

VII. "Cladoniae (Microphyllae)"
(Sections Furcatae and Perviae)

[Note: for the present I leave the two groups together in Keys VIIA and VIIB, but I also provide Keys VIIC and VIID to deal with "Furcatae" and "Perviae" separately, with more info.]

VIIA. Podetia esorediate.

1. Podetia cylindrical, slender, more or less branched, the branches frequently elongate and intertangled and forming complex branch systems, usually cupless; apices acute, obtuse, or attenuate; axils usually perforate and occasionally dilated. (C. rangiformis group; key partly after Ammann (unpublished?).2
 1. Podetia funnel or cupshaped, or cupless, simple or sparingly shortbranched; apices attenuate, truncate, or cupforming; axils dilated, often cupforming. 5
2. Podetia K+ yellow (atranorin).
 - ...3
 - 2 Podetia K (no atranorin).
 - .4
 3. Podetia K+ yellow, changing to pinkish or wine red (40methylcryptochlorophaeic, merochlorophaeic), P or in acetone extract yellow (lacking fumarprotocetraric and protocetraric acids; sometimes with psoromic?). (C. pseudorangiformis)
 3. Podetia K+ yellow (no 40 methylcryptochlorophaeic and merochlorophaeic acids), P+ orangered (fumarprotocetraric and protocetraric). Without rangiformic and norrangiformic acids, rarely with bourgeanic acid (= Evans substance H).
 - C. furcata subsp. subrangiformis
 4. Podetia cupless.C. furcata subsp. furcata (also see C. scabriuscula)
 4. Podetia showing some cups.C. multiformis f. subascypha
 5. Podetia not forming definite cups.6
 5. Podetia forming fairly definite cups. 14
 6. Thallus K+ yellow.7

6. Thallus K.9
7. Podetia with dispersed cortex, areolate or squamulose.8
7. Podetia with continuous or subcontinuous cortex..... C. floridana Vainio
8. Cortex squamulose, interspaces opaque; pycnidia on podetia; containing thamnolic acid and accessory barbatic acid and substances F and G. Podetia relatively tall (to 5cm), often branched.C. squamosa var. subsquamosa
8. Cortex not distinctly squamulose, but dispersed, coarsely globose areolate/squamulose; interspaces pellucid; pycnidia on primary squamules; containing only thamnolic acid (or also barbatic acid?implied by Harris, 1990). Podetia short (to 0.8 cm), rarely branched. Basal squamules irregular, small. East Coast, south to Fla. Rather rare. C. santensis Tuck.
9. P+ yellow or red.10
9. P.11
10. P+ yellow, K, UV+ white, containing squamatic and baeomycic acids; podetia 0.5-1.5 cm tall, simple or sparingly branched; cortex continuous or often becoming minutely and densely squamulose. Basal squamules well developed, irregular, small to medium sized, incised. Southeastern coastal plain. (mostly Fla.) C. beaumontii (Tuck.) Vainio
10. P+ red, containing fumarprotocetraric acid; apothecia on very tiny (to 1 mm tall) translucent podetia or sessile on finely incised or crenate primary squamules. Eastern U.S., except coastal plain.C. caespiticia
11. Containing barbatic acid;C. botryocarpa
11. Containing squamatic acid.12
12. Basal squamules coarse, persistent, imbricate, green above, often weakly pruinose at the tips, strongly white maculate in older parts. On bases of Taxodium just above water, Fla. C. buckii R. C. Harris
12. Basal squamules smaller, not maculate. Occurring in + northern or western areas (not in Florida). 13
13. Cracks at base of podetia white.C. squamosa var.

squamosa

13. Cracks between pieces of cortex at base black.

.....C. subfurcata

14. Cups with interior partly closed by lacerate or punctured membrane; cups sometimes

proliferate. 15

14. Cups with interior entirely open to inside of podetium, lacking lacerate or punctured membrane. 16

15. Ultimate proliferations irregularly cylindrical.

..... C. multiformis

15. Ultimate proliferations of podetia

cupforming.....C. simulata Robbins.

16. P+ yellow or yelloworange. 1716. P.

..... 19

17. K, P+ yellow, containing baeomycic and squamatic acids plus accessory substance F.C. atlantica

17. K+ yellow, P+ orangered, containing thamnolic acid. 18

18. Cortex smooth, continuous, lacking squamules or with but few; containing thamnolic acid plus accessory F and G.

.....C. subsubulata

18. Podetia becoming decorticate, usually thickly squamulose; containing only thamnolic acid.

.....C. squamosa var. subsquamosa

19. Cortex disintegrating, exposing white, more or less arachnoid inner medullary layer.

.....C. squamosa var. squamosa

19. Cortex persistent, areolate or smooth, 20

20. Podetia mostly thick (relative to length), with the base dying and growth continuing from the apex, the cups always present, usually relatively wide, 11.5(2) mm across, abruptly flaring, with numerous and repeated radial proliferations which bear minute cups,C. crispata
var. crispata

20. Podetia thinner (taller), the tips usually subulate or bluntish; cups (only occasionally present) narrow, the proliferations almost solitary from the margins of the small cups which are on the sides of the podetia, the slender proliferations with obsolete cups of obtusespinescent,C.

crispata var. cetrariiformis

VII B. Podetia soresiate.

1. Podetia coarsely granulose soresiate.2
1. Podetia finely farinose soresiate.3
2. Podetia more or less branched, branches elongate and
intertangled; K, P+ red; containing fumarprotocetraric and
protocetraric acids, substance Cph2, and accessory ursolic acid.
..... (C. scabriuscula)
2. Podetia very little branched, mainly simple; K+ yellow; P+
deep yellow to red; containing thamnolic acid plus accessory F
and G.C. parasitica
3. Podetia forming narrow cups with inrolled edges.
.....C. cenotea
3. Podetia lacking cups or forming cuips with margins of cups
not inrolled.4
4. P+ red; containing fumarprotocetraric acid and accessory
ursolic acid; podetia commonly widebranching, surface corticate,
apex soresiate, podetial squamules few (towards base) or absent,
the soresia unaccompanied by minute
squamules.C. farinacea
4. P; containing only squamatic acid; decorticate areas
extending to base of podetia; finely or coarsely soresiate.
.....C. glauca