repens* (Turcz.) Becker, *V. langsdorffii* (Regel) Fisch. in DC., *V. palustris* L.

DISTRIBUTION: British Columbia, Yukon.

COLLECTIONS: *Viola epipsila* ssp. *repens*: Yukon: Itsi Range, $62^{\circ}57'N$ $130^{\circ}09'W$, (1480 m.), 31 July-1 Aug. 1961, DAOM 147527, 147528 (Kukkonen & Calder 564, 561B). *V. langsdorffii*: B.C.: W slope Mt. Thornhill near Terrace, (1190 m.), 21 Aug. 1954, DAOM 54539 (Calder, Savile & Ferguson 14866). *V. palustris*: B.C.: W slope Mt. Revelstoke, Mt. Revelstoke Nat. Park (ca. 1525 m.), 22 July 1953 and 15 Sept. 1954, DAOM 44266, 54541 (Calder & Savile 10854, 15829); Glacier, B.C., 3 Sept. 1902, N. Am. Ured. 1542; 9 Aug. 1907, DAOM 108385; 31 July 1918, DAOM 108384 (all E.W.D. Holway).

NOTES: Extralimital specimens in DAOM on *Viola langsdorffii* from Alaska include four from Kenai Peninsula (J.A. Calder) and one from near Cordova (D.V. Baxter). This rust is widespread in Eurasia on *V. epipsila* and *V. palustris*, but is confined in North America to the Cordilleran region although *V. palustris* is transcontinental.

The three Holway collections from Glacier were issued as on *V. nephrophylla*, *V. sp.* and *V. langsdorffii* respectively, but all are almost certainly *V. palustris*. *V. nephrophylla* is not reported at high altitudes in B.C. and has leaves different from N. Am. Ured. 1542; whereas we have phanerogamic material of *V. palustris* from near Glacier, and we have also collected it, rusted, 40 km. away on Mt. Revelstoke at a higher elevation than Glacier. *V. langsdorffii* is a Pacific coast species only. *V. palustris* often simulates it when vigorously developed on moist and shady sites.

Arthur (Manual of the Rusts, 1934) also lists *V. macloskeyi* Lloyd as a host in B.C. This western

equivalent of the eastern *V. pallens* occurs very sparingly in B.C. The specimen (not seen) is probably *V. palustris*, which is often confused with *V. pallens*. Arthur (loc. cit.) records *P. fergussonii* on *V. palustris* in Alaska, Montana and Colorado. The Alaska specimen is probably on *V. epipsila* ssp. *repens*, for *V. palustris* is seemingly known in Alaska only from Juneau (Calder and Taylor, Flora of the Queen Charlotte Islands, part 1, 1968). Arthur also has a report on *V. nephrophylla* in Utah, which needs verification.

D.B.O. Savile