

**Evernia** Ach.  
(LECANORALES)

After Bird, and others

Rev. 5/94

Thallus fruticose to apparently foliose ("shrubbyfoliose"), upright or pendulous, somewhat flaccid; lobes few to numerous, ± dorsiventral, strongly flattened (to less so in some species), greenish yellow to ± greenish gray, in at least one species the lower side paler than upper (often white), with algae mainly confined to a layer just below the greenish side; both surfaces corticate; cortex of anticlinal hyphae; medulla lax; without rhizines, attached by a basal disk; soredia sometimes present; isidia absent.

Apothecia, when present, marginal, lateral or terminal, ± shortly and stoutly stipitate, concave; disc redbrown, margin thalline, irregular, crenate; hypothecium hyaline; paraphyses unbranched; asci clavate, Lecanoratype, unitunicate; tholus I+ blue; spores 8, simple, hyaline, thin walled.

Pycnidia rare, laminal and marginal, immersed, rounded, blackened around the ostiole; fulcrum endobasidial; pycnospores acicular. Cortex K+ yellow (atranorin, chloratranorin, ± usnic acid); medulla with divaricatic or evernic acid. Photobiont Trebouxia. On bark, wood, or soil.

Differs from Ramalina in having simple spores, and in having a flaccid, often dorsiventral, thallus. Differs from Pseudevernia in lacking isidia, lacking a ± black lower surface, and with at least one side usually being yellowish to greenish rather than gray.

**1. Branches flattened, sorediate; medulla loose; with evernic acid and and chloroatranorin.** Thallus (1)26(10) cm tall; lobes rather soft, few to numerous, strapshaped, 24(5) mm wide, ± palmately branched to rather regularly dichotomous (dichotomies annual), often twisted; upper surface greengray to pale greenish yellow, often with an incomplete network of elongate ridges centrally spreading towards the margins; lower surface white, occasionally dotted greenish especially towards the tips, broadly channelled. Soralia marginal and/or laminal, at first rounded and often confined to ridges and/or margins, later spreading and confluent, paler than or concolorous with upper surface. Apothecia very rare, 0.20.5(1.5) cm diam. Medulla P, K, KC, C,

UV (evernic acid). Usually corticolous, in areas with high humidity, mainly on sunny, often windswept, neutral to acid bark trunks or canopy of wayside and parkland trees or wooden fenceposts, less often in sheltered woodland and boggy sites, occasionally on the ground or on nutrient enriched rocks. Cortex usually yellowish, with usnic acid, but some thalli (e.g., on the Channel Islands of California, and probably elsewhere) are gray, without usnic acid. Lowland maritime to montane. Very common in the west (British Columbia to California, east to Montana), with a number of disjunct occurrences in the east (mostly Great Lakes region). ..... E. prunastri

**1. Branches semiterete to angular, not flattened; medulla K, P, UV+ (divaricatic acid). .....2**

**2. Isidiate or sorediate. ....3**

**2. Isidia and soredia lacking. ....4**

**3. Isidia produced in cracks along ridges of the ± angular branches, becoming sorediate, but capitate soralia lacking; medulla loose. Erect to subpendulous, on bark and twigs of trees and shrubs (especially Picea, Larix and Betula) and fenceposts, rarely on rocks. Thallus much branched, to 10 cm long but shorter in the arctic, rather limp; branches irregular or dichotomous, angularly rounded or partly flattened but not dorsiventral, to 1 mm thick; surface irregularly wrinkled, yellowgreen to yellowish brown, the tips darker, with an abundance of yellowish to gray coarse soredia in small spots over the thallus. Apothecia rare. Coniferous forests, montane, mostly east of the Rocky Mountains, very frequent and common in the western arctic (with disjunct in NE Greenland), westcentral to southeast Canada, Great Lakes region, and ± northeastern U.S. Hale (1979) shows it as also occurring over much of the Pacific NW (BC to western OR and east to Montana), but I have never seen it there, and Thomson shows it being absent from that area. .... E. mesomorpha**

**3. Soredia in capitate soralia where branches have broken off; branches semiterete; medulla dense. Prostrate on calcareous rocky soil. Arctic. .... E. perfragilis f. soredica**

**4. Branches hard, brittle; medulla dense; cortex firm, never broken (but branches fragile, breaking into pieces when dry). Thallus 26 cm long, erect and tufted to prostrate; main branches to 1.5 mm thick, angularly compressed, dichotomously branching, the tips attenuate; surface smooth or roughened to rugose, pale yellowish; cortex chondroid. Apothecia lacking. On calcareous rocky soil, Arctic (Alaska to Baffin Island). .... E.**

perfragilis

4. Branches soft, flaccid, not brittle; medulla loose (to moderately dense in alpine form); cortex cracking. Apothecia lacking or rare. Branches terete to angular. .... 5

5. Thallus to 30 cm long, yellow; medulla moderately dense. Growing pendulous on conifers. In humid locations in montane to subalpine, forests, SW Canada and Montana, and southwest U.S. (AZ, CO, NM, UT). .... E. divaricata (typical form)

5. Thallus to 5 cm long, creamy yellow; medulla more dense than in typical form. Growing prostrate on calcareous rocky soil., Rocky Mountains (Alberta to AZ & NM), with disjuncts in Manitoba and arctic NW Territories. .... E. divaricata (alpineform)

ADD?:

Usually on coniferous trees; sometimes (f. terrestris Tomin) on the ground. Thallus muchbranched; branches generally reticulatelacunose. Apothecia abundant. Report from N. America (Alaska) is based on misidentification of E. perfragilis. .... E. esorediosa (see Norwegian J. of Botany, ca. 1982)

## Literature

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