

KEY TO CRUSTOSE LICHEN GENERA WITH A LOBATE MARGIN

Rev. 2/94

A. Thallus yellow, orange, or red.

1. Thallus and/or apothecial disk K+ purple 2
1. Thallus and apothecial disk not K+ purple; spores not polarilocular 3
 2. Thallus yellow; spores simple; terricolous Fulgensia
 2. Thallus yellow, orange or red (or whitish to blackish); spores polarilocular; frequently on rocks, but also on trees and (rarely among lobed species) soil. Caloplaca
3. Thallus bright yellow or gold (darker in K, but not purple). 4
3. Thallus pale yellow-green (usnic acid), brown or gray 5
 - 4a. Spores ca. 100/ascus 4b
 - 4a. Spores 8(--32)/ascus. 4c
 - 4b. Asci with I- (or almost) tholus, without axial body and ocular chamber. Fatty acids absent. Acarospora
 - 4b. Asci \pm Lecanora-type, with I+ distinctly blue tholus, and with broad axial body and short ocular chamber. Fatty acids present. Arctic-alpine. Pleopsidium
 - 4c. Discs black. Spores brown, 1-septate. Catolechia wahlenbergii--see Buellia segregates
 - 4c. Discs yellowish. Spores hyaline, simple. 4d
 - 4d. Underside corticate, attached with haptera. Candelina
 - 4d. Underside without haptera and with at most an indistinct cortex. Candelariella
5. Thallus pale yellow-green 6
5. Thallus brown or gray or white 8
 6. Spores brown, 1-septate Dimelaena
 6. Spores colorless, non-septate 7
7. Medulla chalky; terricolous or saxicolous in deserts Squamarina s. lato
7. Medulla composed of loosely interwoven hyphae; mostly occurring on rocks Lecanora

B-1. Thallus not yellow, orange, or red.
With Green Algae.
Fertile.

Spores brown, 1-septate or polarilocular.

1. Apothecia lecanorine. (If lower side corticate, see Physcia and Phaeophyscia) 2
1. Apothecia lecideine (but often with pseudothalline margin in Diplotomma). 3
 2. Lower surface attached to rock, without cortex or rhizines. On rock.
Dimelaena--see Rinodina segregates
 2. Lower surface corticate, with a few short, inconspicuous rhizines. Usually on bark. Hyperphyscia--see Physciaceae
3. Spores 3-septate to submuriform. On rock. Diplotomma--see Buellia segregates
3. Spores 1-septate. 4
 4. On soil. Buellia (B. elegans)
 4. On bark, wood, or rock. 5
5. Thallus white, K+ yellow. 6
 6. Thallus pruinose, with distinct lobes closely contiguous for most of their length. On bark or wood. Diploicia canescens (see Buellia segregates)
 6. Not as above. 7
7. Dirinaria
7. Pyxine

**B-2. Thallus not yellow, orange, or red.
With Green Algae.
Fertile.**

Spores colorless, septate or non-septate.

- 1. Spores many per ascus. Sporastatia
- 1. Spores 8 or fewer per ascus. 2
 - 2. Spores 1-septate. Lecania and Solenopsora
 - 2. Spores simple. 4
- 3. Spores over 14u long; apothecia frequently sunken with a \pm indistinct margin. 4
- 3. Spores generally less than 14u long; apothecia usually sessile on top of the thallus with a distinct margin; paraphyses not moniliform 5a
 - 4. Epihymenium greenish, N+ green. Paraphyses often moniliform. Lobes indistinct or narrow, thin. Aspicilia
 - 4. Epihymenium brownish, N-. Paraphyses not moniliform. Lobes distinct, coarse, thick. Lobothallia
- 5a. Apothecia \pm stalked. Baeomyces (B. placophyllus)
- 5a. Apothecia sessile. 5b
 - 5b. Apothecia biatorine. Trapeliopsis
 - 5b. Apothecia lecanorine. 5c
- 5c. Thallus with conspicuous (usually pinkish or brownish) cephalodia; thallus grayish, usually C+ reddish; On rock. Placopsis
- 5c. Thallus without cephalodia, mostly C-. (If thallus brown, see Protoparmelia).
Lecanora

**B-2. Thallus not yellow, orange, or red.
With Green Algae.
Sterile.**

1. Thallus with conspicuous (usually pinkish or brownish) cephalodia; thallus grayish, usually C+ reddish. On rock. Placopsis
1. Thallus without cephalodia, mostly C-. 2
 2. Thallus with soredia. 3
 2. Thallus without soredia. 8
3. Thallus C+ red. Trapelia
3. Thallus C-. 4
 4. Thallus white, K+ yellow. (If thallus with lower cortex, see Phyiscia). 5
 4. Thallus K-. 7
5. Thallus pruinose, with distinct lobes closely contiguous for most of their length.
Diploicia canescens
5. Not as above. 6
 6. Dirinaria
 6. Pyxine
7. Lower side with a lower cortex and a few, inconspicuous, very short rhizines. Medulla prosoplectenchymatous. Spermatia filiform. On bark or rarely rock. Hyperphyscia
7. Thallus paraplectenchymatous throughout. Spermatia bacilliform. On shaded, vertical to overhanging, dry rock. "Lecanora" demissa
8. Thallus green when wet, pale brown when dry; flattened papillae present towards center. On acid soil. Baeomyces placophyllus
8. Not as above. Trapeliopsis, and others