

## **Terminology in Stereocaulon**

**Phyllocladioid Branchlets** extensions of the pseudopodetia (or sometimes arising from the primary thallus), with central strand of chondroid parallel hyphae continuous with that of pseudopodetial axis.

**Coralloid** fine, terete branchlets of the pseudopodetia. Examples: S. ramulosum. Also developing from the primary thallus in some species.

**Disharmonic** considerably smaller than the pseudopodetial stem from which they abruptly spring; often higher on the pseudopodetia.

**Harmonic** gradually decreasing in thickness from the parent pseudopodetium, not abrupt; often lower on the pseudopodetia.

**Lateral foliose** Leaflike, dorsiventral, springing disharmonically out of the pseudopodetium like the phyllocladioid branchlets of S. ramulosum; corticate on upper side only; lower side consisting of loosely intertexted hyphae. Example: S. foliolosum (from the Himalayas)

**Phyllocladia** developing from the original squamules of the primary thallus (outgrowths of the basal medullary layer), raised up on pseudopodetia, or colonizing the pseudopodetia (from other phyllocladia). [See Magnusson, 1926 for more information on some of the types].

**Papillose** Example: S. glareosum

**Verrucose** Examples: S. alpinum (slightly flattened and crenulate), S. incrustatum

**Granular** Globose, constricted at the base. Example: S. botryosum

**Palmatedigitate or digitatesquamulose** Example: S. paschale (strongly flattened, very strongly crenulate).

**Squamuliform** Examples: S. delisei

**Digitate** Examples: S. paschale

**Peltate** Central parts darker (usually glaucous or olivaceous), with a hyaline, transparent cortical layer; margins lighter (whitish) and often ± raised and tumid, with a heavily

inspersednubilated hypahal tissue; laterally attached to the pseudopodetia, or sometimes developing from the primary thallus. Examples: S. vesuvianum, S. denudatum

**Foliaceous** Similar to peltate type, but expanded into flattened, leaflike expansions and occurring on the ends of the pseudopodetia. Examples: S. wrightii

**[Pseudocoralloid]** Distinctly teretecoralloid, but produced by secondary elongation, with transitions to flabellatesquamulose types. This term is not used explicitly, but for the interim I'm using it to refer to true phyllocladia that superficially resemble coralloid phyllocladioid branchlets. Example: S. coralloides.

**Spathulate extensions** Bifacial expansions formed by the flattening of the ends of the pseudopodetia, or arising from the primary thallus as erect squamules, with cortex on upper side, soredia on underside. Example: S. spathuliferum

**Cephalodia** Although the genus of photobiont in the cephalodia is sometimes a useful character if correlated with other characteristics of a species, it is insufficient by itself, and does not always have a consistent relationship with the morphology of the cephalodia.

**Spherical** sessile or nearly so, at times partly immersed, often inconspicuous, hemispherical to spherical, small, seldom over 1 mm diam., the larger ones appearing in aggregates or irregularly rounded, gray to brown masses. With wall of loosely arranged,  $\pm$  tangentially oriented hyphae (in some stages, but often difficult to tell). Photobiont often arranged into separate "capsules", separated by hyphal walls (showing transition to botryose type).

**Paschale type** brownblackish or dark olivebrown, pulvinate to subglobose, conspicuous, with furfuraceous scabrid to minutely tuberculate surface. Photobiont Stigonema. Examples: S. paschale (also has tomentosum type cephalodia).

**Tomentosum type** small, usually not over 1 mm diam., inconspicuous, simple, tumid or with only indistinctly lumpy or uneven surface, only rarely becoming  $\pm$  verruculose, often appearing as mere aeruginose specks in the pseudopodetial tomentum. Photobiont usually Nostoc. Example: S. tomentosum

**Botryose** often stalked at maturity, similar in shape to bunches of

grapes, concolorous with pseudopodium, gray to glaucous, usually rather large, 24 mm diam. Hyphae ± loosely arranged, interwoven in various directions, in well developed forms forming a pseudoparenchymatous tissue. Photobiont [usually?] Nostoc.  
Examples: S. exutum, S. japonicum

**Sacculate (scrobiculate)** usually stalked at maturity, globular but ± clavate, ± smoothly spherical to more often pitted and furrowed with fine convolutions, concolorous with pseudopodetia, whitish to ashy, often large and numerous, 17 mm diam. With wall (cortex) always well developed, thick and even, translucent and hyaline in section, highly gelatinized, with the swollen walls of the hyphae entirely coalescent and indistinguishable, only the lumina visible, appearing in section as tubes or rounded holes in a homogeneous, transparent, mucilaginous matrix; formed of a closely packed tissue of radiating (anticlinal) to variously oriented, tubular to isodiametric hyphae; interior solid or lax. The first two of the following subgroups intergrade with each other.

**Loosecored, scrobiculate** Photobiont usually Stigonema or Scytonema. Examples: S. ramulosum, S. nesaeum.

**Solidcored, smooth** Photobiont usually Nostoc. Examples: S. claviceps, S. macrocephalum

**Strictum** type pale, similar in color and form to phyllocladoid branchlets, branched digitate or digitate lobate; solid, with a strand of chondroid central axis; with hyaline gelatinized cortex of the typical sacculate type with anticlinal, fistulose cell lumina. Photobiont Nostoc. Example: S. strictum.

**Compound aggregate sacculate** Smoothly subglobose, frequently congregated, giving a falsely botryose appearance. Example: S. botryophorum

**Colensoi** type Globose to clubshaped, finally becoming aeruginose cinereous, large and conspicuous, borne on distinct pedicels; surface minutely granulate but not verruculose or botryose; solid internally, connected with core of pseudopodetium by a continuation of central axial strand; cortex thin, umbilicated, pseudoparenchymatous, of thinwalled, not gelatinized cells. Example: "S. colensoi"

**Apothecia**

True lecanorine apothecia do not occur in Stereocaulon, although in some species the margin is pale at least when young, and a few algae may occur sporadically; Lamb does not place much emphasis on external characters of the apothecia.