

KEY TO THE UMBILICATE LICHEN GENERA IN NORTH AMERICA

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1. Perithecia present. Dermatocarpon

1. Perithecia absent. 2

2. Thallus distinctly pustulate. Lasallia

2. Thallus not pustulate. 3

3. Thallus sterile; upper surface whitish, grayish, brownish, or blackish. Medulla often C+ rose (gyrophoric). Umbilicaria

3. Thallus with apothecia (or if sterile, in Rhizoplaca, then upper surface of thallus pale greenish yellow). 4

4. Apothecia lecideine (in a broad sense). Umbilicaria

4. Apothecia lecanorine. 5

5. Mature thallus usually less than 1 cm across; photobiont a cyanobacterium. 6

5. Mature thallus usually more than 1 cm across; photobiont a green alga. 7

6. Thallus olive; spores if present 100/ascus Peltula

6. Thallus black; spores 8/ascus Gonohymenia cribelifera
(several other small black genera also key here--see Cyanolichen key)

7. Spores ca. 100/ascus; on basic rocks; Colorado Plateau region
..... Gypholecia scabra

7. Spores 8/ascus (or sometimes sterile, in Rhizoplaca)
..... 8

8. Thallus large (usually over 10 cm wide); lichenin present; high montane zone Omphalora arizonica

8. Thallus smaller (1-4 cm wide); lichenin absent; deserts to alpine 9

9. Cortex C- or C+ yellow, KC+ yellow (usnic acid or related substances); medulla C- or rarely C+ red (lecanoric acid), UV-, without xanthonenes. Inland, widespread and common. Rhizoplaca

9. Thallus C+ orange, KC+ orange, UV+ orange (containing only xanthonenes). Coastal arctic, rare. Arctopeltis peruviana