

At least 9 species in Alberta. Easy to get to genus, unfortunately difficult to discriminate the species.

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| cavernosa Tuck. | hirta (L.) Weber ex F. H. Wigg. |
| cornuta (cf.) Körb. | lapponica Vainio |
| dasopoga (Ach.) Nyl. (Arcadia 2013) | scabrata Nyl. |
| glabrata (Ach.) Vainio | subfloridana Stirton |
| glabrescens (Nyl. ex Vainio) Vainio | substerilis Motyka |

DICHOTOMOUS KEY – *Usnea*

- 1a. Secondary branches swollen, shiny, sausage-like, with constricted nodes 2
 - 2a. Sorediate; may have spiny branchlets around soralia but lacking isidia; smooth, lacking papillae *U. glabrata*
 - 2b. Soredia relatively small and developing isidia; often with low papillae *U. cf. cornuta*
- 1b. Secondary branches not constricted at base/point of attachment to main branch, cylindrical instead 3
 - 3a. Pendulous, secondary branches growing parallel to main stem 4
 - 4a. Branches papillate (check carefully, but don't mistake pock marks from eroded isidia as papillae) 5
 - 5a. Base always blackened, usually widened like tree-trunk with obvious 'roots' at attachment point; medulla dense; terminal branches round in XS; soralia punctiform to slightly enlarged, often bristling with isidia *U. dasopoga* (syn. *filipendula*)
 - 5b. Base pale or blackened, pinched at attachment point; usually K-; cortex thin, medulla loose, central axis variable in thickness; branches uneven due to ridges and depressions, may be fibrillose (but degree of ridging, fibrils, and height of papillae highly variable); terminal branches often sinuous in inland regions; soredia arising from tubercles (slightly elevated 'warts'), isidia may be contained in soralia or lacking *U. scabrata s.l.*
 - 4a. Branches smooth, lacking papillae; main stem with regular foveoles (=depressions); always lacking isidia and soredia; base pale or often lacking from specimens *U. cavernosa*
 - 3b. Tufted, branches divergent from main stem 6
 - 6a. Heavily to barely isidiate – if mainly sorediate, soredia bearing at least some isidia 7
 - 7a. Branches smooth, lacking papillae; base usually pale; usually abundantly isidiate; medulla loose; branches slightly to heavily uneven because of ridges and depressions *U. hirta*
 - 7b. Branches papillate, base usually blackened 8
 - 8a. Base with 6-9 transverse stress cracks per 5mm, ±robust, tree-like 9
 - 9a. UV- or UV+ white just in exposed medulla; soralia plane to weakly tuberculate, often with raised cortical rim at least in part, isidia sparse and restricted to young soralia, not in mature soralia; medulla usually dense and central axis thick; rare *U. glabrescens*
 - 9b. UV+ blue white everywhere medulla exposed (like a Christmas tree with lights); fibrils often abundant near base but sparse at apices; soralia convex to tuberculate, isidia abundant (rarely sparse), present in both young and old soralia; occasional *U. subfloridana*
 - 8b. Base with 0-3 transverse stress cracks per 5mm; UV- or UV+ white in a few spots but not extensive; typically more irregularly branched, isidia restricted to immature soralia, branches with irregular depressions, medulla lax to dense *U. substerilis s.l.*
 - 6b. Sorediate, lacking isidia 10
 - 10a. Branches round in XS; base blackened, often with lens-shaped cracks; cortex thick, medulla dense and thin; soralia plane to weakly concave but often with raised rim and very uniformly circular in outline; rare *U. glabrescens*
 - 10b. Branches uneven in XS; base pale or blackened; fibrils usually abundant and present even near apices; cortex thin, medulla and axis variable but usually loose; soralia concave, deep, circling around the central axis and revealing the axis at maturity, leaving cortical flaps at edge of soralia *U. lapponica*
 - 6c. Lacking reproductive structures *U. sp.* (non-regenerative or immature, unidentifiable)