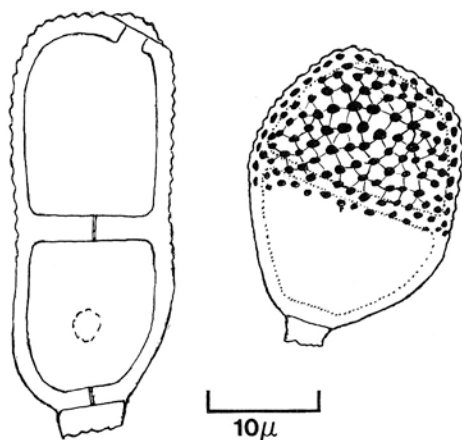


Teliospores in optical section and in surface view,
 × 1500. Strands between warts evident only
 with phase-contrast.



Puccinia parnassiae Arth., Bull. Torrey Bot. Club 31: 3. 1904.

≡ *Puccinia parnassiaeicola* Barth., Handb. N. Am. Ured. ed. 2, 138. 1933 (non *P. parnassiae* (Schlecht.) Barth., Handb. N. Am. Ured. ed. 1, 147. 1928 = *P. uliginosa* Juel 1894).

PYCNIA, AECIA and UREDINIA lacking. TELIA localized, amphigenous and cauliculous, blackish brown, pulverulent. TELIOSPORES (fully cleared) 23-42(-44) μ long, 13.5-22.5 μ wide, (to slightly) constricted at septum, short- to long-ellipsoid or cylindrical with rounded ends; walls 1.2-2.2 μ , yellow-brown to light chestnut (cleared), with small warts ca. 0.2-0.4 μ high and 0.6-1.0 μ diam. above, grading to smooth about 1/2-3/5 toward base, under phase contrast the warts often seem to be linked by very delicate strands; germ pores apical to slightly depressed with small pale yellow cap to 2.0 μ high, and septal - 3/4 depressed with smaller cap; pedicels hyaline, generally cleanly deciduous but seen to 90 μ long, basal to slightly (-moderately) offset.

HOST: *Parnassia fimbriata* König.

DISTRIBUTION: Alberta (fide Arthur loc. cit.), British Columbia, Yukon.

COLLECTIONS: B.C., Wolverine Ra., near Manson Creek, 55°40'N 124°30'W, 29 July 1954, DAOM 54498 (Calder, Savile & Ferguson 13687); Yoho R. Valley, near Field, 29 Aug. 1904, DAOM 145482 (Holway); Mt. Stephen, near Field, 19 Aug. 1953, DAOM 39473 (C. & S. 12058); Glacier, 14 Aug. 1918, DAOM 108454 (Holway); Millar L. cirque, Mt. Revelstoke Nat. Park, 15 Aug. 1953, DAOM 39475 (C. & S. 11853); Paul L., 8 mi. ne. Kamloops, 10 July 1953, DAOM 39477 (C. & S. 10343); road to Paradise Mine, near Windermere, 1 Aug. 1953, DAOM 39472 (C. & S. 11347); Mt. Apex, near Penticon, 12 Aug. 1953, DAOM 39471 (C. & S. 11747); Blackwall Peak, Manning Prov. Park, 9 Aug. 1953, DAOM 39474. Yukon, Itsi Ra., 62°57'N 130°09'W, 31 July-1 Aug. 1960, DAOM 144893 (Kukkonen & Calder 561A); 4 mi. w. Upper Hyland L., 62°03'N 128°59'W, 3 Aug. 1960, DAOM 144892 (K. & C. 576).

NOTES: The type, from Banff, Alta., collected by Holway has not been seen, but the Mt. Stephen collection is from within 40 miles of the type locality. All the Canadian specimens, and one each from Montana and Utah, are extremely uniform. *Parnassia fimbriata*, the only recorded host, is specific in its habitat: moist montane to low-alpine slopes rather than lowland marshes. *Puccinia parnassiae* does not resemble any of the rusts of Saxifragaceae (*sensu stricto*), providing an additional reason for assigning *Parnassia* to a separate family Parnassiaceae.

D.B.O. Savile