ALPHABETICAL GLOSSARY OF LICHENOLOGY

Rev. 11/93; * = additions since then

A

A, AN (prefix) not having; not
ALAYER thin, outermost solid layer of the outer ascus wall (usually inside a layer by gelatinous material)
AB (prefix) position away from
ABORTIVE imperfect or poorly developed, as podetia in some Cladonias.
ABRADED of lichen thalli, having the surface worn, eroded.
ACICULAR long and needleshaped, tapering at both ends, as in some kinds of spores.
ACIDIC ROCK quartzite, granite, basalt, sandstone or other rocks that produce no bubbling when a strong acid (usually 10% HCl) is applied; pH less than 7.
ACIDOPHILE a plant that occurs (preferentially) in acidic habitats or or acidic substrates.
ACRO (prefix) at the end; apical, terminal.
ACROGENOUS developing at the apex; terminal; as applied to formation of pycnidiospores is a neutral term for exobasidial.
ACROTON a spinule in lichens bearing side branches.
ACTINODISC type of apothecia in Umbilicaria, with disc gyrose and having no proper margin
ACTINOGYROSE, ACTINOGYR see actinodisc.
ACTINOLICHEN a lichenlike association between an alga and an actinomycete bacterium.
ACUTE sharply pointed, less than a right angle.
ADHESIVE DISC hapterea type of holdfast.
ADNATE the whole underside closely attached and lying closely upon, the thallus close to the substrate, or the lower surface of the apothecium fused to the thallus; lying flat on and attached to the substrate; adnate foliose thalli are often not flattened but rather somewhat convex, with the lobe margins often straight and the rhizines minute to very short, often dense.
ADPRESSED see appressed.
ADVENTITIOUS, ADVENTIVE incidental, appearing casually; usually refers to production of lobes, branches, or other organs, not in the normal pattern, sometimes caused by regeneration after damage, but sometimes a good taxonomic character.
AEROCYTE thalluswarts, with a loose plectenchyma inside, sometimes with breathing pores (pseudocyphellae); can occur on the lower surface (e.g., Omphalora arizonica) or on the upper surface (e.g., Melanelia exasperata)

AERUGINOSE bluegreen
AGGLUTINATE fixed together as if with glue; conglutinate
AGGREGATE group of closely related species of uncertain circumscription.
AGGREGATED grouped together, crowded.
ALATE winged.
ALGAE
ALGAL LAYER a thin layer of algae (or cyanobacteria) lying justbelow the upper cortex; hyphae generally thinwalled and loosely interwoven.
ALGAL SHEATH dead algal cell
***ALLANTOID** slightly curved, with rounded ends
ALLIANCE term used in phytosociology.
ALUTACEOUS the color of buff leather.
AMPHI (prefix) the two (sorts, sides); surrounding
AMPHITHECIUM (usually), thalline margin of an apothecium; Hertel (Calcifer Lecidea) uses it for the part of the proper excipulum in the margin outisde of the parathecium.
AMPLIARATE (of fruiting warts in Pertusaria), conical (but low, with sides gradually sloping towards the thallus surface).
AMYLOID staining blue or purple in iodine
ANAMORPH conidial state of a fungus
ANAPHYSIS a sterigmatoid thread in the apothecium of the lichen Ephebeia.
ANASTOMOSING with numerous crossconnections, forming a network; joining up, runing into each other.
ANGIOCARPIC closed (of a sporocarp) at least until spores are mature.
ANGULAR with angles, as applied to outlines, or to cross sections (if due to ridges, see angulate).
ANGULATE having angles or corners as seen in cross section, due to sharp ridges running lengthwise on the outside (of a branch)
ANGUSTATE narrowed.
ANISOTOMIC, ANISOTOMOUS unequal branching, with a distinct main axis and smaller lateral side branches.
ANNULAR ringed, ringshaped
ANNULATE ringed, referring to cracks or differentiated, often pigmented zones, in the cortex of Usneas.
ANNULUS of asci, the apical ring (anneau apicale in Fr.)
ANTICLINAL at right angles to the surface.
APICAL situated at the tip or terminal part of a structure; as applied to the involucrellum of a perithecium, means that the involucrellum occurs only around the ostiole, but extends some distance laterally (in contrast to "imperfect)".
APICAL APPARATUS
APICAL CAP layer of (usually?) amyloid gelatin on the outside of

the ascus apex, continuous with the "fuzzy coat" on the sides, but thickened
***APICAL CUSHION** nonamyloid zone running through an amyloid apical dome.
APICAL DOME tholus; thickened apical region of an ascus, inside the outer wall; often consisting of a nonamyloid inner part (dome in the strict sense according to some authors; apical cushion according to Purvis, et al., 1992) and an amyloid outer part.
APICAL NASSE
APICAL RING
APICULUS a point or short projection at one end (of a spore).
APICULATE pointed
APOTHECIUM (APOTHECIA) disk shaped (cupshaped) fruiting body (ascocarp) of an ascomycetous fungus, whether lichenized or not; usually open above, with the disc exposed.**APPENDAGE** a process (outgrowth) of any sort.
APPENDIX ORGAN thallus outgrowth lacking algae; can function for attachment or not.
***APPLANATE** flattened.
APPRESSED the whole underside closely pressed to the substrate or surface; lying flat on and firmly attached to it; 1) in appressed foliose thalli, the lobe tips are plane or turned down and the rhizines are very minute, or absent; 2) in appressed apothecia, the base is scarcely constricted.
APUD in (used where the primary author of a name published it in a work by another author).
AQUATIC growing in water or where periodically inundated.
ARCUATE bent, curved, or arched.
ARACHNOID cobweblike in structure, composed of or covered by parallel or more often irregularly oriented and loosely interwoven hyphae, appearing as fine strands; applied to ecorticate surfaces.
ARBORICOLOUS growing on trees.
ARCHICARP in Ascomycotina, the cell, hypha, or coil which later becomes the ascocarp or part of it.
ARCUATE arclike, moderately curved in one direction.
ARDELLA a small spotlike apothecium as in Arthonia.
AREOLE (AREOLA) a small, usually rounded to polygonal or irregular area, appearing like an island or a tile in a mosaic; 1) a small, flattend part of a lichen thallus separated from the rest of the thallus by deep, narrow to wide cracks or more or less scattered on the substrate; 2) small discrete corticated patches on the thallus surface
AREOLATE consisting of or covered by areoles, islandlike, sharply divided into areoles by separating cracks, usually resembling a mosaic or jigsaw puzzle; true areolation is formed

by the isolated development of individual areoles, which may later coalesce; if areoles are formed by cracking of an originally continuous thallus or surface, then referred to as rimose, or rimosareolate.
ARTICULATE, ARTICULATED broken into jointed or segmented, often swollen, portions and so appearing rather like a crustacean's leg, as in branches of some Usneas; with reference to paraphyses means septate (and somewhat constricted at the septae?)
ASCENDING, ASCENDENT rising from the substrate, directed upwards at a rather narrow angle, or curving upwards.
ASCIGEROUS having asci.
ASCIGEROUS CENTRUM the special tissue which becomes the asci and paraphyses of a pyrenomycete.
ASCOCARP a "fruiting body" containing fungal ascospores.
ASCOGENOUS ascusproducing or supporting.
ASCOGONES (ASCOGONIUM) cell or group of cells in Ascomycotina fertilised by a sexual process.
ASCOGONIAL APPARATUS, ASCOGONIUM the cell or group of cells in Ascomycotina fertilised by a sexual act.
ASCOHYMENIAL Ascomycotina having asci and paraphyses arranged in a hymenium, as in pyrnomycetes and discomycetes.
ASCOLICHEN, ASCOMYCETE
ASCOLOCULAR Ascomycotina having asci in cavities, as inloculoascomycetes.
ASCOMA (ATA) a sporocarp having asci.
ASCOMYCOTINA, ASCOMYCETES class of fungi in which spores are developed in asci.
ASCOPHORE 1) an ascusproducing hypha in an ascocarp; 2) apothecium (term used by Massee).
ASCOSPORE spore produced in an ascus (by "free cell formation").
ASCUS (ASCI) saclike vessel or cell (20100 um long) of the perfect state of an ascomycete, containing one or more (most often 8) sexually produced fungal spores
ASCYPHOUS without a cup
ASEPTATE lacking cross walls (septa).
ASPICILIOID (of lecanorine apothecia) more or less immersed in thallus, at least when young, as in the genus Aspicilia.
ASSIMILATIVE having to do with growth before reprouduction; nonreproductive; vegetative.
ASSOCIATION term used in phytosociology; also used to refer to the lichen symbiosis.
ATTACHMENT ORGAN
ATTENUATE, ATTENUATED gradually tapering or narrowed.
ATYPICAL not normal.
AUSTRAL southern, especially referring to the Southern Hemisphere; corresponds to Boreal in the Northern Hemisphere.

AUTHENTIC (of specimens), identified by the author of the name of the taxon to which they were originally referred (but not necessarily part of the type collection).
AUTONOMOUS independent, separate (e.g., autonomous isidia are ones not produced from or associated with soredia or soralia).
AXIAL BODY, AXIAL MASS
AXIL notch (angle or point of divergence) between two branches or lobes, or between a branch and the axis from which it springs; in fruticose lichens the upper angle between branches, which may be closed (imperforate, sometimes cracked open due to age or handling) or open (perforate from the beginning); nontechnically referred to (in dubious taste) as a "crotch".
AXIS (AXES) central longitudinal support; 1) the main trunk or stem of an abundantly branching thallus; 2) in Usnea, the cartilaginous (chondroid) central core running through the thallus filaments.

B

BLAYER thin layer of the outer wall of an ascus, between the a layer (to the outside) and clayer (to the inside).
BACILLAR, BACILLIFORM like a short rod; generally very small, with rounded ends.
BALLTIPPED RHIZINE type having a swollen, globose tip
BARBATE having one or more groups of hairs; bearded (generally applied to growth forms of Usnea in which the thallus is pendulous, with abundant branches and usually also fibrils).
BARE 1) epruinose; 2) without hairs, tomentum, squamules, etc.
BASAL CELL conidiogenous cell (basidium) in a fulcrum (interpreted as producing conidia)
BASAL DISC, BASAL HOLDFAST the single disclike basal part by which a thallus is attached to the substratum; see fixation disc
BASE
BASIC ROCKS rocks containing either calcium (calcareous rocks) or magnesium (ultramafic rocks).
BASIDIOCARP basidiumbearing organ of Basidiomycotina.
BASIDIOMYCOTINGA, BASIDIOMYCETE, BASIDIOLICHEN class of fungi in which spores develop on basidia.
***BASIDIOMA (BASIDIOMATA)** basidiumcontaining structure.
BASIDIOSPORE spores from a basidium.
BASIDIUM (BASIDIA) 1) inflated hyphal segment (microscopic clavate body) which, after karyogamy and meiosis, bears basidiospores at the tip; 2) also formerly applied to the basal cells of sporebearing structures in pycnidia (intepreted as bearing conidia) in ascomycetous fungi or lichens
BASIONYM in nomenclature, the name or epithet bearing synonym on which a new transfer or new combination is based, generally the earliest name published for the taxon.
BASIPETAL development in the direction of the base, i.e., the apical part is oldest.
BAYONETLIKE STERIGMA rather elongated and tapering or pointed sporebearing process (in a pycnidium)
BEAK (of a perithecium or pycnidium), an elongated neck through which the spores are discharged.
BEARD LICHEN, BEARD MOSS species of Alectoria, Bryoria, or Usnea.
BI usually, having or consisting of two of something
BIATORINE (of lichen apothecia) of lecideine type s. lato (lacking algae), but the disc (epihymenium) and margin (excipulum) pale or more or less colored, soft in consistency (not carbonized), and often strongly convex.
BICORNUTE curved and drawn into two points
BIFURCATE divided into two branches (also see FURCATE)

BIFUSIFORM rodshaped with minute swellings near but at each end.
BIGUTTULATE containing two oil drops or droplets (usually of contents of a simple spore).
BILATERAL concerning both sides
BILOCULATE, BILOCULAR divided into two compartments, as a 2celled spore.
BIPOLAR 1) occurring in both Arctic and Antarctic regions, butdisjunct to various degrees between the polar regions; 2) at the two ends (poles) of a spore.
BISERIAL, BISERIATE arranged in two rows, as spores in an ascus.
BITUNICATE with two functional ascal wall layers (separating to show endoascus and exoascus); called fissitunicate by some authors; found in the Loculascomycetes.
BIVALVE DEHISCENCE a type found in Pertusaria, in which the ascus tip bursts open like a clam.
BLASTENIOSPORE a polarilocular (q.v.) lichen spore.
BLASTIC condition in which a pycnospore initial enlarge before a septum forms between it and the cell bearing it.
BLASTIDIUM (BLASTIDIA) 1) small subsidiary locule in a thickwalled spore; 2) vegetative propagule containing mycobiont and photobiont, produced by yeastlike "budding" (often in series of two or more, with each new one produced from the tip of the previous one)
BOREAL pertaining to the circumpolar bioclimatic zone, also called the northern coniferous zone or taiga, in the Northern Hemisphere.
BOTRYOID, *BOTRYOSE with rounded clusters like bunches of grapes
BRACHY (prefix) short
BRANCHLET
"BREATHING PORE" a nontechnical term used especially for a pseudocyphellum.
BROADLY ELLIPSOID/ELLIPSOIDAL Length: width = 1.151.3
***BRYOPHILOUS** growing on mosses and liverworts.
BULBATE with a bulbous swelling; globose with a narrow, tapering neck, as in cilia in some Parmelioid lichens.
BULLA a delimited convexity resembling a blister.
BULLATE 1) strongly convex and swollen, almost globular (applied to areoles, generally coarser and more constricted at the base than verrucae, and usually with a loose to almost hollow medulla); 2) with surface with bubblelike or blisterlike swellings or puckerings, as in Lasallia; 3) having a rounded projection at the center.
BUSHLIKE nontechnical term meaning in the form of a bush or shrub, i.e., (in the sense of Taylor) many axes of more or less equal size arising from a single base, or from the same spot on the substrate, usually without a distinct main axis; caespitose.

BYSSOID cottony, composed of delicate threads, floccose.

C

CLAYER thick, inner layer of the outer wall of an ascus, inside the blayer and outside the dlayer
CA. abbreviation for circa, meaning approximately
CAESPITOSE growing in dense low tufts, tufted; forming cushions; shrublike.
CALCAREOUS ROCK limestone or other rocks containing calcium or lime (calcium carbonate), with pH over 7, vigorously bubbling when treated by a strong acid (usually 10% HCl); must be distiguished from noncalcareous rocks that have an external coating or calcareous material.
CALCICOLOUS growing on calcareous substrates.
CALCIPHILE a plant that grows (preferentially) on calcareous substrates
CALCIPHOBE a plant that does not occur on substrates containing or exposed to significant amounts of calcium.
CANALICULATE longitudinally channelled or grooved.
CANALS 1) in some Pertusaria spores, fine lines or channels in or within the outer or inner spore walls, and communicating with the spore lumina; 2) in polarilocular spores, isthmus (pore or tube) connecting the locules.
CAPILLARY hairlike.
CAPITATE swollen like a head, knoblike, as in soralia, and tips of paraphyses.
CAPITULUM the expanded headlike terminal part of the ascocarp on its stalk in the Caliciales.
CARBONACEOUS, CARBONIZED black, opaque (usually matt), usually brittle, friable
CARIOSE appearing decayed, usually with irregular fissures
CARPOCENTRUM
CARTILAGINEOUS somewhat stiff, firm and tough but readily bent, gristly (as in gristle in meat); as applied to tissues, also implies translucent, and is referred to as chondroid.
CARTILAGINOUS LAYER sometimes applied to the stereome in Cladonia and the chondroid axis in Usnea.
CATENULATE linked together in a chain
CAULESCENT having or developing a stem
CAVERNOSE having hollows or cavities
CAVERNULA cavity, especially the cavities in the lower cortex of Cavernularia
CAVITY 1) a hollow area; 2) the inside of a pycnidium
CENTRIFUGAL from the center outwards
CENTRUM the structures within an ascocarp.
CEPHALODIUM (CEPHALODIA) small (to ca. 0.51 mm), delimited, galllike thallus structure (or tiny thallus) containing a second

photobiont, usually a cyanobacterium, on or within thalli containing a green photobiont; found in diverse genera, including Peltigera, Lobaria, Stereocaulon, and Placopsis.
CEREBRIFORM brainlike, convoluted.
CESPITOSE see caespitose
CF. abbreviation for confrere, literally meaning closely related, but often used loosely to express uncertainty about an identification.**CHAFFY**
CHALKY
CHANNELED grooved, as in the lower surface of Pseudevernia
CHEMICAL RACE a group of chemically differentiated individuals or populations, not of any particular taxonomic rank.
CHEMICAL STRAIN an informal infraspecific trank used for populations distinguished only by chemical characters
CHEMODEME group of chemically differentiated individuals of a species, of unknown or of no taxonomic significance.
CHEMOSPECIES
CHEMOSYNDROME a biogenetically meaningful set of major and minor natural metabolic products produced by a species.
CHEMOTYPE a group of chemically differentiated individuals of a species of unknown or of no taxonomic significance (same as chemodeme).
CHINKY cracked and fissured; rimose.
CHIONOPHILOUS = nitrophilous
CHONDROID like cartilage, tough and more or less translucent, often with a shiny cut surface.
CHONDROID AXIS the elastic, cartilaginous central cord in the genus Usnea
CHONDROID STRANDS
CHROMATOGRAPHY physicochemical technique for the identification of metabolic and other chemical products.
CHRYSOGONIDIA photobiont cells of Trentepohlia (obsolete)
CILIATE having cilia (by either definition below).
CILIUM (CILIA) short, eyelashlike hair; 1) longishacute hairlike outgrowth, from the margin or upper surface of lobes or on the margin of the apothecium, consisting of compact strands of hyphae; 2) rhizinelike growth on the margin, visible with the naked eye (sometimes called marginal rhizines).
CINEREOUS ashy colored (gray)
CIRCUMPOLAR used of a species occurring in a broad latitudinal zone in Arctic and Subarctic, or Antarctic and Subantarctic regions.
CITRINE lemon yellow.
CLADONIFORM consisting of a crustose to squamulose primary thallus and an erect, stalked secondary thallus of podetia (as in Cladonia) or pseudopodetia (as in Pilophorus).

CLATHRATE like a network, latticed.
CLAVARIOID clubshaped to coralloid, having the appearance of a Clavaria (genus in the Basidiomycotina).
CLAVATE, CLAVIFORM clubshaped, with the further end larger than the nearer.
CLYPEUS a shieldlike stromatic growth, composed of fungal hyphae and host tissue, around the ostiole of an ascocarp.
CLYPEATE having a clypeus.
COALESCE fuse together, as several thalli merging into a single large colony.
COCCOID organized in small, more or less spherical groups
COCHLEATE shelllike, i.e., somewhat concave, shaped more or less like a mussel (but usually relatively broader)
COHERENT
COLE, COLICOLOUS (suffix) living on; inhabiting**COLONY** a group of lichen thalli of the same species growing together.
COLUMELLA a sterile central axis within a mature fruit body
COLUMNAR ISIDIA tall (over 5 mm) unbranched or furcate isidia in which compaction and lateral fusion may lead to loss of the usual cylindrical form; e.g., in Pertusaria spp.
COMMUNITY loosely used to refer to any phytosociological taxon, i.e. group of plant species in Nature
COMPLANATE flattened; may also imply smooth.
COMPLEX sometimes used to designated a group of closely related species, usually ones that are very difficult to distinguish from each other
COMPLICATE folded, bent upon itself.
COMPOUND made up of a number of parts
COMPRESSED (of a stipe) flattened transversely
CONCAVE hollowed out, basinlike.
CONCENTRIC arranged around a common center, often forming rings one outside the other.
CONCEPTACLE any hollow structure producing spores or spermatia
CONCEPTACULUM the wall of a pycnidium or spermogonium
CONCOLOROUS of the same color.
CONCRESCENT becoming joined.
CONE CORTEX
CONFLUENT running together, blending, united; as applied to rhizines, means that each rhizine is composed of groups of parallel, elongated hyphae, which are united but still somewhat distinct, giving a fibruous appearance to the outside.
***CONGENERIC** belongint to the same genus.
CONGESTED crowded.
CONGLOMERATE clustered.
CONGLUTINATE glued or stuck together, referring to fungal tissues, and especially to paraphyses.

CONIDANGE a small lichen pycnidium having "no stout wall" (des Abbayes)
CONIDANGIUM a pycnidium, interpreted as producing asexual spores (conidia).
CONIDIUM, CONIDIOSPORE asexual spore
CONIDIOGENOUS CELL any fungal cell from which, or within which, a conidium is directly produced; in ascomycetes, the term is generally synonymous with "basidium"; neutral terms are pycnide and sporogenous cell
CONIDIOMA (COMIDIOMATA) multihyphal, conidiumcontaining structure; another term for conidiangium
CONIDIOPHORE a simple or branched hypa bearing condiogenous cells form which conidia are produced; the conidiogenous cell
CONSISTENCY the overall internal appearance and texture of the thallus, especially as related to its response to handling, sectioning, or moistening; reflects anatomical properties (e.g., relative thickness and fragility of the tissues, degree of gelatinization, or amount of inspersion with various kinds of granules); although subjective and relative, it is often a useful characteristic.
***CONSPECIFIC** belonging to the same species.
CONTEXTUAL of the tissue lying between the hymenial layer andthe upper surface in a basidiocarp.
CONTIGUOUS touching or in close contact along most of the length, scarcely or not at all overlapping, "except for raised edges following the marginal lines" (Taylor); generally implying not fused or joined; applied to areoles, squamules, or lobes.
CONTINUOUS more or less unbroken, uninterrupted, as in a cortex without pores or cracks.
CONTORTED irregularly twisted or bent into irregular curves
CONVEX "equally rounded, broadly obtuse" (Galloway)
CONVOLUTE
COPROPHILOUS
CORALLIFORM
CORALLOID divided up into many short, irregular cylindrical branches, like coral; often brittle; a) having or being composed of such outgrowths; b) a type of isidium or phyllocladium having this form; in Pertusaria, they are tall (over 5 mm), dichotomous or monopodially branched, with numerous, short, esorediate ramifications that resemble the much small ecorticate isidioid soredia formed by soralia.
CORD a dense strand of hyphae, as in the center of branches of Usnea.
CORIACEOUS leathery and not easily broken or crumbled.
CORNICULATE
CORNUTE like a cow's horn.

CORONA crownlike radiating structure.
CORONATE crowned; of an apothecium; 1) bearing cilia on the thalline margin; 2) having the apothecium surrounded by lobes of thallus.
CORPUS
CORRUGATE, CORRUGATED wrinkled.
CORTEX outermost layer of the thallus (and of lecanorine apothecial margins) which, if present, in the true sense consists of compacted hyphae which may appear either fibrous or cellular, sometimes gelatinized; relatively hard and tough, protective in function; used loosely to include superficially similar outer layers; also used sometimes for the wall of a pycnidium.
CORTEXRHIZINES
CORTICATE having a cortex (or cortexlike layer).
CORTICATED MEDULLARHIZINE
CORTICOLOUS growing on the bark of trees or shrubs.
CORYMBOSE clustered; arranged in clusters, with branches coming up to the same general level.
COSTATE veined or ribbed.
CRACKED breaking open in lines or chinks, sometimes exposing the medulla; often irregular and due to age, but sometimes regular and characteristic of a taxon.
CRATERIFORM cup or craterlike in form
CRENATE of a wavy margin with rounded projections (or teeth) separated by notches (sinus acute); scalloped (as in the edge of a scallop shell).
CRENULATE deminutive of crenate.
CRETACEOUS chalky in consistency, due to abundant calcareous particles.
CRISPED of a margin crumpled or thrown into waves.CROTTLE Scottish term for many lichens (obsolete); often used collectively
CROWDED having a great number of parts close together and usually overlapping or overgrowing each other; often (especially as applied to parts of areolate or placodioid thalli, or to apothecia), producing distortion of outline, surface, or orientation, or wrinkling and bunching up towards the center of the thallus or apothecium, because of growth pressures.
CROWDED BACK
***CROZIER** the hook of an ascogenous hypha before ascusdevelopment.
CRUSTACEOUS, CRUSTOSE thallus type forming a strongly adherent crust over the substrate (in intimate contact with the substrate), without a lower cortex, rhizines, or umbilicus; often without a distinct or true upper cortex; usually not removable intact (without tearing, or removing part of the substrate as

well).
CRYPTOLECANORINE with a reduced or inapparent thalline margin (of an ascocarp).
CRYPOTHALLINE
CUCULLATE forming an almost tubular structure opening along one side, as in Cetraria cucullata.
CUDBEAR Ochrolechia tartarea, used in dyeing yarn
CUFFSHAPED SORALIUM
CUNEATE wedge shaped, thinner at one end than the other.
CUP scyphus in Cladonia
CUPULAR, CUPULATE like a cup.
CUPULAR EXCIPULUM
CUSHIONFORMING
CYANOBACTERIUM an organism related to true bacteria and belonging to the Kingdom Monera (prokaryotes, lacking a nucleus and chloroplasts); formerly called Cyanophyta or bluegreen algae.
CYANOLICHEN
CYANOPHILIC, CYANOPHILOUS
CYANOTROPHIC
CYLINDRICAL
CYMOSE in a sequence one above the other, the youngest at the top
CYPHELLA (CYPHELLAE) a pore recessed into the lower surface of the thallus (a break in the lower cortex), sharply bounded, concave, cuplike, rounded or ovate or effigurate, lined with a "pseudocortex" (of loosely connected, nongelatinized hyphae, with frequently globular cells, formed from the medulla) distinct from the lower cortex, and surrounded by a pale ring; known only in the genus Sticta (or also Oropogon according to Ainsworth & Bisby, 6th ed.).

D

DLAYER layer of the ascus just inside the Clayer
DACRYOID teardroplike
DACTYL a nodular to cylindrical or clavate body, somewhat resembling a swollen isidium, bounded by a cortex, often opening at the apex to expose the medulla, sometimes producing soredia from the inner surface.
DACTYLIFORM, DACTYLOID fingerlike
DECORTICATE, DECORTICATED with cortex or bark removed (fallen away or decomposed).
DECUMBENT resting flat on the substratum, usually with the ends turned up.
DECURRENT descending the stem.
DECUSSATE (of lichen thalli) having the surface divided and crossed by dakr lines
DEFLEXED bent sharply downward.
DEHISCENCE the mechanism or process of opening when mature, in lichens applied only to asci
DELIMITED having a distinct restricting edge, margin, or boundary.
DELIQUESCENT shrublike branching (e.g., in Usnea), in which a main stem exists towards the base of the thallus but looses itself towards the apex by repeated branching
DENDRITIC, DENDROID irregularly branched in all directions from a central trunk, like a tree.
DENDROMORPHIC treelike, applied to the branching of rhizines
DENSE set close together, compact, often closely interwoven; having the branches or hyphae massed and crowded, (as opposed to diffuse, or loose)
DENTATE an appearance of projecting teeth; a toothed edge.
DENTICULATE diminutive of dentate.
DEPAUPERATE poorly developed
DEPENDENT hanging down
DEPRESSED having the middle lower than the edge
DEPSIDE a type of lichen product
DEPSIDONE a type of lichen product
DERMIS the limiting layer of a thallus (i.e., the cortex) (obsol.)
DETERMINATE having a distinct, defined form.
DIAGNOSIS a usually rather brief account, usually the first, of the essential distinguishing characteristics of a taxon
DIASPORE any propagule for dissemination (sexual or asexual); in lichens particulary applied to vegetative propagules.
DICARPOUS with two ascocarps; usually refers to two apothecia per fruit wart in Pertusaria.

DICHOTOMOUS branched or divided in pairs, usually into two more or less equal portions as in the letter "Y", sometimes repeatedly; forked.
DIFFRACT cracked or broken into small areas, areolate; usually implies that the areoles are angular and sharpedged, with the cracks deep and distinct.
DIFFUSE scattered and without any definite pattern, as in diffuse soredia; widely and loosely spreading, with no distinctmargin.
DIGITATE shaped like or arranged like fingers.
DILACERATE appearing torn
DIMIDIATE 1) applied to a perithecium when excipulum or (more frequently) the outer wall (involucrellum) covers only the upper portion of the ascocarp (in section the wall appears as two dark lateral areas in the upper part); 2) appearing to lack one half or having one half very much smaller than the other (of a compound ascocarp).
DIMORPHIC having two forms.
DIMPLE
DISC, DISK exposed upper surface of the hymenium in an apothecium, concave to plane or convex, usually pigmented in a characteristic way, often surrounded by a margin or rim; visible by the unaided eye or under low magnification (e.g., 20X).
DISCIFORM round and flat, e.g., as applied to apothecia in Pertusaria spp.
DISCOCARP apothecium; ascocarp in which hymenium is uncovered when asci and ascospores are mature.
DISCOID flat and more or less circular, disclike or platelike.
DISCOMYCETE, DISCOLICHEN
DISCOPODIAN STAGE
DISCOPODIUM
DISCOSTROMIUM
DISCRETE separate and distinct, not joined, as lobes or thalli, or loose, as in paraphyses.
DISJUNCT not joined, set apart; of a population, of a species widely separated geographically or otherwise from other populations of the same species.
DISPERSED pertaining to a thallus which consists of scattered small subunits.
DISSECTED deeply and finely (relative to the overall width) divided or cut up, into many lobes or lobules.
DISTAL situated away from the center of a body, or from the point orf orgin; terminal.
DISTICHOUS 1) (of spores) having a large oil drop in each half of the cell, giving the spore the appearnance of being twocelled; 2) in two lines

DIVARICATE divergent at right angles
DIVERGENT growing away from each other, spreading apart, usually at a rather wide angle; generally applied to lobes or branches.
DORSAL back or upper surface; surface facing away from the axis; frequently applied to the upper surface of foliose lichens.
DORSIVENTRAL having distinct upper and lower surfaces that are different from each other.
DOWNY
DRUSE a stellate cluster of large crystals in a lichen thallus
DULL = matt

E

E, EX (prefix), from; out of; without; not having. See ex.
ECHINATE (especially of spores), having sharply pointed spines.
ECHINULATE diminutive of echinate
ECILIATE lacking cilia.
ECORTICATE without a cortex or bark, and never having one; appearing fibrous or cobwebby.
ECOTYPE part of a population of a species showing morphological, chemical, or physiolgical characteristics which appear to be genetically determined and correlated with particular ecological conditions, but which are not considered of taxonomic significance.
ECTAL EXCIPULUM
EDGE
EFFIGURATE 1) without a defined form, grossly irregular (for example not ovoid) (Rogers); 2) having a definite form or figure, not effuse (Galloway; Swinscow & Krog); 3) radiating at the periphery; used by some authors to include obscurely or even distinctly rosulate or lobate crustose (placodioid) thalli, with elongated marginal lobes. Fig.: Ahmadjian & Hale p. 22
EFFLORESCENT bursting out of
EFFUSE pertaining to a thallus having no definite boundaries; stretched out flat, especially as a filmlike growth.
ELLIPSOID, ELLIPSOIDAL of a solid object (e.g., a spore) appearing approximately elliptical in longitudinal section (L:W = 1.31.6).
ELLIPTICAL oval or oblong narrowed at each end.
ELONGATE considerably longer than wide
EMACULATE without spots or dots.
EMBROWN darken form exposure to the sun
EMERGENT of ascocarps, projecting partly above the substrate; semiimmersed
EMERSED of perithecia, having only the lower third immersed in the thallus or substrate.
ENDEMIC occurring only in (and indigenous to) a single, usually small, geographic area.
ENDO (prefix), inside.
ENDOASCUS inner layer of a bitunicate ascus
ENDOBASIDIAL fulcrum type normally with short cells and producing lateral (pleurogenous, intercallary) pycnospores (interpreted as conidia), usually from short projections or secondary branches (Steiner); usually producing bacilliform pycnospores.
ENDOCARPINOID (of perithecia) sunk into the tissues of the thallus, as in Endocarpon

ENDOGONIDIUM a gonidium (photobiont) "having its development inside a receptacle or gonidangium"
ENDOLITHIC growing "within" rocks, i.e., under and around the rock crystals, often with little or no thallus visible on the outer rock surface.
ENDOPHLOEDAL, ENDOPHLOIC within bark.
ENDOSPORE, ENDOSPORIUM inner wall of a spore
ENDOSUBSTRATIC growing within the substrate.**ENDOTUNICA** inner layer of a bitunicate ascus
***ENTEROBLASTIC** conidia in the formation of which the existing inner or neither wall layer of the conidiogenous cells is not directly involved; formed from the inside.
ENTIRE smooth and unbroken, continuous, without notches, lobes or teeth, as in margins of lobes or apothecia; in apothecial margins also implies that the apothecia are rounded (i.e., the margin is not flexuous or sinuous); in perithecia, the term means that the excipulum or involucrellum completely surrounds the perithecium.
ENVELOPE
EPI (prefix) upon
EPIGEAL, EPIGEAN, EPIGEIC growing on the ground; Ainsworth & Bisby (sixth edition) state that in lichen the term means not attached to any substrate but blowing about on the surface of the ground (i.e., vagrant or wandering)
EPIHYMENIUM indistinctly delimited uppermost portion of the hymenium, where this differs in appearance from lower part; usually pigmented (often on the swollen tips of the paraphyses) and sometimes inspersed with tiny granules; not a distinct tissue; generally narrow (315 um), but sometimes with granules penetrating much deeper into the hymenium. Some authors (e.g., Corner, 1950) use the term for a thin layer of interwoven hyphae on the surface of the hymenium (i.e., the same definition given below for epithecium).
EPILITHIC on surface of rock, with little or no penetration between and under the rock particles.
***EPINECRAL LAYER** horny dead fungal hyphae with indstinct lumina (see discussion under NECRAL LAYER); also referred to as the amorphous layer.
EPIPHLOEDAL, EPIPHLOIC on surface of bark, with little or no penetration below the outermost layer.
EPIPHYLLOUS on surface (usually upper) of leaves of vascular plants, the mycobiont not penetrating the leaf surface.
EPIPHYTE a plant growing on another (usually living) but not organically connected to it (i.e., not parasitic or saprophytic on it, but deriving its moisture and nutrients from the air and precipitation).

EPIPLASM the main inside part of an ascus, where the spores develop.
EPIPSAMMA 1) granular material associated with the epihymenium (on top of it, within it, or both); 2) granular zone (usually pigmented) permeating upper parts of hymenium but more or less distinct from epithecium, especially in Rhizocarpon
EPISPORE, EPISPORIUM a transparent gelatinous outer covering, often irregular in thickness, generally thin, surrounding the ascospores of many lichens; often called a "halo"; some authors use it to refer to an outer layer of the spore wall; Purvis, et al define it as the fundamental and often outer wall of a spore which determines its shape. Compare with PERISPORE.
EPISUBSTRATIC growing upon substrate.
EPITHECIUM the layer above the asci, formed by the tips of the paraphyses; in the strict sense (according to Poelt, pers. comm.), a distinct tissue (plectenchyma) of interwoven hyphae ontop of hymenium; often (e.g., by Purvis, et al.) confused with or used interchangeably with epihymenium; according to Ainsworth & Bisby, can also mean "the surface of the disc in some discomycetes". In my keys and descriptions I have generally used epihymenium, except in the few cases where I know that the strict sense applies, but I have not been entirely consistent about this.
EPINECRAL LAYER a layer of dead, decomposing hyphae, usually appearing hyaline, gelatinous and amorphous, on top of the cortex or pseudocortex
EPITHET the second (specific) part of a Latin binomial of a plant species (= the "trivial" name of the zoologist); also the third or fourth (varietal, etc.) term.
EPIXYLIC, EPIXYLOUS living on the surface of wood.
EPRUINOSE without pruina.
ERECT rising vertically from the substrate or surface (straight, not curved up); as applied to overall growth form, the thallus and lobes grow away from the substrate tending towards the perpenticular; attached only by a few, more or less centered, contact points; rhizines, if present, only at contact points or along margins.
ERODED
EROSE 1) eroded; 2) delicate, usually irregular, toothlike projections from the edge (appearing as if bitten or gnawed)
ERRATIC not fixed to the substratum; epigaeic; used by some authors in a more restricted sense, to refer to individuals or populations growing (or at least lying) loosely on the ground but belonging to species that are normally firmly attached to solid substrates, and not evolved into distinct taxa.
ERUMPENT bursting through surface; applied to soredia or

ascocarps.
ESEPTATE = aseptate
ESOREDIATE lacking soredia.
EU (prefix), true
EUCARPIC having only part of the thallus used for the fructification (sporocarp).
EUCORTEX a true cortex, formed of "well differentiated tissue" (Ainsworth & Bisby); in the sense of Poelt (1958), a tissue composed entirely of fungal cells, without dead algae, and formed from a cambiumlike layer within or just above the algal layer.
EUGONIDIUM a bright green lichen photobiont (e.g., Trebouxia) (obsol.)
EULECANORINE
EUPERTUSARIATE in Pertusaria, pertaining to fruit warts which are more or less constricted at the base.
EUTHYPLECTENCHYMA hyphal tissue having no "cellular" structure (i.e., not composed of conglutinate cells) (Degelius); with the hypahe more or less parallel to the surface; see prosoplectenchyma
EUTROPHIC, EUTROPHICATED nutrientenriched (correctly applied to water, but often applied by lichenologists to bark or other substrates).
EXPANSIBLE INNER LAYER endoascus sensu Luttrell (1951).
EVANESCENT dissappearing at maturity, as in the primary thallusof some Cladonias; usually applies soon disappearing, lasting a short time.
EVERSIBLE APICAL RING
EVERSIONTYPE DEHISCENCE
EX 1) in citations of authors (e.g., Pers. ex Fr.), from, i.e., first validly published by the second author; 2) (prefix), see e.
EXCAVATE hollowed out; concave.
EXCENTRIC, ECCENTRIC onesided; (of a stipe), at one side or not in the center.
EXCIPLE, EXCIPULUM 1) the cupshaped or ringshaped layer surrounding the hymenium which sometimes develops into a distinct margin (used by many authors in describing the external margin as well as internal structure); in the broadest sense includes the parathecium and hypothecium; 2) an area in an apothecium external to and below the hypothecium in lecideine or biatorine apothecia and internal to the amphithecium in lecanorine or zeorine apothecia; in this narrow sense is more or less equivalent to "parathecium"; restricted by some authors to the lateral part; 3) the inner (or only) wall of a perithecium, lirella, or pycnidium, generally circular in cross section; can be hyaline, pigmented, or carbonaceous.
EXCIPULOID TISSUE tissue forming the walls or margins of

ascolocular ascocarps (especially in Micarea and Arthonia), similar in appearnace and position to the true exciple of lecideine apothecia.
EXCIPULUM PROPRIUM see proper exciple
EXCIPULUM THALLINUM see thalline exciple
EXCLUDED shut out, eliminated; applied to proper or thalline margin of a discocarp when the disc swells, causing the margin to be obliterated; crowded back.
EXCURRENT treelike branching (e.g., in Usnea), in which the main axis tus through to the apex
EXFOLIATING losing outer cortex through peeling or cracking; also used to describe rock surfaces.
EXO (prefix), outside.
EXOBASIDIAL fulcrum type normally with long cells producing terminal (acrocgenous) pycnospores (interpreted as conidia), not on secondary branches (Steiner); often producing filiform pycnospores
EXOSPORE; EXOSPORIUM a coat outside the spore proper, often thick and hyaline, sometimes of irregular shape or ornamented.
EXOTIC of another country; not native.
EXOTUNICA outer layer of a bitunicate ascus
EXPANDED broadened or extended; spread out, as the thallus of large foliose lichens, or the discs of apothecia.
EXSICCATUM (A) a dried specimen, usually part of a set (see exsiccata, below). The spelling "exsiccati" is often used to refer either to the specimens within a set, or to two or more sets, but is grammatically incorrect. "Exsiccat" is an Anglicized form of the original Latinderived word.
EXSICCATA (AE) a set of dried specimens (usually with a number for each member of the set), with multiples of the set distributed to major herbaria and generally cited in taxonomicrevisions; preferred abbreviation, Exsicc. (according to Ainsworth & Bisby); usually (and preferrably), all the multiple specimens of a particular number are collected at the same place and time, and ideally are very similar to each other.