

12 species recorded in Alberta

- adiastola** (Essl.) Essl. Syn.: *Physcia adiaastola* ACIMS, ABMI  
**ciliata** (Hoffm.) Moberg Syn.: *Physcia ciliata*, *P. obscura* auct. ACIMS, ABMI  
**constipata** (Norrlin & Nyl.) Moberg Syn.: *Physcia constipata* ACIMS, ABMI  
**decolor** (Kashiw.) Essl. ACIMS -Rockies (BROD01)  
**endococcina** (Körber) Moberg Syn.: *Physcia endococcina*, *P. lithotodes*, (?) *P. columbiana* ACIMS  
**hirsuta** (Mereschk.) Essl. Syn.: *Physcia hirsuta*, *Phaeophyscia cernohorskyi* (Esslinger 2004b) ACIMS, ABMI  
**hispidula** (Ach.) Essl. Syn.: *Physcia hispidula*, *P. setosa* ACIMS, ABMI  
**kairamoi** (Vainio) Moberg Syn.: *Physcia kairamoi* AB ! (NA)  
**nigricans** (Flörke) Moberg Syn.: *Physcia nigricans* ACIMS  
**orbicularis** (Necker) Moberg Syn.: *Physcia orbicularis*, *P. virella* ACIMS, ABMI  
**pusilloides** (Zahlbr.) Essl. Syn.: *Physcia pusilloides* AB! (NA)  
**sciastra** (Ach.) Moberg Syn.: *Physcia sciastra*, *P. lithotea* ACIMS

### DICHOTOMOUS KEY – *Phaeophyscia*

Modified from Esslinger 1978, with minor input from Goward et al. 1994, Brodo et al. 2001 & McCune and Geiser 2009  
 Key features: thallus olive-brown to grey, lobes radiate out, elongate, mainly 0.2-1.5 mm wide; usually lacking pruina but may be maculate; isidiate, sorediate or neither; lower surface typically black, occasionally pale; rhizines simple, short, usually black with white tips; often visible from above as fringe around lobes; cortex chemical reactions all (-), no atranorin as in *Physcia*; medulla may be white or orangish red with anthroquinones; apothecia often with marginal cilia.

**See also *Physcia*, *Anaptychia*, *Heterodermia*, and *Physconia* (see table below)**

- 1a.** Lobes mostly 2-4 (-5.5) mm broad, flat to more often somewhat concave, especially near the upturned lobe tips; thalli relatively large (up to 14 cm diameter), usually with numerous, long (often 2 mm or more) black rhizines on the lower surface and projecting outward and often upward from the margin; ±soredia or isidia ..... ***P. hispidula***
- 1b.** Lobes usually less than 1.5 mm broad (rarely to 3 mm), more or less flat or occasionally somewhat concave; thalli relatively small (mostly less than 5 cm, rarely up to 10 cm), lower surface with few to many rhizines (mostly 1 mm or less, never over 2 mm in length) which are seldom conspicuous from above ..... **2**
- 2a.** Thallus without soredia, isidia or lobules, primarily sexual/fertile species ..... **3**
- 3a.** Lower surface **dark brown to black** with numerous black rhizines ..... **4**
- 4a.** Medulla pigmented **red** (skyrin); lobes flat to weakly convex, mostly 0.5 mm broad or less, brown, **on rock** ..... ***P. endococcina***
- 4b.** Medulla not pigmented, white ..... **5**
- 5a.** **On bark** or **mooses over rock**; amphithecial cortex [outermost cortical cells of the thalline margin of the apothecia] of smaller cells, 3-6 (-8) µm in diameter; lobes flat, mostly 0.5-1.5 mm broad (some forms only 0.2-0.3 mm), gray or gray-brown; on bark or mooses over rock, rarely on rock ..... ***P. ciliata***
- 5b.** **On rock**; amphithecial cortex of larger cells, 9-10 (-12) µm in diameter; lobes flat to weakly convex, mostly 0.5 mm broad or less, brown, on rock ..... ***P. decolor***
- 3b.** Lower surface **white to pale tan or very pale brown**, with sparse concolorous rhizines; thallus of numerous, crowded, long, narrow, mostly ascending lobes; generally on **soil or mooses** in open arid localities; marginal cilia present, pale, tapering and unbranched; cortical hairs lacking ***P. constipata***
- 2b.** Thallus bearing soredia or isidia but not lobules, medulla white, apothecia usually absent ..... **6**
- 6a.** Thallus with small, pale (or occasionally darkening) cortical hairs, especially on young lobe tips, on apothecial margins or (in *P. kairamoi*) on the isidia or soredia ..... **7**

- 7a. Soralia marginal, with granular isidioid soredia/isidia with sparse pale hairs.. *P. kairamoi*
- 7b. Soralia marginal and linear to terminal and labriform, the soredia more finely granular, not isidioid and lacking hair; hairs present on lobe tips ..... *P. hirsuta*
- 6b. Thallus without cortical hairs ..... 8
- 8a. Lower surface **dark brown to black** throughout or at least in the older, central parts, sometimes very pale marginally ..... 9
- 9a. Thallus with **blackened**, marginal or occasionally laminal, strongly isidioid soredia/isidia; lobes narrow, mostly <0.5 mm broad; occasionally pruinose; **saxicolous**.. *P. sciastra*
- 9b. Thallus with finely granular to weakly isidioid **greenish** soredia; lobes mostly >0.5 mm ..... 10
- 10a. Soralia capitate [shaped like a head], primarily terminal on main lobes or on small lateral lobes, often born on an ascending lobe; **on bark** or rarely **on calcareous rock** ..... *P. pusilloides*
- 10b. Soralia marginal, laminal or terminal, but not strongly capitate or stipitate11
- 11a. Soralia primarily laminal and sub-marginal, rounded in outline, the soredia mostly finely granular; common ..... *P. orbicularis*
- 11b. Soralia primarily labriform, terminal and marginal, irregular in outline, the soredia coarsely granular and isidioid; **on siliceous rock** or occasionally **on bark** ..... *P. adiastrum*
- 8b. Lower surface **white to tan or very pale beneath**; lobes narrow and linear, mostly less than 0.4 mm broad with sparse granular soredia or isidia on some lobe tips and margins....*P. nigricans*