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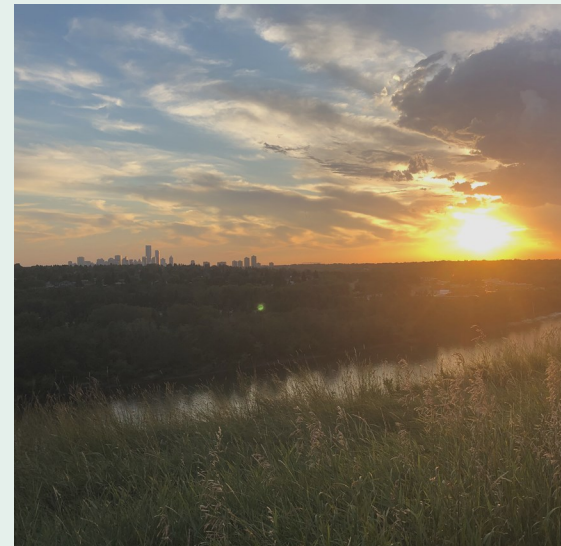


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Getting to Know Your Neighbours

Common Lichens of Edmonton Alberta



Diane L. Haughland

This draft booklet was produced in support of a Lichen Walk for the Tomorrow Foundation. Images are the authors unless otherwise indicated. Additional images largely were provided by students from the author's course at the University of Alberta Renewable Resources Lichens of Alberta Course in 2019 (listed on pg. 11). All images were taken of specimens from or within Edmonton. Line drawings are from Trevor Goward's 1994 "The Lichens of British Columbia", Special Report Series 8, Ministry of Forests Research Program.

All errors or omissions are the sole responsibility of the author.

This booklet is dedicated to the students, colleagues and collaborators that continue to sustain our lichen work in Edmonton. Thank you Alessandra Hood, Aryn Stordock, Catherine Shier, Christopher Schulze, Danielle Koleyak, Darcie Thauvette, David Evans, David Fielder, Dominik Royko, Hayley Webster, Joseph Cooper, Joshua Wasyliw, Kevin McCullum, Laura Hjartarson, Mary Villeneuve, Megan Lewis, Ming Cao, Rashell Bolduc, and Sydney Toni.

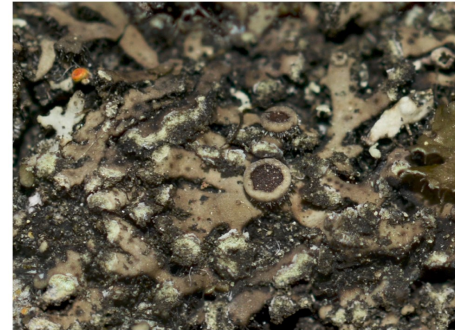
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Images on front cover: Edmonton River Valley and Downtown as viewed from Ada Boulevard. Lichen images from top to bottom: *Physcia adscendens*, Beuna Vista Meadow; *Xanthomendoza fallax*, MacKenzie Ravine; *Peltigera elisabethae*, MacKenzie Ravine.

Brown Leafy Lichens



These camouflage lichens are mostly in the genera *Melanelixia*, *Melanohalea*, *Phaeophyscia* and *Physconia*. The 'smelly mellies' may be an acquired taste with their baby-poo color and sometimes greasy luster. **ID tips:** Look for greasy inflated warts (called isidia), rough powdery surfaces or edges, or white frosting (pruina on lobe edges). Check out the bottom for bushy or simple root-like rhizines.



Mealy Shadow (*Phaeophyscia orbicularis*)



Lustrous Camouflage (*Melanohalea exasperatula*)



Powered Camouflage (*Melanelixia albertana*)



Yellow-edged Frost (*Physconia enteroxantha*)

Additional Photo Credits: Crusts: Alessandra Hood - *Arthrosporium populorum*, *Candelariella vitellina*, *Caloplaca pyracea*. Furry Fruticose : Laura Hjartarson— *Bryoria fuscescens*. Joshua Wasyliew— *Evernia mesomorpha*. Yellow & Orange Leafy Lichens: Laura Hjartarson— *Xanthomendoza hasseana*. Darcie Thauvette & Mireille Martel © Royal Alberta Museum— inset *Candelaria pacifica*. Grey Leafy Lichens: Laura Hjartarson— *Phaeophyscia orbicularis*. Ming Chao— *Physcia alnophila*. Pelts: Laura Hjartarson— *Peltigera didactyla*. Brown Leafy Lichens: Joseph Cooper— *Phaeophyscia orbicularis*. Dominik Royko— *Melanelixia albertana*.

Pelts: Frogs, Dogs & Freckles



This diverse genus is abundant in Edmonton's world-class river valley parks. When dry *Peltigera* resemble dead leaves—when wet their true colors shine. **ID tips:** Look at both sides. Get a close-up of the top—look for felty edges, warts, tiny lobes or freckles (colonies of blue-green bacteria). Then gently flip a lobe and examine the root-like rhizines and veins on the bottom (the Pelt won't mind).



Concentric Pelt (*Peltigera elisabethae*)



Flat Dog Lichen (*Peltigera horizontalis*)



Pale-bellied Dog Lichen (*Peltigera ponojensis*)



Black Saddle Lichen (*Peltigera neckeri*)



Alternating Dog Lichen (*Peltigera didactyla*)



Peppered Pelt (*Peltigera evansiana*)



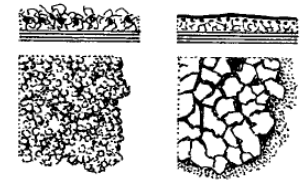
Ruffled Freckle Pelt (*Peltigera leucophlebia*)

Looking at lichens

- Determine its GROWTH FORM using the pictures below
- On the page that best describes your lichen—look for a match
- This is 40 or so common species of the 100+ known from Edmonton so (sadly) your find may not be found within
- Submit photos to the Naturelynx app <https://naturelynx.ca/>
- to grow our knowledge of Edmonton Lichens and have an expert help ID your find!
- Try and find them all – it's more fun than Pokémon

**Tiny
Tightly attached
or embedded**

CRUSTOSE (pg. 4)



Hair-like

3-Dimensional

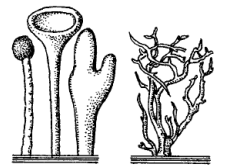
FRUTICOSE (pg. 5)



Cups, Wand, Shrubs

3-Dimensional

**PIXIE CUPS, WANDS &
REINDEER LICHENS (pg. 6)**



2-Dimensional

Flattened, Leaf-like

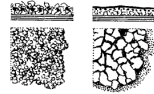
**If tightly attached,
can separate from substrate**

Diverse in color and shape

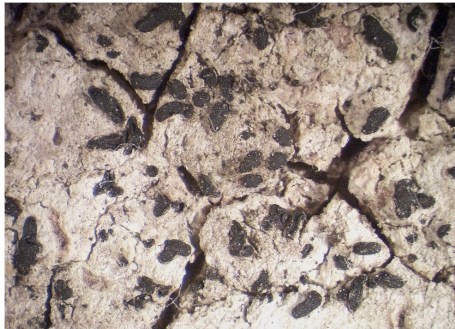
LEAFY/FOLIOSE LICHENS (pg. 7)



Crustose Lichens



Coating so many of the surfaces around us, crustose lichens just don't get the appreciation they deserve; perhaps because you have to cut most open for a confident ID. **Fun tip:** Look for little 'button'-like fruiting bodies with little else visible. Check your concrete, your boulevard trees, the old indoor-outdoor carpet on your steps—draw the curtain back on a little (ahem) hidden diversity.



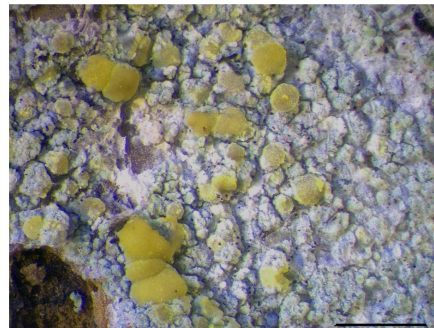
Scribble Lichen (*Alyxoria varia*)



Poplar Crust (*Arthrosporium populorum*)



Common Goldspeck (*Candelariella vitellina*)



Fused Rim Lichen (*Lecanora symmicta*)

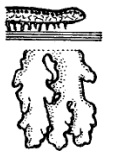


Sulphur Whiskers (*Chaenotheca furfuracea*)



Firedot Lichen (*Caloplaca pyracea*)

Grey Leafy Lichens



These elegant lichens don't need flashy pigments; instead they make crystalline sunblocks that absorb UV and protect the green algae within. **ID tips:** Look for inflated tips, rough powdery edges or black 'button' like fruiting bodies. Check out the bottom for root-like rhizines (or lack thereof).



Hammered Shield (*Parmelia sulcata*)



Hooded Rosette (*Physcia adscendens*)



Mealy Shadow (*Phaeophyscia orbicularis*)



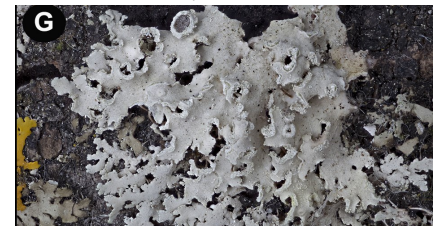
Hooded Tube (*Hypogymnia physodes*)



Star Rosette Lichen (*Physcia stellaris s.l.*)



Alder-loving Rosette Lichen (*Physcia alnophila*)



Frosted Rosette Lichen (*Physcia dimidiata*)



Case's Speckled Shield (*Punctelia caseana*)

Yellow & Orange Leafy Lichens



Want to learn just one lichen? Hooded Sunburst would be my pick. Ubiquitous in Edmonton, colorful, it can even ‘clone’ itself (by splitting its upper and lower skins to make crescent-shaped bowls full of powdery propagules). Plus if you add a drop of a strong base like potassium hydroxide, this lichen turns royal purple. A tough act to follow. **ID tips:** Look for rough powdery edges or orange ‘button’-like fruiting bodies. Check out the bottom for root-like rhizines (or lack thereof). Size is also useful - these species range from under 1 mm (*Candelaria*) to palm-sized (*Flavopunctelia*).



Close-up of Hooded Sunburst (*Xanthomendoza fallax*)



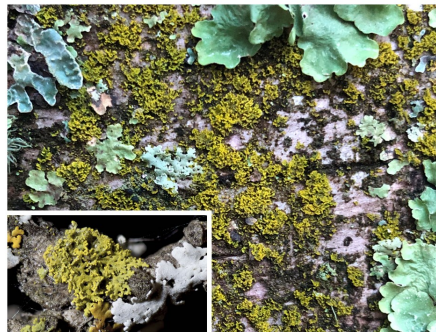
Hooded Sunburst (*Xanthomendoza fallax*)



Poplar Sunburst (*Xanthomendoza hasseana*)



Speckled Greenshield (*Flavopunctelia flaventior*)



Flickering Candleflame (*Candelaria pacifica*)

Fruticose Lichens



A sensitive group—so much surface area, so little volume. In Edmonton they are rare outside of the valley. **ID tips:** *Bryorias* are brown. To ID the rest, gently stretch and break a branch to examine the insides. Beard lichens have an elastic central cord. Oakmosses have cottony stuffing. Cartilage lichens are honeycombed or solid.



Punctured Cartilage (*Ramalina dilacerata*)



Chalky Cartilage (*Ramalina polinaria*)



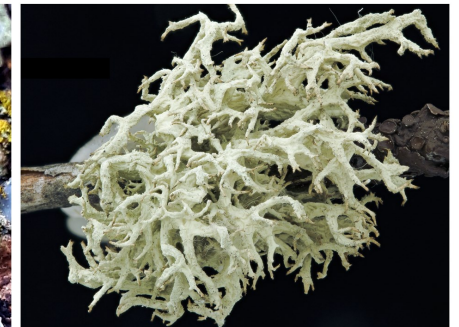
Powdered Beard (*Usnea lapponica*)



Straw Beard (*Usnea scabrata*)

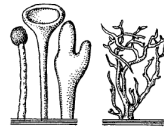


Pale-footed Horsehair (*Bryoria fuscescens s.l.*)



Boreal Oakmoss (*Evermia mesomorpha*)

Pixie Cups, Wands & Reindeer Lichens



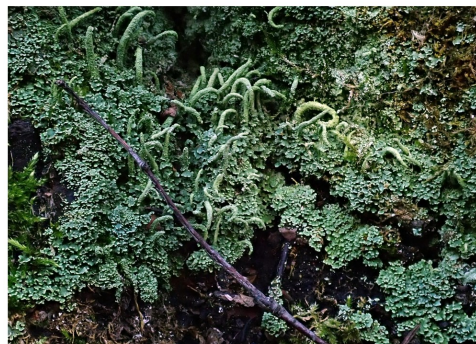
Cladonia is a big (and notoriously difficult) genus. Challenge yourself! **ID tips:** Is the surface powdery like flour, grainy or smooth? Rub with a finger! Cupped or pointed? Branched a lot or a little? Try to find colored tips (fruiting bodies). Check if the cups are open funnels or closed-topped.



Pixie Cups (*Cladonia chlorophaea*, *C. pyxidata*)



Trumpets (*Cladonia fimbriata*)



Common Powderhorn (*Cladonia coniocraea*)



Mealy Forked Lichen (*Cladonia scabruscula*)



From Left: Giraffe Lichen, Reinder Lichen, Organ-pipe (*Cladonia gracilis*, *C. mitis*, *C. crispata*)



British Soldiers (*Cladonia cristatella*)

Leafy (aka Foliose) Lichens



About 40% of Edmonton's 100+ known lichens are leafy lichens. If you pay attention to size and color you can learn to ID these with relative ease.

Orange or yellow, mostly on trees & logs

ORANGE & YELLOW LEAFY LICHENS (pg. 8)

Small grey leafy lichens, mostly on trees & logs

GREY LEAFY LICHENS (pg. 9)

Green to grey to brown, often bigger than your palm & in large patches, mostly on the ground & logs

PELTS (pg. 10)

Small brown to green-brown, often well camouflaged, mostly on trees & logs

BROWN LEAFY LICHENS (pg. 11)