

Key to the Genera of Yellow & Orange Foliose Lichens of Alberta v. 2025

Encompasses 40 species across 13 genera. Excludes the squamulose/areolate *Fulgensia*.

If you are using Goward et al.'s 1994 keys:

Alberta species Goward keys are missing: *Ahtiana pallidula*, *Candelaria pacifica* (much more common in Alberta than *C. concolor*), *Xanthoparmelia camtschadalis*

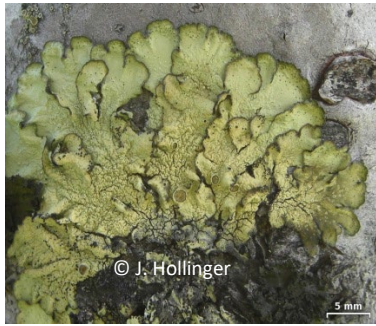
Taxonomic updates: *Flavocetraria* is included in *Cetraria* in Goward, *Xanthomendoza* is included in *Xanthoria* in Goward

Key to the Yellow and Orange Foliose Lichens of Alberta

- 1a. Umbilicate, attached by a central holdfast to rocks in open arid regions..... ***Rhizoplaca*** →
- 1b. Foliose to semi-fruticose, variety of substrates and habitats.....2
 - 2a. Lobes orange, **K+ purple** cortex (anthraquinones).....3
 - 3a. Rhizines present ***Xanthomendoza s.l.***
 - 3b. Rhizines lacking completely or small stubby attachment structures present..... ***Xanthoria s.l.***
 - 2b. Lobes greenish yellow, pale yellow or bright yellow, K-4
 - 4a. Lobes bright yellow5
 - 5a. Lobes tiny, (width ≤0.3 mm) lower cortex white or lacking..... ***Candelaria***
 - 5b. Lobes larger, (width ≥0.5 cm), often ascending, top and bottom alike in color... ***Vulpicida***
 - 4b. Lobes pale to greenish yellow, **KC+ yellow** cortex (usnic acid).....6
 - 6a. On rock, soil or moss on soil.....7
 - 7a. Appearing fruticose on first inspection ('cetrarioid', with pseudocyphellae on the lower surface), both surfaces similarly-colored and attached basally..... ***Flavocetraria*** →
 - 7b. Clearly foliose, lower surface colored differently.....8
 - 8a. Rhizines lacking; lobes > 1cm wide, lower surface pale marginally and darkening centrally, mainly mountain and shield..... ***Nephroma***
 - 8b. Rhizines present, lobe width variable9
 - 9a. Attachment variable, vagrant to appressed, upper cortex often shiny, on rock or soil, lower cortex brown to black, in arid open areas in shield, grassland and mountains..... ***Xanthoparmelia***
 - 9a. Tightly attached/appressed on rock, upper cortex dull, lower cortex white to grey, shield and mountains..... ***Arctoparmelia***
 - 6b. On trees or downed wood, rarely on rock10
 - 10a. Sorediate11
 - 11a. Lobes small, narrow (width typically ≤2 mm), closely appressed and linear, common throughout treed regions..... ***Parmeliopsis*** →
 - 11b. Lobes large (typically wider than 1 cm), lobes rounded
..... ***Flavopunctelia*** Key including ***Flavoparmelia***
 - 10b. Apotheciate; rare, restricted to mountains ***Ahtiana***



Pictorial Guide to the Yellow & Orange Foliose Genera with Example Species



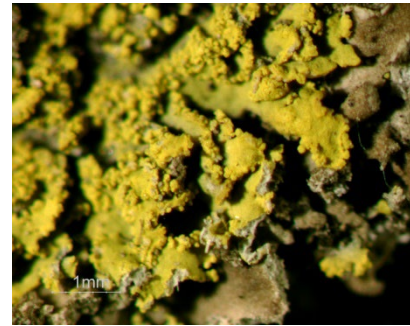
Ahtiana sphaerosporella

Montane epiphyte



Arctoparmelia centrifuga

Saxicolous, narrow appressed lobes, cortex dull



Candelaria pacifica

Tiny, resembling crust, has branching lobes, epiphyte, yolk-yellow



Flavocetraria cucullata

Terricolous, appears fruticose, pseudocyphellate



Flavopunctelia flaventior

Large-lobed, sorediate, pseudocyphellate, green yellow epiphyte



Nephroma arcticum

Large lobed, cephalolichen, montane soil dweller, apothecia on bottom of lobe



Parmeliopsis ambigua

Appressed, sorediate, small lobed, on wood and trees



Rhizoplaca chrysoleuca

Umbilicate, saxicolous, apotheciate



Vulpicida pinastri

Bright yellow, lobes often ascending, variety of habitats and reproductive modes



Xanthomendoza hasseana

Evolutionary clade of mainly foliose, rhizinate spp
K+ purple



Xanthoria elegans

Paraphyletic, as used here, foliose but
lacking rhizines, K+ purple



Xanthoparmelia camtschadalis

Shiny cortex, varies from attached to vagrant, chemically
diverse