

Getting to know Hawaiian Algae: a Glossary

AAAAA

Abaxial. On the side away from an axis or branch.
Acuminate. Having a gradually diminishing point.
Acute. Tapering to a sharp point.
Adaxial. On the side toward an axis or branch.
Adjoined. Lying in contact with.
Algal. With reference to an alga.
Alternate. Not opposite or arranged only along one side; not secund.
Anastomose. To unite by cross connections.
Annular (Annulate). Ring-shaped or showing rings.
Apex (pl. apices). The distal end of a branch or filament, etc.
Apical. Situated at or referring to the apex.
Apical cell. A specialized cell initiating growth at the apex of a thallus or its branches.
Articulated. Jointed.
Articulation. A joint or a more or less jointed thallus.
Asexual. Reproduction which does not involve a union of gametes.
Assimilatory filament. A superficial filament the cells of which contain chloroplasts.
Attenuate. Narrow and gradually tapering.
Axil. The angle between an axis and an organ borne on it.
Axial filament. A longitudinal series of cells running through the center of an axis or branch.
Axis (pl. axes). The longitudinal portion on which the parts of a plant are arranged.

BBBBB

Basipetalous. With progressively younger organs from base to apex.
Bifurcate. Divided into two branches; forked.
Blade. The more or less broad, flattened, foliose part of an erect alga; lamina.
Bladelet. A small blade.
Branchlet. A small branch.

CCCCC

Caespitose. Tufted
Calcareous. Stony and containing lime (CaCO_3).
Calcified. Stony and containing lime (CaCO_3).
Carpogonial filament (or branch). A special filament which terminates in a carpogonium (found only in the Florideae of the Rhodophyta); may be lateral or terminal in occurrence on vegetative filaments.
Carpogonium. Female gametangium in red algae.
Carposporangium. A sporangium containing carpospores.
Carpospore. A spore produced in a carposporangium.
Carposporophyte. The gonimoblast filaments and the carposporangia borne on them, plus the carposporangia or the auxiliary cell producing the gonimoblast filaments.
Cartilaginous. Hard and tough; elastic; having the texture of cartilage.
Central cell. A cell of the axial filament (especially in polysiphonous red algae).
Chloroplast. A plastid containing chlorophyll only.
Coenocyte (coenocytic). A term applied to an organism consisting of a number of united protoplasts, or to an alga with multinucleate cell or cells.
Compressed. Flattened.
Concentric. Having a common center.
Conceptacle. A cavity opening to the thallus surface and containing reproductive organs.

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Confluent. Blended or merging into one.

Coralline. Referring to the lime-encrusted algae of the family Corallinaceae.

Cordate. Heart-shaped, the point directed upwards or outwards.

Cortex. The thallus between the epidermis and medulla; if no epidermis is present, the region surrounding the medulla or the axial filament.

Cortical. Occurring in or belonging to the cortex.

Cortication. The development or production of an outer covering layer of cells or tissue over part of all of an algal thallus.

Cruciate. The contents of a tetrasporangium divided into two places to form a cross shape.

Crustose. Crust-like; in the case of algae, the term is restricted to thin thalli growing flattened against the substratum.

Cystocarp. The "fruit" resulting from fertilization in Rhodophyta; may appear as "bumps" on thallus surface.

DDDDD

Deciduous. Falling off or shed at maturity; not persistent.

Decumbent. Prostrate but with the apex bent upward.

Dentate. Toothed.

Denticulate. Minutely toothed.

Determinate. Having limited growth (as opposed to indeterminate).

Dichotomous. Branching by equal forking.

Dioecous. Unisexual; male and female organs are borne on separate plants.

Diploid. Two sets of homologous chromosomes in the nucleus of the cell.

Discoid. In the form of a disc.

Distal. Remote from the place of attachment; converse of proximal.

Distichous. Arranged in two vertical rows along opposite sides of an axis or a branch.

Distromatic. Two cells in thickness.

Divaricate. Extremely divergent.

Dorsal. The upper surface of a dorsiventral thallus.

Dorsiventral. Algae having prostrate thalli having the upper and lower surfaces unlike.

EEEEEE

Encrusting. Covering with a layer or crust.

Endogenous. Formed below the surface of a thallus.

Endophyte. A thallus growing endophytically.

Endophytic. Growing within the tissues of another alga.

Entire. Having the margin continuous and not broken by division, teeth, or serrations.

Epidermis. The outermost cell layer of a thallus.

Epiphyte. The thallus that is growing epiphytically on a host species.

Epiphytic. Growing upon another alga but attached superficially to the surface only; not parasitic.

Exogenous. Formed at the surface of a thallus.

FFFFF

Fasciculate. In a small cluster or tuft.

Fastigate. With parallel, clustered and erect branches

Fertile. With reproductive structures.

Filament. A branched or unbranched row of cells joined end to end.

Filamentous. In the form of a filament.

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Filiform. Hair-like.

Flabellate. Fan-shaped.

Flaccid. Soft and flabby.

Float. An air-filled structure.

Foliaceous. Leaf-like.

Fronnd. Leaf-like organ.

GGGGG

Gametangium (pl. gametangia). A sex organ in which a gamete or gametes are formed.

Gametophyte. Gamete-producing generation of an alga.

Gelatinous. Jelly-like.

Genicula. The portion between two successive segments of erect, jointed Coralline algae.

Gonimoblast. A carposporangium-producing filament growing from the carpogonium or from an auxillary cell of the Florideae.

HHHHH

Hair. A narrow filament arising from the surface of a thallus.

Haploid. One set of homologous chromosomes in the nucleus of the cell.

Hapteron. (pl. haptera). A basal organ or attachment; usually cylindrical and much branched; root-like portion of a holdfast.

Heteromorphic. Having different forms or appearances.

Heterothallic. With male and female organs borne on separate thalli; dioecious.

Heterotrichous. A highly evolved type of filamentous habit in the algae; or an initial filamentous stage in brown or red algae, consisting of a prostrate system and an erect or projecting system.

Holdfast. A structure by which an alga is fastened to the substrate.

Homothallic. With male and female organs borne on the same thallus; monoecious.

Hypothallium. The lower portion of a crustose thallus differentiated into unlike upper and lower portions.

IIIII

Indeterminate. Having more or less unlimited growth.

Intercalary. Occurring anywhere in a filament but not terminal nor basal in position.

Intergenicula. A segment of an erect, jointed, coralline alga.

Internode. The segment between two nodes of a jointed thallus.

Involcre. A sterile envelop or group of branchlets around a reproductive structure.

Isomorphic. Having the same form or appearance.

LLLLL

Lacerate. With margin appearing as if torn.

Lacinate. Slashed; as if cut into deep narrow lobes.

Lamina. The more or less broad, flattened, foliose part of an erect alga; blade.

Lanceolate. Lance-shaped, narrow and tapering.

Lateral. Situated at the side; a part of a thallus arising from the side.

Leaflet. A small leaf-like branch.

Life-history. The course of development from any given stage to the same stage again, as from zygote to zygote.

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Ligulate. Strap-like and short.

Linear. Long and narrow, with sides parallel.

Lobed. A somewhat rounded division of an alga thallus.

MMMMM

Macroscopic. That which is discernible without magnification.

Marginal. At the margin.

Median. At the middle.

Medulla. The central tissue of an internally differentiated multicellular thallus.

Meiosis. Reduction division of chromosome number leading to haploid cells.

Membranous. Like a membrane, or thin pliable layer.

Meristem. A tissue which initiates growth.

Microscopic. That which is discernible only with the aid of a microscope.

Midrib. The thickened longitudinal axis of a flattened thallus.

Mitosis. Typical cell division which results in new cells but no change in ploidy.

Monoaxial. With a single axial filament terminating in a apical cell.

Monoecious. With male and female organs borne on the same thallus.

Monopodial. A mode of development in which the main or primary axis continues its original line of growth, giving off successive axes or lateral branches.

Monosiphonous. Consisting of a single series of cells.

Monostromatic. Having a single layer of cells.

Multiaxial. With a medulla of parallel longitudinal filaments each terminating in an apical cell.

Multicellular. Having more than one (and usually many) cells.

Multiseriate. With several rows of cells.

NNNNN

Nemathecium. A wart-like elevation containing many reproductive organs among red algae.

Node. The region between two successive joints of a jointed thallus.

Non-septate. Without septa; without crosswalls or partitions perpendicular to the length of the filaments.

OOOOO

Opposite. Arising from the same place across from one another.

PPPPP

Palmate. Divided in a fan-like fashion so that the parts arise from a common point.

Papilla. A short, nipple-like, superficial outgrowth.

Paraphysis. A short sterile unicellular or multicellular hair borne adjacent to a reproductive cell.

Parenchyma. A group of thin-walled non-elongated randomly arranged cells, more or less isodiametric in form.

Parenchymatous. Composed of parenchyma.

Parietal. Borne on or near the side walls.

Pectinate. With lateral branches restricted to one side and set close together like the teeth of a comb.

Pedicel. The stalk of a reproductive organ.

Pedicillate. Borne on a pedicel.

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Peltate. Having the stipe attached to the lower surface but not at the base or margin.
Percurrent. Extending through the entire length.
Pericentral cell. One of a ring of cells cut off from and surrounding the central axial cell;
Rhodophyta.
Periclinal. Parallel to the thallus surface of circumference.
Perithallium. The upper layer of tissue in a crustose alga.
Phaeophycean hairs. Hairs with a meristematic region is near the base ; only in the Phaeophyta.
Pinna. A primary branch of a pinnately divided thallus.
Pinnate. With leaflets or filaments on opposite sides of an axis; feather-like.
Pinnule. A secondary branch of a pinnately divided thallus.
Plastid. In algae, the specialized organelle in the cytoplasm containing photosynthetic machinery - chlorophyll a and other pigments as well as enzymes for that cycle.
Ploidy. A general reference to the chromosome state for an organism; either diploid or haploid.
Plurilocular. The term applied to many-celled reproductive organs in which each cell is produced via mitosis (usage restricted to the Phaeophyta).
Pneumatocyst. An air-bladder.
Polysiphonous. With transverse tiers of vertically elongated cells whose vertical walls are parallel, as in *Polysiphonia*.
Polystichous. In many rows, or ranks.
Polystromatic. Made up of several cell layers.
Proliferous. Producing outgrowths, sometimes similar to the original.
Prostrate. Lying along the substrate.
Psuedoparenchyma. A basically filamentous tissue having the appearance of parenchyma.
Proximal. At or near the point of attachment.

RRRRR

Romulus. A secondary branch.
Receptacle. A differentiated, usually swollen region of an alga bearing conceptacles.
Recurved. Curved back.
Reticulate. In the form of a network.
Rhizoid. In algae, a unicellular or multicellular filament functioning as an organ of attachment.
Rhizome. The prostrate portion of a thallus with an upright leaf-like or branch-like portion.

SSSSS

Secund. With branches restricted to one side of the structure bearing them.
Septate. Having cross walls or partitions generally perpendicular to the length of a filament.
Sessile. Not borne on a stalk.
Setae. Bristles or stiff hairs.
Simple. Unbranched or undivided.
Siphonaceous (siphonous; siphonaceous). Tubular and composed of one cell (usage restricted to Chlorophyceae).
Sorus (pl. sori). A group or cluster of reproductive organs.
Spermatangium. The male sex organ producing the spermatia of Rhodophyta.
Spermatium (pl. spermatia). The nonflagellated male gamete of Rhodophyta.
Sporangium (pl. sporangia). A spore-producing reproductive organ.
Spore. A motile or non-motile reproductive cell which germinates and grows into a new thallus.
Sporophyte. Spore-producing generation in algal life-histories.
Stellate. Star-shaped.
Sterile. Without fertile (reproductive) structures.

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Stipe. The upright, stem-like region below an erect blade.

Stipitate. Borne on a stipe.

Subacute. Somewhat acute.

Subdichotomously. Somewhat dichotomous but not rigidly so.

Sympodial. A method of development wherein a branch continues growth in the direction of the axis and the axis continues growth as a lateral branch.

TTTTT

Tetrahedral. Having contents of a tetrasporangium triangularly divided so that only three of the tetraspores can be seen in one view.

Tetrasporangium. A sporangium whose contents divide to form four spores.

Tetraspore. A non-motile spore formed within a tetrasporangium of a red alga.

Trabeculum (pl trabeculae). A special wall structure projecting into or traversing the siphon of some coenocytic green algae.

Trichoblast. A simple or branched usually colorless filament growing from the surface of a thallus (usage restricted to Florideae).

Trichogyne. The receptive apical hair-like extension of a carpogonium.

Trichothallic. A method of growth in which thallus development is initiated at the base of one or more filaments (in certain Phaeophyta).

Tubercle. A warty outgrowth.

Tuberculate. With irregular warty outgrowths. Tufted. In small bundles.

UUUUU

Ultimate. The final order, i.e., of branches.

Uncorticated. Lacking a cortex.

Unilateral. Occurring or developing on one side only. Uniaxial. With a single longitudinal filament through the center of the thallus.

Unilocular. Term applied to one-celled sporangia producing four or spores by meiosis followed by mitosis (usage restricted to Phaeophyta).

Uniseriate. With cells joined end to end in a row one cell broad.

Utricle. A vesicle-like cell, or the terminal bulge of a superficial filament forming a kind of tissue as in *Codium*.

WWW

Vegetative. Non-reproductive.

Ventral. The lower surface of a dorsiventral thallus.

Vertical. One whorl in a verticillate system of branching.

Verticillate. With successive whorls of branches along an axis.

Vesicle. An air bladder or float.

WWWWW

Whorl. A group of branches radially distributed about and attached at the same plane of an axis.

ZZZZZ

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Zonate. Contents of a tetrasporangium divided by three parallel planes so that tetraspores lie one above another.