

*Parasitology, Harold W. Manter Laboratory of  
Armand R. Maggenti Online Dictionary of  
Invertebrate Zoology*

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Online Dictionary of Invertebrate  
Zoology: Complete Work

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*In memory of*  
Mary Ann Maggenti,  
*a good friend and teacher*

# Online Dictionary of Invertebrate Zoology

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## Abbreviations

a.	adjective	Mal.	Maldivean
A.S.	Anglo-Saxon	MD.	Middle Dutch
Ab.Am.	Aboriginal American	ME.	Middle English
ACANTHO	Acanthocephala	MESO	Mesozoa
adv.	adverb	MF.	Middle French
ANN	Annelida	ML.	Medieval Latin
Ar.	Arabic	MOLL	Mollusca
ARTHRO	Arthropoda	n.	noun
BRACHIO	Brachiopoda	NEMAT	Nematoda
BRYO	Bryozoa	NEMER	Nemertina
CHAETO	Chaetognatha	NL.	New Latin
CNID	Cnidaria	Obs.	obsolete
Corn.	Cornish	OE.	Old English
CTENO	Ctenophora	OF.	Old French
D.	Dutch	ON.	Old Norse
Dan.	Danish	ONYCHO	Onychophora
dim.	diminutive	pert.	pertaining
ECHI	Echiura	pl.	plural
ECHINOD	Echinodermata	PLATY	Platyhelminthes
ENTO	Entoprocta	POGON	Pogonophora
F.	French	PORIF	Porifera
GASTRO	Gastrotricha	PRIAP	Priapula
Ger.	German	ROTIF	Rotifera
GNATHO	Gnathostomulida	Russ.	Russian
Gr.	Greek	sing.	singular
HEMI	Hemichordata	SIPUN	Sipuncula
Hind.	Hindi	Skt.	Sanskrit
It.	Italian	Sp.	Spanish
KINOR	Kinorhyncha	Sw.	Swedish
L.	Latin	TARDI	Tardigrada
LL.	Late Latin	Turk.	Turkish
LORI	Loricifera	v.	verb
		v.t.	verb, transitive

# A

**abactinal** a. [L. *ab*, from; Gr. *aktis*, ray] (ECHINOD) Of or pertaining to the area of the body without tube feet that normally does not include the madreporite; not situated on the ambulacral area; abambulacral. **abactinally** adv.

**abambulacral** see **abactinal**

**A-band** That zone of the sarcomere composed of both actin and myosin filaments.

**abapertural** a. [L. *ab*, from; *apertura*, an opening] (MOLL: Gastropoda) Refers to being away from any shell aperture.

**abapical** a. [L. *ab*, from; *apex*, top] 1. Pertains to the opposite of apical and thus the lower pole of spherical organisms. 2. (MOLL: Gastropoda) Away from the shell apex toward base along axis or slightly oblique to it.

**abaxial** a. [L. *ab*, from; *axis*, axle] Refers to being situated outside of or directed away from the axis or central line. see **adaxial**.

**abbreviate fascia** (ARTHRO: Insecta) A fascia extending less than half the wing.

**abcauline** a. [L. *ab*, from; *caulis*, stalk] (CNID: Hydrozoa) Pertaining to polyps that extend outwards from the common stem. see **adcauline**.

**abdomen** n. [L. *abdomen*, belly] 1. (ARTHRO) The posterior of the three main body divisions of insects; not homologous with chelicerate opisthosoma. 2. (ARTHRO: Crustacea) The trunk somites (with or without limbs) between the thorax and telson; the pleon.

**abdomere** n. [L. *abdomen*, belly; Gr. *meros*, part] An abdominal segment.

**abdominal feet** see **prolegs**

**abdominal filament** see **cercus**

**abdominal ganglia** (ARTHRO) Ganglia of the ventral nerve cord that innervate the abdomen, each giving off a pair of principal nerves to the muscles of the segment; located between the alimentary canal and the large ventral muscles.

**abdominal process** (ARTHRO: Crustacea) In Branchiopoda, fingerlike projections on the dorsal surface of the abdomen.

**abdominal somite** (ARTHRO: Crustacea) Any single division of the body between the thorax and telson; a pleomere; a pleonite.

**abduce** v. [L. *abducere*, to lead away] To draw or conduct away.

**abduct** v. [L. *abducere*, to lead away] To draw away from position of median plane or axis.

**abductin** n. [L. *abducere*, to lead away] (MOLL: Bivalvia) Rubber-like block of protein of the inner hinge ligament of Pecten.

**abductor muscle** The muscle that draws an appendage or part away from an axis of the body. see **adductor muscle**.

**aberrant** a. [L. *aberrans*, wandering] Pertaining to a deviation from the normal type or form; abnormal; anomalous variations; different.

**abient** a. [L. *abire*, to depart] Avoiding or turning away from a source of stimulation. see **adient**.

**abiocoen** n. [Gr. *a*, without; *bios*, life; *koinos*, common] The non-living components of an environment.

**abiogenesis** n. [Gr. *a*, without; *bios*, life; *genesis*, beginning] The theoretical concept that life can arise from non-living matter; spontaneous generation; archebiosis; archegenesis; archigenesis. see **biogenesis**, **neobiogenesis**.

**abiology** n. [Gr. *a*, without; *bios*, life; *logos*, discourse] The study of inanimate objects; anorganology.

**abiotic** a. [Gr. *a*, without; *bios*, life] Pertaining to, or characterized by the absence of life.

- abjugal furrow** (ARTHRO: Chelicerata) In Acari, the line separating the aspidosoma (prodorsum) and the podosoma of mites.
- ablation** n. [L. *ablatus*, taken away] Removal of a part as by excision or amputation.
- aboral** a. [L. *ab*, from; *os*, mouth] 1. Pertaining to, or situated away from the mouth; surface opposite the mouth. 2. (ECHINOD: Asteroidea) The surface opposite that bearing the mouth and ambulacral grooves; abactinal; apical; dorsal. see **oral**.
- aboriginal** a. [L. *aborigineus*, ancestral] 1. Of or pertaining to an aborigine, the first, original. 2. Native fauna and flora of a geographic region.
- abortion** n. [L. *abortus*, premature birth] Arrest or failure of development of any entity or normally present part or organ rendering it unfit for normal function.
- abbranchiate** a. [Gr. *a*, without; *branchia*, gills] Pertains to being without gills.
- abreptor** n. [L. *ab*, from; *reptere*, to crawl] (ARTHRO: Crustacea) The postabdomen of water fleas terminating in two claws.
- abscised** n. [L. *abscissus*, cut off] Cut off squarely; with a straight margin.
- abscission** n. [L. *abscissus*, cut off] The separation of parts.
- absolute** a. [L. *absolutus*, finished, perfect, complete] Any entity existing in and of itself free from impurities or imperfections.
- absorption** n. [L. *ab*, from; *sorbere*, to suck] The passage of water and dissolved substances into a living cell or tissue. see **adsorption**.
- abterminal** a. [L. *ab*, from; *terminus*, limit] Passing from the end toward the center.
- abullate** a. [Gr. *a*, without; L. *bulla*, bubble] Lacking a bulla.
- abyss** n. [Gr. *abyssos*, the deep sea] Bottomless, sometimes used to denote very deep.

- abyssal** a. [Gr. *abyssos*, the deep sea] Pertaining to the ocean depth beyond the continental shelf; dark area of the ocean below 2,000 meters.
- abyssobenthos** a. [Gr. *abyssos*, the deep sea; *benthos*, depth of sea] Pertaining to all organisms that are sessile, or creep or crawl over the ocean bottom.
- abyssopelagic** a. [Gr. *abyssos*, the deep sea; *pelagos*, sea] Pertains to all organisms inhabiting the deep abyssal zone; they are either active swimmers, or float with the current.
- acantha** n. [Gr. *akantha*, thorn, spine] Spinous process; prickle.
- acanthaceous** a. [Gr. *akantha*, thorn, spine] Pertaining to being armed with spines or prickles.
- acanthella larva** (ACANTHO) Transitional larva developed from an acanthor after crossing through the gut wall into the intermediate host hemocoel; stage between an acanthor and a cystacanth in which the definitive organ systems are developed.
- acantho-** [Gr. *akantha*, thorn, spine] A prefix meaning spine.
- Acanthocephala, acanthocephalans** n.; n.pl. [Gr. *akantha*, thorn, spine; *kephale*, head] A phylum of parasitic pseudocoelomate, bilateral animals distinguished by a generally eversible proboscis with recurved, sclerotized, retractable hooks; commonly called spiny-headed worms. **acanthocephalous** a.
- acanthocyst** n. [Gr. *akantha*, thorn, spine; *kystis*, bladder] (NEMER) The stylet apparatus housed in the middle (stylet bulb) portion of the proboscis, including two to several accessory stylet pouches containing replacement stylets.
- acanthodion** n.; pl. **-dia** [Gr. dim. *akanthodes*, thorn, spine] (ARTHRO: Chelicerata) In Acari, a tarsal seta that contains an extension of a sensory basal cell.
- acanthodrilin set** (ANN: Oligochaeta) With reference to male terminalia, having prostatic pores in segments xvii and xix, and male pores in segment xviii, all pores are in seminal furrows.

**acanthoparia** n.; pl. **-iae** [Gr. *akantha*, thorn, spine; *pareion*, cheek] (ARTHRO: Insecta) In Coleoptera, the lateral spiny paired region of the paria (epipharynx) in scarabaeoid larvae.

**acanthophore** n. [Gr. *akantha*, thorn, spine; *phoreus*, bearer] (NEMER) A conical mass that forms the basis of the median stylet.

**acanthophorites** n. [Gr. *akantha*, thorn, spine; *phoreus*, bearer] (ARTHRO: Insecta) In Diptera, spine bearing plates at the tip of the female abdomen used to aid oviposition in soil.

**acanthopod** n. [Gr. *akantha*, thorn, spine; *pous*, foot] (ARTHRO: Crustacea) A barnacle appendage (cirrus) bearing a short row of strong sharp spines distally at each articulation of greater curvature, and few or no spines of lesser curvature. see **centopod**, **basipod(ite)**.

**acanthopore** n. [Gr. *akantha*, thorn, spine; *poros*, passage] (BRYO) 1. A tubular spine in certain fossils. 2. In Stenolaemata, sometimes referred to as style, stylet, or acanthorod.

**acanthor** n. [Gr. *akantha*, thorn, spine] (ACANTHO) The first stage larva that emerges from the egg; the infective stage in the gut of the arthropod (intermediate host); has 6-8 blade-like hooks forming an acclid organ or rostellum.

**acanthorod** n. [Gr. *akantha*, thorn, spine; A.S. *rod*] (BRYO: Stenolaemata) A style or stylet. see **acanthopore**.

**acanthosoma** n. [Gr. *akantha*, thorn, spine; *soma*, body] (ARTHRO: Crustacea) In Decapoda, the last larval stage preceding the postlarva; zoea; mysis; schizopod larvae.

**acanthosphenote** a. [Gr. *akantha*, thorn, spine; *sphen*, wedge] (ECHINOD: Echinoidea) Pertaining to a spine composed of solid wedges separated by porous tissue.

**acanthostegous** a. [Gr. *akantha*, thorn, spine; *stegos*, roof] (BRYO) Pertaining to an overlay of spines, as the ovicell.

**acanthostyle** n. [Gr. *akantha*, thorn, spine; *stylos*, pillar] 1. (BRYO: Stenolaemata) A type of stylet with a smooth rod

core of nonlaminated calcite, with sheath laminae usually strongly deflected toward the zoarial surface as spines; usually larger than paurostyle. 2. (PORIF) A monactinal spicule covered with thorny processes.

**acanthozoid** n. [Gr. *akantha*, thorn, spine; *zoon*, animal; *eidos*, form] (BRYO) A specialized zooid that secretes small tubules that project as spines above the colony's surface.

**Acari** n. [Gr. *akari*, mite or tick] (ARTHRO: Chelicerata) Subclass of the most diverse and species-rich group of arachnids containing the mites and ticks; formerly the order Acarina.

**acariosis** n. [Gr. *akari*, mite or tick; *-iasis*, diseased condition] (ARTHRO: Chelicerata) Infestation with ticks or mites, or any diseased condition resulting therefrom.

**Acarina** see **Acari**

**acarinarium** n.; pl. **-aria** [Gr. *akari*, mite or tick; L. *-arium*, place for] 1. (ARTHRO: Chelicerata) Any surface or anatomical feature, enclosed or not, internal or external, that regularly serves as an abode for mites. 2. (ARTHRO: Insecta) In Hymenoptera, variously placed and constructed integumental cavities that serve as abodes for mites in certain eumenine wasps; originally defined as the enclosed acarid chambers of xylocopid bees.

**acarocecidium** n.; pl. **-ia** [L. *akari*, mite or tick; Gr. *kekis*, gallnut] (ARTHRO: Chelicerata) Any plant gall caused by a mite.

**acarology** n. [Gr. *akari*, mite or tick; *logos*, discourse] That branch of zoology that studies mites and ticks.

**acarophily** n. [Gr. *akari*, mite or tick; *philos*, loving] Symbiosis of mites and plants.

**acaryote** see **akaryote**

**acaudal**, **acaudate**, **ecaudate** a. [Gr. *a*, without; L. *cauda*, tail] Without a tail.

**acceleration** n. [L. *acceleratare*, to hasten to] The speeding up of a development so that a feature appears earlier in the ontogeny of a descendant than in an ancestor.

**accentuation** n. [L. *ad*, to; *canere*, to sing] Intensify; increase distinctness.

**accessory** a.; pl. **-ries** [L. *ad*, to; *cedere*, move] Contributing to the effectiveness of a principal design; secondary; supplemental.

**accessory appendages** (ARTHRO: Insecta) In Odonata, the genital appendages (intromittent organs) on the venter of the second and third abdominal segment.

**accessory bodies** Argyrophil particles obtained from Golgi bodies in spermatocytes. see **chromatoid bodies**.

**accessory boring organ** (MOLL: Gastropoda) A glandular structure (in naticaceans on the lower lip, and in muriceans sole of the foot) that aid the radular rasping process by acidic secretions so mechanical removal by the radula is made easy.

**accessory cell** (ARTHRO: Insecta) A cell in the wing not normally present in the group, or definite location.

**accessory circulating organs** see **accessory pulsatile organs**

**accessory claws** (ARTHRO: Chelicerata) In Araneae, clawlike bundles of setae or bristles below the true claws.

**accessory genitalia** see **accessory appendages**

**accessory glands** (ARTHRO: Insecta) 1. A pair of glands opening primarily on the venter or the eighth or ninth abdominal segment of females that secrete an adhesive substance or material forming a cover or case (ootheca) for the eggs. 2. In males, secretion glands opening into the ejaculatory duct.

**accessory lamellae** (MOLL: Bivalvia) In Pholadinae, accessory periostracal coverings or shelly plates along the dorsal margin, over the anteroventral pedal gape, or along the posteroventral margin encircling the siphons.

**accessory lobes** (ARTHRO) Ventral lobes of the protocerebrum.

**accessory nidamental gland** (MOLL: Cephalopoda) Small paired glands subordinate to the nidamental gland.

**accessory pigment cells** (ARTHRO: Insecta) As many as twenty-four cells that surround the retinulae of a compound eye; in superposition eyes the pigment granules assume different positions in light and darkness; also known as secondary pigment cells, secondary iris cells, iris pigment cells and outer pigment cells.

**accessory pulsatile organs** (ARTHRO) Pulsating structures connected with the hemocoel that are concerned with maintaining a circulation through the appendages, but pulsating independently from the heart.

**accessory sac** (PLATY: Cestoda) A sac in the proglottid wall that opens into the genital atrium.

**accessory spicule** (PORIF) A category of megasclere, supplemental to the primary skeleton, may be located anywhere.

**accessory stylets** (NEMER) Replacement stylets that are stored in reserve stylet sacs or pouches.

**accessory subcoastal vein** (ARTHRO: Insecta) In Perlidae, the vein given off from the subcosta, branching toward the apex of the wing.

**accessory testis** (ARTHRO: Insecta) In Coleoptera, the coiled middle section of the vas deferens serving as a reservoir for mature sperm.

**accidental evolution** A condition that occurs as a consequence of mutation, but does not appear to improve survival value.

**accidental host** A host in which a pathogenic parasite is not commonly found.

**accidental myiasis** (ARTHRO: Insecta) In Diptera, the presence within a host of a fly larva that is not normally parasitic; pseudomyiasis.

**accidental parasite** A parasite in other than its normal host; an incidental parasite.

**accidental transport** Unintentional movement of a pathogen from one location to another by an animal not normally associated with the parasite or disease. see **phoresis**.

**acclimation** n. [L. *ad*, to; Gr. *klima*, climate] The habituation of an organism to a foreign or different climate or environment; acclimatization.

**acclivous** a. [L. *acclivis*, ascending] Pertaining to an upward slope. see **declivous**.

**accretion** n. [L. *accrescere*, to increase] Growth or increase by external addition. see **intussusception**.

**acelomate** see **acoelomate**

**acentric** a. [Gr. *a*, without; *kentrol*, center] Pertaining to not being centered; lacking a centromere when referring to a chromosome or chromosome fragment.

**acentric inversion** An inversion of any part of the chromosome not involving the centromere.

**Acephala** (MOLL) Former name for Class Bivalvia.

**acephalocyst** n. [Gr. *a*, without; *kephale*, head; *kystis*, bladder] (PLATY: Cestoda) A hydatid larval stage; bladderworm; cysticercus.

**acephalous** a. [Gr. *a*, without; *kephale*, head] (ARTHRO: Insecta) Pertains to the absence of any structure comparable to a head, as in certain dipteran larvae; acephalic. see **eucephalous**, **hemicephalous**.

**acerata** n. [Gr. *a*, without; *keratos*, horn] 1. Without true antennae. 2. (ARTHRO) In former classifications, the name Acerata comprised a class combining Merostomata and Arachnida.

**acerate** a. [L. *acer*, sharp] Of or pertaining to needle-shaped; acerose; acicular.

**acerose** a. [L. *acer*, sharp] Having a sharp, rigid point; acerate; acicular.

**acerous** a. [Gr. *a*, without; *keras*, horn] Lacking horns, antennae or tentacles.

**acervate** a. [L. *acervare*, to heap] Pertaining to heaped or growing in heaps or clusters. see **coacervate**.

**acervuline** a. [L. *acervare*, to heap] Resembling small heaps.

**acescence** n. [L. *acesceres*, to turn sour] Acetic acid fermentation.

**acetabular caps** (ARTHRO: Insecta) The coxal cavity of Hemiptera.

**acetabuliform** a. [L. *acetabulum*, cup; *forma*, shape] Resembling the shape of a shallow cup or saucer.

**acetabulum** n.; pl. **-la** [L. *acetabulum*, cup] 1. A cup-shaped socket or cavity. 2. (ANN: Hirudinoidea) In leeches, the large posterior sucker. 3. (ARTHRO: Chelicerata) In Acari, the genital sucker. 4. (ARTHRO: Insecta) *a*. Any cavity into which an appendage is articulated; the coxal cavity. *b*. The conical cavity at the anterior of some larvae; in Diptera, the cavity in the sucking mouth. *c*. In dytiscid water beetles, stalked cuplets or sucker discs on the anterior tarsi, in some, also the second tarsi, thought to act as adhesive organs during copulation; a palette. 5. (ECHINOD: Echinoidea) The cavity located on the proximal end of a spine. 6. (MOLL: Cephalopoda) The sucker on the arm. 7. (PLATY: Cestoda) The sucker on the scolex. 8. (PLATY: Trematoda) The ventral sucker.

**achaetous, achetous** a. [Gr. *a*, without; *chaite*, hair] Without setae, bristles, or chaetae.

**achatine, achatinus** a. [L. *achates*, agate] Pertaining to lines resembling those of an agate; in bands of more or less concentric circles.

**achelate** a. [Gr. *a*, without; *chele*, claw] Lacking pincherlike organs or claws.

**achilary** a. [Gr. *a*, without; *cheilos*, lip] Lacking a lip.

**achlamydate** a. [Gr. *a*, without; *chlamys*, mantle] Lacking a mantle.

**achroacyte** n. [Gr. *a*, without; *chroa*, colored; *kytos*, container] A colorless cell; a lymphocyte.

**achroglobin** n. [Gr. *a*, without; *chroa*, colored; L. *globus*, sphere] (MOLL) A colorless respiratory pigment.

**achroic** see **achroous**

- achromasia, achromasie** n. [Gr. *a*, without; *chroma*, color] Lacking the usual reaction to stains. see **chromasia**.
- achromatic** a. [Gr. *a*, without; *chroma*, color] Being achroous; stains not permeating readily; uncolored.
- achromatic apparatus/figure** Pertaining to mitosis, those structures (spindle fibers and cell centers) that do not stain readily.
- achromatin** n. [Gr. *a*, without; *chroma*, color] Those parts of the cell nucleus that do not absorb color of the basic stains.  
**achromatinic** a. see **chromatin**.
- achromic** a. [Gr. *a*, without; *chroma*, color] Free from color; unpigmented.
- A-chromosome** Any of the chromosomes of the normal chromosome complement, as opposed to the B-chromosomes.
- achroous** a. [Gr. *a*, without; *chros*, complexion] Colorless; unpigmented; achromatic.
- acia** n. [L. *acia*, thread] (ARTHRO: Insecta) A thin cuticular plate of the mandible.
- acicle** n. [L. dim. *acus*, needle] (ARTHRO: Crustacea) A thorn-shaped scaphocerite of hermit crabs.
- acicula** n.; pl. **-lae** [L. dim. *acus*, needle] A slender needle-like process; a spine or bristle; something larger than a seta or chaeta. **acicular, aciculate** a.
- aciculiform** see **acicula**
- aciculum** n.; pl. **-lums, -la** [L. dim. *acus*, needle] (ANN: Polychaeta) A chitinous stiff basal seta or rod supporting the parapodial lobes.
- acid gland, poison gland** 1. Any of numerous glands secreting acid in many invertebrates. 2. (ARTHRO: Chelicerata) In Araneae, the poison gland. 3. (ARTHRO: Diplopoda) The HCN-secreting glands. 4. (ARTHRO: Insecta) Gland of stinging Hymenoptera. 5. (MOLL: Gastropoda) The salivary gland.
- acidic** a. [L. *acere*, to be sour] Acid forming; having the properties of an acid.

- acidobiontic** a. [L. *acere*, to be sour; Gr. *bion*, life] Living in an acid environment. see **oxyphilic**.
- acidophil** a. [L. *acere*, to be sour; Gr. *philein*, to love] Growing in an acid media. see **oxyphilic**.
- acidophilic, acidophilous** a. [L. *acidus*, sour; Gr. *philein*, to love] 1. Tolerating acid; aciduric. 2. Staining readily in an acid stain.
- acidophobic** a. [L. *acere*, to be sour; Gr. *phobos*, fear] Pertaining to the intolerance of an acid environment; oxyphobic.
- acidotheca** n. [L. *acere*, to be sour; Gr. *theke*, case] (ARTHRO: Insecta) The pupal sheath of the ovipositor.
- aciduric** a. [L. *acere*, to be sour; *durus*, hardy] Tolerating an acid medium. see **acidophilic**.
- acies** n. [L. *acies*, sharp edge or point] (ARTHRO: Insecta) The extreme termination of a margin.
- aciform** a. [L. *acus*, needle; *forma*, shape] Pertaining to being shaped like a needle; acicular.
- acinaciform, acinacicate** a. [L. *acinaces*, short sword; *forma*, shape] Scimitar-shaped; having one edge thick and slightly concave, the other thin and convex; curved and growing wider toward a curve with a truncate apex.
- acinarius** a. [L. *acinarius*, pert. to grapes] Having globose vesicles resembling grape seeds.
- aciniform** a. [L. *acinus*, berry or grape; *forma*, shape] Resembling a cluster of berries; having small kernels like grapes.
- acinus** n.; pl. **-ini** [L. *acinus*, berry or grape] A small sac or alveolus in a multicellular gland or lung. **acinose** a.
- acid organ** (ACANTHO) A spined invagination located at the anterior end of an acanthor; sometimes referred to as a rostellum.
- acline** see **orthocline**
- acitellate** a. [L. *a*, without; *clitella*, packsaddle] (ANN: Oligochaeta) Lacking a clitellum; an adult earthworm, but still

without a clitellar tumescence of the epidermis; the second growth stage.

**acme** n. [Gr. *akme*, point] 1. The highest point. 2. That period of greatest development in the phylogenetic history of a group of organisms.

**Acoelomata** n. [Gr. *a*, without; *koilos*, hollow] A coined term denoting those lower phyla of zoological classification that lack a body cavity or coelom as Cnidaria (=Coelenterata), Nemertea, Platyhelminthes, Porifera, or Ctenophora.

**acoelomate, acelomate** a. [Gr. *a*, without; *koilos*, hollow] Refers to any Metazoa with no internal cavities in the body other than the lumen of the gut. **acoelous** a.

**acone eye** (ARTHRO: Insecta) A condition (possibly primitive) of a compound eye in which the ommatidium is lacking a crystalline cone, but is modified in the form of elongated transparent bodies called Semper cells. see **pseudocone, eucone, exocone**.

**acontioids** n.pl. [Gr. *akon*, dart; *eidos*, shape] (CNID: Anthozoa) Simple or branched adhesive threads of tube anemones situated on the lower portion of the mesenteries.

**acontium** n.; pl. **-ia** [Gr. *akon*, dart; *ium*, nature of] (CNID: Anthozoa) An elongate, hollow, nematocyst-studded thread of sea anemones.

**acoustic** a. [Gr. *akouein*, to hear] Auditory; pertaining to the organs or sense of hearing, or produce sound such as a stridulatory organ.

acquired a. [L. *acquirere*, to seek] 1. Pertaining to being developed as a result of environmental effects; noninheritable. 2. Resulting from experience or learning.

**acquired character** A trait or somatic modification that originates during the life of an organism as the result of an environmental or functional cause.

**acraein** n. [Gr. *akrasia*, bad mixture] (ARTHRO: Insecta) In Lepidoptera, a secretion of certain butterflies of protective or distasteful function.

**Acraspeda** n. [Gr. *akraspedos*, without fringes] (CNID: Hydro-

zoa) In former classifications, a group of jellyfish having a medusa without a velum.

**acraspedote** a. [Gr. *a*, without; *kraspedon*, border] 1. (CNID: Hydrozoa) Refers to medusae without a velum. 2. (PLATY: Cestoda) Pertaining to tapeworm segments that do not overlap.

**acrembolic proboscis** (MOLL) Having a completely invaginable proboscis. see **pleurembolic proboscis**.

**acridophagus** n. [Gr. *akridion*, locust, grasshopper; *phagein*, to eat] (ARTHRO: Insecta) The act of preying and feeding on members of the Acrididea.

**acroblast** n. [Gr. *akros*, tip; *blastos*, bud] In spermatogenesis, Golgi material giving rise to an acrosome.

**acrocentric** a. [Gr. *akros*, tip; *kentron*, center] Pertaining to chromosomes with the centromere at or near one of the ends; rod-shaped chromosomes. see **telocentric**.

**acrocercus** see **cercus**

**acrocyst** n. [Gr. *akros*, tip; *kystis*, sac] (CNID: Hydrozoa) A chitinous sac containing a planula in which development is completed; may protrude from the gonangium.

**acrodendrophily** a. [Gr. *akros*, tip; *dendron*, tree; *philein*, to love] Inhabiting the tree-tops.

**acron** n. [Gr. *akros*, tip] 1. (ARTHRO) The anterior unsegmented, or indistinguishably fused, body segments. a. In Crustacea, ophthalmic somite; presegmental region. b. In Insecta, the prostomium. 2. (MOLL) The prostomal region of trochophore larva.

**acronematic** a. [Gr. *akros*, tip; *nema*, thread] Referring to smooth, whip-like flagella.

**acroneme** n. [Gr. *akros*, tip; *nema*, thread] The slender section of a flagellum.

**acroparia** n.; pl. **-ae** [Gr. *akros*, tip; *pareion*, cheek] (ARTHRO: Insecta) In Coleoptera, the anterior part of the paria bearing the bristles of scarabaeoid larvae.

**acroperiphallus** n.; pl. **-li** [Gr. *akros*, tip; *peri*, around; *phal-*

*los*, penis] (ARTHRO: Insecta) In Protura, the distal part of the periphallus, sometimes retractable into basiperiphallus.

**acrophilous** a. [Gr. *akros*, tip; *philein*, to love] Preferring regions of high altitude.

**acrorhagus** n.; pl. **-gi** [Gr. *akros*, tip; *rhax*, berry] (CNID: Anthozoa) A marginal tubercle of sea anemones containing specialized nematocysts.

**acroscopic** a. [Gr. *akros*, tip; *skopein*, to view] Looking towards the apex. see **basiscopic**.

**acrosome** n. [Gr. *akros*, tip; *soma*, body] A cap-like structure investing the front part of the sperm head allowing penetration of the cover of the egg cell; formed from Golgi material.

**acrosternite** n. [Gr. *akros*, tip; *sternon*, chest] (ARTHRO: Insecta) That part of the narrow marginal flange anterior to the antecosta of a definitive sternal plate, including the preceding primary intersegmental sclerotization; normally found on abdominal sterna, but absent on thoracic sterna.

**acrostical** see **acrostichal area, bristles, scales**

**acrostichal area** (ARTHRO: Insecta) In Diptera, the median longitudinal area of the scutum between the anterior promontory and prescutellar area, bearing bristles or scales.

**acrostichal bristles** (ARTHRO: Insecta) In Diptera, setae occurring in a median longitudinal row on the acrostichal area of the scutum.

**acrostichal hairs/seta/setulae** see **acrostichal bristles**

**acrostichal scales** (ARTHRO: Insecta) In Diptera, scales occurring in one or two lines on the acrostichal area.

**acrosyndesis** n. [Gr. *akros*, tip; *syndesai*, to bind together] Incomplete end-to-end pairing of two chromosomes during meiosis; telosyndesis.

**acrotergite** n. [Gr. *akros*, tip; L. *tergum*, back] (ARTHRO: Insecta) The anterior precostal part of the tergal plate of a secondary segment usually in the form of a narrow flange, varying in size or sometimes obliterated.

**acroteric** a. [Gr. *akros*, tip; *-terion*, place for] Relating to or affecting the extremities.

**acrotroch** n. [Gr. *akros*, tip; *trochos*, hoop] (ANN: Polychaeta) The band of cilia anterior to the prototroch (preoral band) of a larval stage.

**acrotrophic ovariole** see **telotrophic ovariole**

**acrydian** a. [Gr. *akridion*, locust, grasshopper] (ARTHRO: Insecta) Pertaining to grasshoppers or grasshopper-like.

**actin** n. [Gr. *actus*, move] A muscle protein that combines with myosin to form a contractile protein complex, actomyosin; the chief constituent of the I and Z-band myofilaments of each sarcomere.

**actinal** a. [Gr. *aktis*, ray] 1. Star-shaped; pertaining to that area of a radiate organism from which arms or tentacles radiate. 2. (CNID: Anthozoa) Oral area of sea anemones.

**actine** n. [Gr. *aktis*, ray] (PORIF) The single ray of a star-shaped spicule.

**actinenchyma** a. [Gr. *aktis*, ray; *en*, in; *chyma*, to pour] Cellular tissue resembling a star.

**actinic** a. [Gr. *aktis*, ray] Pertaining to wave lengths between those of visible violet and X-rays, having certain chemical effects.

**actiniform** a. [Gr. *aktis*, ray; *forma*, shape] Having a radiated form; star-shaped. **actinoid** a.

**actinobiology** n. [Gr. *aktis*, ray; *bios*, life; *logos*, discourse] The study of effects of radiation upon living organisms.

**actinoblast** n. [Gr. *aktis*, ray; *blastos*, bud] (PORIF) The rudimentary cell of a spicule.

**actinochitin** n. [Gr. *aktis*, ray; *chiton*, tunic] Chitin that is anisotropic or birefringent (double refracting).

**actinodont** a. [Gr. *aktis*, ray; *odous*, tooth] (MOLL: Bivalvia) With teeth radiating from the beak of the shell.

**actinogonidial** a. [Gr. *aktis*, ray; *gonos*, seed] Having genitalia arranged in a radial pattern.

- actinoid, actiniform** a. [Gr. *aktis*, ray; *eidos*, shape] Raylike; star-shaped; stellate.
- actinology** n. [Gr. *aktis*, ray; *logos*, discourse] 1. The study of radially symmetrical animals. 2. The study of the activity of radiation.
- actinomere** n. [Gr. *aktis*, ray; *meros*, part] A segment of a radially segmented organism.
- actinopharynx** n. [Gr. *aktis*, ray; *pharynx*, gullet] (CNID: Anthozoa) Gullet of the sea anemone.
- actinostome** n. [Gr. *aktis*, ray; *stoma*, mouth] The mouth of a radially symmetrical animal.
- actinotrocha, actinotroch** n. [Gr. *aktis*, ray; *trochos*, wheel] (PHORON) A free-swimming, elongate, ciliated larva of the phylum Phoronida, bearing tentacles attached to a girdle immediately posterior to the preoral lobe.
- actinula** n. [Gr. dim. *aktis*, ray] (CNID: Hydrozoa) A larval stage that looks like either a polyp or medusa, depending upon whether the mouth is turned upward or downward.
- action current** The flow of electric current between a region of excitation and neighboring unexcited regions.
- action potential** A temporary change in potential that occurs across the surface membrane of a muscle or nerve cell following stimulation.
- activator** n. [L. *agere*, to act] Any substance that renders another substance active.
- active** a. [L. *agere*, to act] Pertaining to movement; given to action; alert.
- active center** The site on an enzyme molecule that interacts with the substrate molecules; where activation and reaction take place.
- active transport** The transportation or movement of substances through differentially permeable cell membranes against a concentration or electrical gradient with the expenditure of energy.
- actomyosin** n. [Gr. *aktis*, ray; *mys*, muscle] Actin and myosin

- linkage in myofilaments that shortens when stimulated resulting in muscle contraction.
- acuate** a. [L. dim. *acus*, needle] Sharpened; needle-shaped; sharp pointed.
- aculea** n.; pl. **-eae** [L. dim. *acus*, needle] (ARTHRO: Insecta) 1. In Diptera, one of the minute spines comprising the tomentum that covers the cuticula (except the wing membrane), usually dense in adults but sparse or absent in immatures. 2. In Lepidoptera, one of the minute spines on the wing membrane.
- aculeate** a. [L. dim. *acus*, needle] 1. Pertaining to being armed with a sting or short, sharp points. 2. Furnished with aculeae.
- aculeate-serrate** Armed with saw-like teeth inclined toward one direction.
- aculei** pl. of **aculeus**
- aculeiform** a. [L. dim. *acus*, needle; *forma*, shape] Formed like a thorn.
- aculeus** n.; pl. **-lei** [L. dim. *acus*, needle] (ARTHRO: Insecta) 1. In Hymenoptera, an ovipositor in the form of a sting. 2. In Diptera, a sharp spine projected from the margin of the eighth sternite of Tipulidae.
- acumen** n. [L. *acumen*, point] 1. (ARTHRO: Crustacea) In Decapoda, the pointed tip of the rostrum. 2. (ARTHRO: Insecta) The pointed tip of genitalia.
- acuminate** a. [L. *acumen*, point] Terminating in a long tapering point.
- acuminose** a. [L. *acumen*, point] Nearly acuminate.
- acuminulate** a. [L. *acumen*, point] Minutely acuminate.
- acupunctate** a. [L. *acus*, needle; *punctus*, a pricking] Pertaining to fine superficial punctures as if made with a needle.
- acutangular** a. [L. *acutus*, sharpened; *angulus*, angle] Forming or meeting at an acute angle.
- acute** a. [L. *acutus*, sharpened] Pointed; forming an angle of

less than 90°; having a sharp or sharply tapering point. see **obtuse**.

**acutilingual** a. [L. *acutus*, sharpened; *lingus*, tongue] Having a sharp pointed tongue or mouth structure.

**acutilingues** n. pl. [L. *acutus*, sharpened; *lingua*, tongue] A former classification (Acutilinguae) of bees that have a short pointed tongue. see **obtusilingues**.

**acyclic** a. [Gr. *a*, without; *kyklos*, circle] Referring to noncyclic; not arranged in circles or whorls.

**adactyl, adactyle** a. [Gr. *a*, without; *daktylos*, finger] Lacking fingers, toes, or claws.

**adambulacral** a. [L. *ad*, near; *ambulare*, to walk] (ECHINOD: Asteroidea) Relates to structures situated along the ambulacral grooves in starfish.

**adanal** a. [L. *ad*, near; *anus*, anus] Pertaining to being located near the anus.

**adanal bursa** (NEMATA) Referring to a bursa not enclosing the tail terminus; leptoederan.

**adanal copulatory papillae** (NEMATA) Male adanal supplements, glandular or sensory.

**adanale** n. [L. *ad*, near; *anus*] (ARTHRO: Insecta) The fourth axillary sclerite of a wing.

**adanal segment** (ARTHRO: Chelicerata) In Actinotrichida Acari, segment XIV plus one of the paraproctal segments.

**adanal supplements** (NEMATA) Organs of secretion and attachment near the male anus.

**adapertural** a. [L. *ad*, near; *apertura*, opening] (MOLL: Gastropoda) Refers to being toward the shell aperture.

**adapical** a. [L. *ad*, near; *apex*, top] (MOLL: Gastropoda) Slightly oblique or along the axis toward the top.

**adaptation** n. [L. *ad*, near; *aptus*, fit] The process and condition of showing fitness for a particular environment, as applied to characteristics of a structure, function, or entire organism; also the process by which such fitness is ac-

quired.

**adaptive** a. [L. *ad*, near; *aptus*, fit] Capable of or showing adaptation.

**adaptive divergence** Evolutionary new forms from a common ancestry due to adaptation to different environmental conditions.

**adaptive ocelli** (ARTHRO: Insecta) Simple eyes or ocelli of most larvae. see **stemmata, ocellus**.

**adaptive race** A race that is physiologically, rather than morphologically, distinguished.

**adaptive radiation** Evolutionary diversification of members of a single phyletic line into a series of different niches or adaptive zones.

**adaxial** a. [L. *ad*, near; *axis*, axle] 1. Situated on the side of, or facing toward an axis. 2. (MOLL: Gastropoda) Inward toward the shell axis.

**adcauline** a. [L. *ad*, near; *caulis*, stalk] (CNID: Hydrozoa) Pertaining to polyps that bend towards, or are near to the common stem.

**addendum** n.; pl. **-da** [L. *addere*, to add] Something to be added; an addition, extension or supplement.

**additive variance** Gradation due to the average value of different genes.

**addorsal** a. [L. *ad*, near; *dorsum*, back] Near to, but not on the middle of the dorsum.

**addorsal line** (ARTHRO: Insecta) A longitudinal line between the dorsal and subdorsal line of caterpillars.

**adduct** v.t. [L. *ad*, near; *ducere*, to lead] To draw towards a median axis or plane, or one part toward another. see **abduct**.

**adduction** n. [L. *ad*, near; *ducere*, to lead] 1. Drawn toward or beyond the median line or axis. see **abduction**. 2. (ARTHRO: Insecta) In describing the movement of the legs, the movement of the coxa towards the body.

**adductor** n. [L. *ad*, near; *ducere*, to lead] A muscle that draws parts together or toward the median axis. see **adductor muscles**.

**adductor coxae** (ARTHRO: Insecta) The second muscle of the coxa.

**adductor mandibulae** (ARTHRO) The muscle that retracts or closes the mandible.

**adductor muscles** 1. Any muscle that adducts or bring parts into apposition. 2. (ARTHRO: Crustacea) In bivalves, muscles attached to the carapace that pull it to the body, or connect the carapace. *a*. In Barnacles, any transverse muscle, especially those attached to the scutum for closing the aperture. 3. (MOLL: Bivalvia) A single posterior or an anterior and posterior muscle connecting the two valves. *a*. In oysters, the crescent shaped "catch" muscle that holds the valves in a set position, or the "quick" muscle, the main opening and closure muscle.

**adductor muscle scar** (ARTHRO: Crustacea) In Ostracoda, an impression of the adductor muscles on the valve interior, serving for closure of valves.

**adductor pit** (ARTHRO: Crustacea) Depression on the inner surface of the scutum between the adductor ridge and the occludent margin for the attachment of the adductor muscle of certain barnacles.

**adductor ridge** (ARTHRO: Crustacea) In sessile barnacles, the linear elevation on the inner surface bounding the adductor pit on the tergal side.

**adecticus** a. [Gr. *a*, without; *dektikos*, able to bite] (ARTHRO: Insecta) Pertaining to pupae without articulated mandibles. see **decticous**.

**adelocerous, adelaceratous** a. [Gr. *adelos*, concealed; *keras*, horn] (ARTHRO: Insecta) Having antennae concealed in a cavity or groove.

**adelocodonic** a. [Gr. *adelos*, concealed; *kodon*, a bell] (CNID: Scyphozoa) Refers to degenerate attached medusae lacking an umbrella (bell).

**adelomorphic, adelomorphous** a. [Gr. *adelos*, concealed; *morphe*, form] Indefinite or obscure in form.

**adelonymy** n. [Gr. *adelos*, concealed; *onymos*, name] State of an organ that makes it impossible to receive a distinct nomenclatorial designation. **adelonymous** a.

**adelphogamy** n. [Gr. *adelphos*, brother; *gamos*, marriage] Mating of siblings. see **back-cross**.

**adelphoparasite** n. [Gr. *adelphos*, brother; *para*, beside; *sitos*, food] (ARTHRO: Insecta) A heteronomous hyperparasitoid.

**adendritic, adendric** a. [Gr. *a*, without; *dendron*, tree] Having no dendrites or branches.

**adeniform** a. [Gr. *aden*, gland; L. *forma*, shape] Glandlike; resembling the shape of a gland.

**adenine** n. [Gr. *aden*, gland] A 6-amino-purine base, closely related to uric acid, that derived its name from the original source from which it was derived.

**adenoblast** n. [Gr. *aden*, gland; *blastos*, bud] An embryonic glandular cell.

**adenocheiri** see **adenodactyl**

**adenodactyl** n.; pl. **-tyli, -yls** [Gr. *aden*, gland; *daktylos*, finger] (PLATY: Turbellaria) Prostatoid male apparatus occurring in the wall of the common antrum in some freshwater and land triclads and some Acoela, thought to act as stimulators in copulation.

**Adenophorea, adenophorean** n. [Gr. *aden*, gland; *phora*, producing] A class of unsegmented worms in the phylum Nematoda; formerly Aphasmidia.

**adenose** a. [Gr. *aden*, gland] Glandular.

**adenosine** n. [Gr. *aden*, gland] A nucleoside whose phosphates provide the primary energy transfer system in living materials.

**adenosine diphosphate (ADP)** Formed in biokinetic systems from decomposition of ATP.

**adenosine monophosphate (AMP)** A compound of importance in the release of energy for cellular activity, composed of adenine, d-ribose and phosphoric acid; also called AMP, adenylic acid, adenine ribotide.

**adenosine triphosphate (ATP)** A major energy contributor in biokinetic systems that upon hydrolysis yields adenosine diphosphate (ADP).

**adenotaxy** n. [Gr. *aden*, gland; *taxis*, arrangement] (ARTHRO: Chelicerata) In Acari, the number and distribution of the openings of the tegumentary glands of mites.

**adenotrophic viviparity** Reproduction characterized by fully developed, shelled eggs passing to and retained in the uterus, where the egg hatches and the larva is nourished by special maternal glands until fully developed.

**adeoniform** a. [L. *Adeona*, Roman goddess; *forma*, shape] (BRYO: Gymnolaemata) Pertaining to a lobate, bilamellar colony; resembling the fossil *Adeona*.

**adermata** n. [Gr. *a*, without; *derma*, skin] (ARTHRO: Insecta) Transparent cuticle in pupa allowing the wings and other parts of the forming imago to be seen.

**adesmatic** a. [Gr. *a*, without; *desmos*, ligament] Pertaining to a segment of an appendage, or to the articulation between segments of an appendage, lacking its own tendons and muscles. see **eudesmatic**.

**adetopneustic** a. [Gr. *adetos*, free; *pnein*, to breathe] (ECHINOD) Dermal gills occurring beyond the abactinal surface.

**adfrontal areas/plates** (ARTHRO: Insecta) A pair of narrow oblique plates on the head of Lepidoptera larvae, extending upwards from the base of the antennae and meeting medially above.

**adfrontal setae** (ARTHRO: Insecta) Setae borne on the adfrontal areas of immature insects, usually numbered according to their proximity to the vertex.

**adfrontal sutures** (ARTHRO: Insecta) In immature insects, sutures separating the adfrontal sclerites or areas from the epicranium.

**adherent** a. [L. *ad*, near; *haerere*, to stick] Referring to being attached, clinging or sticking fast.

**adhesion** n. [L. *ad*, near; *haerere*, to stick] 1. Act or state of adhering. 2. Attraction between two molecules of different substances.

**adhesion organs** 1. Any of numerous invertebrate organs used for adhesion to various surfaces. 2. (ARTHRO: Insecta) Abdominal suckers, tarsal suckers and ventral tube. 3. (NEMATA) The spinneret. 4. (PLATY: Cestoda) Suckers, bothria and bothridia. 5. (PLATY: Trematoda) Oral and ventral suckers. 6. (ROTIF) Pedal glands in the toes.

**adhesion tubes** (NEMATA) Specialized hollow, tubelike structures, that may be supplied with muscles, associated with glands presumed to secrete a sticky substance; sometimes referred to as tubular setae, adhesive bristles or ambulatory setae.

**adhesive bristles** see **adhesion tubes**

**adhesive capsule** (CNID) A type of nematocyst used for attaching to objects.

**adhesive cells** Various glandular or specialized cells capable of causing adhesion in cnidarians and tubellarians; sometimes referred to as colloblasts, glue cells, or lasso cells.

**adhesive gland** Various invertebrate glands that secrete a sticky substance.

**adhesive pad** (CNID: Hydrozoa) In some medusae, an adhesive sucker near tip of the tentacles utilized for clinging to sea weed.

**adhesive papillae** (PLATY: Turbellaria) In triclads, the protuberant structures for the purpose of attachment at the ends of the marginal adhesive glands.

**adiabatic** a. [Gr. *a*, without; *dia*, through; *bainein*, to go] Without gaining or losing heat.

**adiaphanous, adiaphanus** a. [Gr. *a*, without; *diaphanes*, transparent] Impervious to light; opaque.

**adient** a. [L. *adire*, to approach] Turning toward or approach-

ing a source of stimulation. see **abient**.

**adipocytes** n.pl. [L. *adeps*, fat; Gr. *kytos*, container] (ARTHRO: Insecta) Cells that form the fat-bodies of insects; adipohemocytes; trophocytes.

**adipogenesis** n. [L. *adeps*, fat; Gr. *gennaein*, to produce] The formation of fat or fatty tissue.

**adipohemocytes** n.pl. [L. *adeps*, fat; Gr. *haima*, blood; *kytos*, container] (ARTHRO: Insecta) Hemocytes characterized by refringent fat droplets and other inclusions; spheroidocytes. see **adipoleucocytes**.

**adipoleucocytes** n.pl. [L. *adeps*, fat; Gr. *leukos*, white; *kytos*, container] 1. Leucocyte blood cells with fat inclusions. 2. (ARTHRO: Insecta) In Hemiptera, large cells containing fat droplets, often thought to be hemocytes.

**adipose** a. [L. *adeps*, fat] Pertaining to fat.

**adipose tissue** see **fat body**

**A-disc** see **A-band**

**adiscota** n. [Gr. *a*, without; *diskos*, circular plate] (ARTHRO: Insecta) Adult development without forming imaginal discs. see **discota**.

**aditus** n.; pl. aditus, adituses [L. *aditus*, entrance] Anatomical passage or opening to a part or structure.

**adiverticulate** a. [Gr. *a*, without; L. *divertere*, to turn away] Without diverticula.

**adjustor** n. [L. *ad*, near; *justus*, just] 1. Any central nervous organ of an animal that links receptors with effectors. 2. (BRACHIO) The muscle linking stalk and valve.

**adjustor neuron** A neuron that is neither sensory nor motor, but which correlates the activities of both.

**admedial, admedian** a. [L. *ad*, near; *medial*, middle] 1. Near the median plane. 2. (MOLL) The lateral teeth of a radula between central and marginal.

**adminiculum** n.; pl. **-ula** [L. *adminiculum*, support] 1. A support or prop. 2. (ARTHRO: Insecta) *a*. Minute hairs, spines

or teeth on the dorsal abdominal surface of certain pupae that aid in locomotion. *b*. Elevated or indented lines on some larvae.

**adnate** a. [L. *ad*, near; *natus*, born] Pertaining to being united or fused to another organ or structure, normally of unlike parts.

**adneural** a. [L. *ad*, near; Gr. *neuron*, nerve] 1. Adjacent to a nerve. 2. (POGON) Term used instead of dorsal. see **anti-neural, subneural**.

**adnotale** a. [L. *ad*, near; Gr. *notos*, back] (ARTHRO: Insecta) In Lepidoptera, having fused median and postmedian notal processes; median notal process.

**adolescaria** n.; pl. **-iae** [L. *adolescens*, young; Gr. *kerkos*, tail] (PLATY: Trematoda) Cercaria or metacercaria stage. see **marita, parthenita**.

**adoption society** A group of one or more organisms living together, free to dissociate, and to neither does the continued association bring any apparent advantage.

**adoption substance** (ARTHRO: Insecta) Any secretion put forth by a social parasite that induces the potential host to accept it as a member of their colony.

**adoral** a. [L. *ad*, near; *os*, mouth] Near or toward the mouth.

**ADP** see **adenosine diphosphate**

**ADPP** see **adenosine triphosphate**

**addressed** a. [L. *ad*, near; *pressus*, pressed] 1. Refers to being pressed close to or laying flat against. 2. (MOLL: Gastropoda) Condition of whorls that overlap in such a manner that their outer surfaces converge very gradually.

**adradius** n. [L. *ad*, near; *radius*, ray] (CNID) The midradius between perradius and interradius; a radius of the third order.

**adrectal** a. [L. *ad*, near; *rectus*, straight] Associated with the rectum. see **adanal**.

**adrostral** a. [L. *ad*, near; *rostrum*, snout] Adjacent to or connected with a beak or rostrum.

**adsorption** n. [L. *ad*, near; *sorbere*, to suck in] Adhesion of dissolved substances, liquids or gases, to the surfaces of solid bodies with which they come into contact.

**adsperse, adspersus** a. [L. *adspersus*, a sprinkling] Having closely spaced small spots.

**adsternal** a. [L. *ad*, near; Gr. *sternon*, chest] Being situated adjacent to the sternum.

**adtidal** a. [L. *ad*, near; A.S. *tid*, time] Referring to organisms living in the littoral zone just below the low tide mark.

**adult** n. [L. *adultus*, grown up] 1. A fully grown, sexually mature individual. 2. (ARTHRO: Insecta) The imago. 3. (NEMATA) That stage following the 4th (juvenile) and final molt.

**adultation** n. [L. *adultus*, grown up] The appearance of adult ancestral characters in the larvae of descendants.

**adultoid** a. [L. *adultus*, grown up; Gr. *eidos*, shape] (ARTHRO: Insecta) A nymph having imaginal characters more developed than in the normal nymphs.

**adultoid reproductive** (ARTHRO: Insecta) In higher termites, a replacement reproductive following the disappearance of the primary reproductive, that is an imaginal already present, or a nymph reared to an imago stage and morphologically indistinguishable from the primary. see **primary reproductive, nymphoid reproductive, ergatoid reproductive**.

**adult transport** (ARTHRO: Insecta) The conveying of an adult social insect by carrying or dragging during colony emigrations; frequent behavior among ants.

**aduncate, aduncous** a. [L. *ad*, near; *uncus*, hooked] Inwardly curved; hooked; hamate.

**adust** a. [L. *ad*, near; *urere*, to burn] Burnt; scorched; dried up.

**advehent** see **afferent**

**adventitia** n. [L. *adventitius*, extraordinary] The connective tissue covering of an organ (mainly fibroelastic in nature),

such as the heart, or blood vessels.

**adventitious** a. [L. *adventitius*, extraordinary] Acquired; accidental; additional; occurring in abnormal places; ectopic foci.

**adventitious bud** (BRYO: Phylactolaemata) The small bud primordium on the dorsal side of the main bud near the parental polypide.

**adventitious vein** (ARTHRO: Insecta) A secondary wing vein, neither accessory nor intercalary, usually the result of cross veins lined up to form a continuous vein.

**adventive** a. [L. *advenire*, to arrive] Referring to an organism that has been accidentally introduced to a new area; not native.

**adventral line** (ARTHRO: Insecta) A line that extends along the underside of caterpillars between the middle and the base of the legs.

**adventral tubercle** (ARTHRO: Insecta) In caterpillars, a small pimple, sometimes bearing setae, located on each of the abdominal segments on the inner base of the leg and apodal segment.

**advolute** n. [L. *ad*, near; *voluta*, spiral] (MOLL: Gastropoda) A condition of whorls that barely touch one another, not distinctly overlapping.

**aedaeagus, aedagus, aedoeagus** see **aedeagus**

**aedeagal fulcrum** see **juxta**

**aedeagus** n.; pl. **-agi** [Gr. *aidoia*, genitals; *agein*, to lead] (ARTHRO: Insecta) In males, the intromittent organ; distal part of the phallus: penis plus parameres. see **penis, telopod**.

**aedoeotype** n. [Gr. *aidoia*, genitals; *typos*, type] The first specimen in which the genitalia are studied.

**aeneous, aeneus** a. [L. *aeneus*, of bronze] Bright brassy or golden green in color.

**aerate** v.t. [Gr. *aer*, air] To combine or charge with air; to supply or impregnate with common air.

**aeration** n. [Gr. *aer*, air] 1. Exposure to air. 2. Impregnation of a liquid with air or oxygen. 3. Oxygenation of blood in lungs.

**aerial** a. [Gr. *aer*, air] Living or occurring in air.

**aeriduct, aeriductus** n. [L. *aer*, air; *ducere*, to lead] (ARTHRO: Insecta) Tubes concerned with respiration, such as internal trachea or breathing tubes.

**aeriform** a. [Gr. *aer*, air; L. *forma*, shape] Of the nature or form of air; gaseous.

**aerobe, aerobiont** n. [Gr. *aer*, air; *bios*, life] An organism utilizing air. **aerobiotic** a. see **anaerobe**.

**aerobic respiration** That which requires oxygen.

**aerobiology** n. [Gr. *aer*, air; *bios*, life; *logos*, discourse] The study of aerial organisms.

**aerobiosis** n. [Gr. *aer*, air; *biosis*, manner of life] Life in air or oxygen.

**aerophore** n. [Gr. *aer*, air; *phorein*, to bear] (ARTHRO: Insecta) In caterpillars, a hollow hair on the body containing liquid.

**aeropyle** n. [Gr. *aer*, air; *pyle*, orifice] (ARTHRO: Insecta) 1. Rings of cells. 2. In the follicular epithelium, functioning in secretions for chorion formation. 3. Small pores between plastron and spiracles in spiracular gills.

**aeroscepsin, aeroscepsy** n. [Gr. *aer*, air; *skepsis*, observe] The theoretical power possessed by certain organisms of observing the quality of air by means of special sense organs.

**aeroscopic plate** (ARTHRO: Insecta) The air-containing part of the chorion of an egg.

**aerostat** n. [Gr. *aer*, air; *statos*, placed] (ARTHRO: Insecta) Air sacs in the body.

**aerostatic** a. [Gr. *aer*, air; *statos*, placed] Said of any organism or object that is, by certain means, supported chiefly by buoyancy derived from surrounding air.

**aerotaxis** n. [Gr. *aer*, air; *taxis*, arrangement] Movement of

organisms toward or away from oxygen.

**aeruginous, aeruginose, aeruginus** a. [L. *aerugo*, copper rust] Nature or color of copper rust or verdigris (green).

**aesthacyte, esthacyte** n. [Gr. *aisthetes*, perceiver; *kytos*, container] A sensory cell of certain primitive organisms.

**aesthesia, esthesia** n. [Gr. *aisthetes*, perceiver] Sensibility; sense-perception.

**aesthetasc, aesthetask, esthetasc** n. [Gr. *aisthetes*, perceiver; *askos*, bag] (ARTHRO: Crustacea) Sensory seta covered by a delicate cuticular membrane, often projecting from an antenna or antennule; an olfactory hair.

**aesthete, esthete** n. [Gr. *aisthetes*, perceiver] 1. Any invertebrate sense organ. 2. (ARTHRO) Usually applied as sensory nerve endings, but also used for sensory hairs and bristles. 3. (MOLL: Polyplacophora) Sensory organs terminating in the tegmentum. see **megalaesthetes, micraesthetes**.

**aestivate, estivate** v. [L. *aestas*, summer] To pass the summer in a quiet, torpid condition.

**aestivation, estivation** n. [L. *aestas*, summer] A form of dormancy during the summer months in high temperatures, or dry seasons. see **hibernestivation**.

**aetiology** see **etiology**

**afference** n. [L. *ad*, near; *ferre*, to bear] Impulses from the external sense organs of an animal because of events in the environment. see **reafference**.

**afferent** a. [L. *afferre*, to bring] Refers to a structure or vessel that leads to or toward a given position. see **efferent**.

**afferent channel** (ARTHRO: Crustacea) The opening through which water passes to the gills.

**afferent fiber** A nerve fiber carrying impulses from a receptor to the central nervous system.

**afferent nerve** A nerve that conducts impulses from the periphery toward a nerve center; the axon of a sensory neuron between a receptor and the central nervous system.

**afferent neuron (neurone)** A sensory neuron that conveys inward impulses received or perceived by a sense organ

from external sources.

**affinity** n.; pl. **-ties** [L. *affinis*, related to] Relationship; sometimes misleadingly employed as synonym for phenetic similarity.

**aflagellar** a. [Gr. *a*, without; L. *flagellum*, whip] Without flagella.

**afterbody** a. [A.S. *aefter*, behind; *bodig*, body] (ARTHRO: Insecta) In Coleoptera, the body area behind the pronotum.

**after-discharge** 1. The continuing discharge of impulses after stimulation has ceased in sensory receptors. 2. The continuation of the motor response (reflexes) after discontinuance of stimulation. see **after-sensation**.

**afternose** a. [A.S. *aefter*, behind; *nosu*, nose] (ARTHRO: Insecta) Pertaining to the triangular area below the antennae and above the clypeus.

**after-sensation** Continuation of nerve impulses after cessation of external stimulation of sensory apparatus.

**agameon** n. [Gr. *a*, without; *gamos*, marriage; *on*, being] A species reproducing exclusively by apomixis. see **apomictic (ameiotic) parthenogenesis**.

**agamete** n. [Gr. *a*, without; *gamos*, marriage] Any product of reproductive multiple fission that develops directly into the adult form without sexual union.

**agamic** a. [Gr. *a*, without; *gamos*, marriage] Parthenogenetic; reproduction without mating, may be either mitotic or meiotic.

**agamobium** n. [Gr. *a*, without; *gamos*, marriage; *bios*, life] The asexual form in alternation of generations. see **gamobium**.

**agamodeme** n. [Gr. *a*, without; *gamos*, marriage; *demos*, people] A population mainly consisting of asexual organisms.

**agamogenesis** n. [Gr. *a*, without; *gamos*, marriage; *genesis*, beginning] Asexual reproduction; parthenogenesis; reproduction without fertilization by a male gamete. **agamogenetic** a. see **gamogenesis**.

**agamospecies** n. [Gr. *a*, without; *gamos*, marriage; L. *spe-*

*cies*, kind] A species without sexual reproduction; an asexual species.

**agamous** see **agamic**

**agar** n. [Malay *agar-agar*, substance from seaweed] A nonnitrogenous, gelatinous hydrophilic substance obtained from certain seaweeds used in the preparation of culture media in microbiology and as a stabilizer of emulsions.

**agastic** a. [Gr. *a*, without; *gaster*, stomach] Lacking a digestive tract or cavity.

**age** n. [L. *aevum*, lifetime] 1. The period of time any living individual has existed. 2. A particular period of life or development.

**age and area theory** The older a species, the more extensive its area of distribution.

**agenesis, agenesis** n. [Gr. *a*, without; *genesis*, beginning] 1. Lacking development. see **aplasia**. 2. Inability to produce offspring. see **agenesis**.

**agenesis** n. [Gr. *a*, without; *gennesis*, an engendering] Impotent; sterile. **agenetic** a.

**age polyethism** (ARTHRO: Insecta) In social insects, the regular changing of labor specialization as they grow older. see **polyethism**.

**agenital** a. [L. *ad*, to; *genitalis*, genitalia] (ARTHRO: Chelicerata) In Acari, pertaining to that area on both sides of the genital region.

**agglomerate** n. [L. *ad*, to; *glomerare*, to form into a ball] To group or gather into a mass or cluster; clustered densely; piled or heaped together.

**agglutinate** v. [L. *ad*, to; *glutinare*, to glue] To join by adhesion; to unite as with glue; to collect in masses.

**agglutinated** a. [L. *ad*, to; *glutinare*, to glue] 1. Sticking together. 2. (ARTHRO: Insecta) Used by entomologists to describe a larva with an unusually heavy chitinous covering. see **obtect pupa**.

**agglutinin** n. [L. *ad*, to; *glutinare*, to glue] A substance or specific antibody causing clumping of cells.

- aggregate** a. [L. *ad*, to; *gregare*, to collect] Clustering or crowding together to form a dense mass.
- aggregation** n. [L. *ad*, to; *gregare*, to collect] 1. Collection or grouping into a mass or sum. 2. A group of individuals comprised of more than a mated pair or family, collecting in the same place, that do not construct nests or rear offspring in a cooperative manner. see **colony**.
- aggressin** n. [L. *aggressus*, attacked] A substance produced in the body of a host by a pathogenic organism that paralyzes the defense mechanisms of the host.
- aggression** n. [L. *aggressus*, attacked] The behavior of an organism involving threats or attack of another organism or object.
- aggressive mimicry** A method of mimicry of one species by another that is hostile to it.
- agigeriata** a. [Gr. *a*, without; *gigerium*, gizzard] Gizzardless; without a gizzard.
- Aglossa** see **Bivalvia**
- aglossate** n. [Gr. *a*, without; *glossa*, tongue] Lacking a tongue.
- agminate** a. [L. *agminis*, crowd] Grouped together; aggregated. see **cluster**.
- agnathous** a. [Gr. *a*, without; *gnathos*, jaw] Lacking a jaw.
- agnotobiotic culture** Any population with one or more kinds of organisms present. see **gnotobiotic culture**.
- agonist** n. [Gr. *agonistes*, contestant] A primary muscle responsible for the movement of a part or appendage.
- agonistic** a. [Gr. *agonistes*, contestant] Behavior signaling aggressive attitude.
- agriotype** n. [Gr. *agrios*, wild; *typos*, type] Ancestral type.
- agriotypiform** a. [Gr. *agrios*, wild; *typos*, type; L. *forma*, shape] (ARTHRO: Insecta) In Hymenoptera, referring to the peculiar form of larval Agriotypidae, with the first instar having a heavily sclerotized, mandibulate head, rows of spiniform setae on the succeeding segments, and a slender, bifurcate caudal appendage.

- ahermatype corals** (CNID) Non-reef building species of corals.
- ahermatic** a. see **hermatype corals**.
- aileron** n. [F. dim. *aile*, wing] (ARTHRO: Insecta) A large scale or structure in front of the base of the fore wing; sometimes used as synonymous with alula.
- air chamber** (MOLL: Cephalopoda) The gas-filled cavity of a nautilus shell that was previously occupied by that organism.
- air sacs** 1. (ARTHRO: Insecta) Pouch-like enlargements of tracheal tubes in winged forms, usually lacking taenidia, capable of inflation and thought to function as an aid in flight and to lessen specific gravity. 2. (CNID: Hydrozoa) In Siphonophora, that portion of a pneumatophore that contains gas.
- air stores** (ARTHRO: Insecta) The covering of bubbles of air carried by hydrofuge structures of certain aquatic forms.
- air tube** A respiratory tube or siphon.
- aitiogenic** a. [Gr. *aitios*, causing; *gennaein*, to produce] Referring to the resultant reaction from stimulation.
- akanth** see **acanth**
- akaryote, acaryote** n. [Gr. *a*, without; *karyon*, nut] 1. Lacking a nucleus. 2. A non-nucleated cell.
- akinesis, akinesia** n. [Gr. *a*, without; *kinesis*, motion] Loss or disturbance of motion, as in certain insects, resulting from loss of antennae.
- ala** n.; pl. **alae** [L. *ala*, a wing] Any wing-like process or structure; a thin, cuticular projection or fin, running longitudinally, usually lateral or sublateral, frequently paired.
- alabastrine** a. [Gr. *alabastros*, alabaster box] Pertaining to, or like alabaster; smooth and white.
- alacardo** n. [L. *ala*, a wing; *cardo*, hinge] (ARTHRO: Insecta) The distal sclerite of the cardo.
- alacercus** n. [L. *ala*, a wing; Gr. *kerkos*, tail] (ARTHRO: Insecta) The caudal filament; the middle cercus when three are present.
- alacoxasuture** n. [L. *ala*, a wing; *coxa*, hip; *sutura*, seam]

(ARTHRO) The suture that appears to divide the coxa into an anterior and posterior part; found on only one side of the coxa.

**alacrious** a. [L. *alacer*, lively] Brisk; active; lively.

**alacrista** n.; pl. -**ae** [L. *ala*, a wing; *crista*, ridge] (ARTHRO: Insecta) In Coleoptera, a ridge on each side of the anterior scutal area that converges posteromesally.

**alae** pl. of **ala**

**alaglossa** n. [L. *ala*, a wing; Gr. *glossa*, tongue] (ARTHRO: Insecta) Glossae fused into a single plate.

**alar** a. [L. *alaris*, of the wing] Pertaining to a wing, or wing-shaped.

**alar area** (ARTHRO: Insecta) In certain coleopteran scarabaeoid larvae, an integral area immediately above the epipleural area, separated in the thorax by an oblique suture.

**alar frenum** (ARTHRO: Insecta) 1. In Diptera, a ligament dividing the supra-alar cavity into anterior and posterior areas. 2. In Hymenoptera, a ligament crossing the supra-alar groove toward the wing base.

**alaria** n. [L. *alaris*, of the wing] (ARTHRO: Insecta) The notal wing processes.

**alarima** n. [L. *ala*, wing; *rima*, cleft] (ARTHRO: Insecta) The opening between the two paraglossae.

**alarm pheromone** A chemical released into the environment inducing a fright response in other members of the same species.

**alar squama** (ARTHRO: Insecta) In Diptera, one of three membranous lobes in the region of the wing base that represents the jugum. see **alula**, **thoracic squama**.

**alary** a. [L. *alaris*, of the wing] Wing-like; aliform.

**alary muscles** see **aliform muscles**

**alary polymorphism** (ARTHRO: Insecta) Two or more shapes of wings in the same species, not necessarily correlated to sex.

**alassostasy** n. [Gr. *alassein*, to alter; *stasis*, standing] (ARTHRO: Chelicerata) An orthostasic stage in the life cycle in-

volving secondary changes in number and/or shape of stases and number of molts. see **orthostasy**.

**alatae** n. [L. *ala*, wing] (ARTHRO: Insecta) Winged forms of Aphidae.

**alatate** a. [L. *ala*, wing] Possessing lateral wing-like expansions.

**alate** a. [L. *ala*, wing] 1. Winged, or wing-like expansions, auricles or alae. 2. (MOLL: Gastropoda) Commonly refers to outer lip.

**alavertex** see **occiput**

**albinism** n. [L. *albus*, white] The congenital deficiency of pigmentation, and particularly of melanin. see **melanism**.

**albinistic** a. [L. *albus*, white] Affected with albinism; tending toward whiteness of normally dark forms.

**albumen** n. [L. *albumen*, white of an egg] Egg white, containing several proteins, but consisting principally of albumin.

**albumen gland** (MOLL: Gastropoda) A gland that produces the perivitelline fluid that connects to a hermaphroditic gland.

**albumin** n. [L. *albumen*, white of an egg] One of a group of proteins present in blood serum, muscle, and other tissue.

**albuminoid** a. [L. *albumen*, white of an egg; Gr. *eidos*, form] Like or of the character of albumin, including collagen and keratin.

**albuminoid spheres** (ARTHRO: Insecta) Eosinophilic bodies that are liberated into the blood during molting and metamorphosis, formed by extruded chromatin granules of fat cells.

**aleatory** a. [L. *alea*, chance] Pertaining to organs that are existing or lacking, depending on chance. see **vertition**.

**aletocyte** n. [Gr. *aletes*, wanderer; *kytos*, container] A wandering cell; a phagocyte.

**aleuritic acid** (ARTHRO: Insecta) One of the organic acids contained in lac that is produced by certain scale insects.

**algaliculous** a. [L. *alga*, seaweed; *colere*, to inhabit] Pertaining to an organism living on or around seaweed.

**algophagous** a. [L. *alga*, seaweed; Gr. *phagein*, to eat] Refer-

ring to any algae eating organism.

**alienicola** n.; pl. **-colae** [L. *alienus*, foreign; *colere*, to dwell] (ARTHRO: Insecta) In aphids, the parthenogenetic, viviparous female that mostly develops on the secondary host. see **fundatrix**, **migrante**.

**alifer** n. [L. *ala*, wing; *ferre*, to bear] (ARTHRO: Insecta) The pleural fulcrum of the wing.

**alifera** n.; pl. **aliferae** [L. *ala*, wing; *ferre*, to bear] (ARTHRO: Insecta) The projections of the *pleuron*, against which the pteralia of a wing articulates.

**aliferous** a. [L. *ala*, wing; *ferre*, to bear] Bearing or possessing wings.

**aliform** a. [L. *ala*, wing; *forma*, shape] Shaped like or resembling a wing; alary.

**aliform apophyses** (BRACHIO) Incurved anterior and posterior extremities of the growth line.

**aliform muscles** (ARTHRO: Insecta) Muscles closely associated with the heart, usually fan-shaped; sometimes also associated with the abdominal as well as the thoracic muscles.

**alima** n. [Gr. *halimos*, pert. the sea] (ARTHRO: Crustacea) The last larval stage of a mantis shrimp of the family Squillidae; a megalopa stage larva.

**alimentary** a. [L. *alimentum*, food] Pertaining to food or nutrition.

**alimentary canal (tract)** The food tube traversing the body from mouth to anus; generally divided into three main regions: the ectodermal foregut or stomodeum, the endodermal midgut or mesenteron and the ectodermal hindgut or proctodeum.

**alimentary castration** Pertaining to an individual deprived of sufficient nourishment in the larval form leading to suppression of gonadal development. see **nutritional castration**.

**alinetum** n. [L. *ala*, wing; Gr. *noton*, back] (ARTHRO: Insecta) The notal plate of the mesothorax or metathorax of winged forms.

**aliphatic** a. [Gr. *aleiphos*, fat] Refers to compounds having an

open-chain structure, and those cyclic compounds that resemble the open-chain structure.

**aliquant** a. [L. *alius*, other; *quantus*, how great] In mathematics, dividing a smaller number into a larger number with a remainder; in biology, taking equal quantities of a solution with unequal numbers of organisms in suspension. see **aliquot**.

**aliquot** a. [L. *alius*, other; *quantus*, how great] In mathematics, dividing a smaller number into a larger number evenly; hence, in biology, dividing a population of organisms evenly or into equal parts. see **aliquant**.

**alitrunk** n. [L. *ala*, wing; *truncus*, trunk] (ARTHRO: Insecta) Thorax to which the wings are attached, including the first abdominal segment in certain Hymenoptera; mesosoma.

**alivincular hinge** (MOLL: Bivalvia) A somewhat flattened cord from one bivalve umbo to another, having the long axis transverse to the planes of the margins and the axis of motion.

**alizarin, alizarine** n. [F. *alizari*, the juice] A transparent orange-red stain or dye.

**alkaline gland** (ARTHRO: Insecta) In Hymenoptera, the Dufour's gland; an accessory gland that discharges at the base of the sting; function unknown, but thought to be concerned with lubrication of the sting.

**alkanes** n.pl. [OF. *al qualiy*, ashes of salt wart] A group of saturated hydrocarbons found in Pre-Cambrian geological strata presumed to be fossils.

**allaesthetic, allesthetic** a. [Gr. *allos*, other; *aisthetes*, perceiver] Recognition of characteristics of an organism, as perceived by another.

**allantoin** n. [Gr. *allas*, sausage] The resultant of purine and pyrimidine metabolism occurring in allantoinic fluid and urine of various invertebrates.

**allatectomy** n. [L. *allatum*, brought; Gr. *ektemnein*, to cut out] (ARTHRO: Insecta) Total excision of the endocrine glands, corpora allata.

**allatum hormone** see **juvenile hormone**

- Allee's principle** The concept of an optimal population level where organisms flourish.
- allele** n. [Gr. *allelon*, one another] Genes occupying the same locus in homologous chromosomes, that segregate from each other at the reduction division. see **dominant allele**, **pseudoallele**, **isoallele**, **recessive allele**, **multiple allele**.
- allelism** n. [Gr. *allelon*, one another] The relationship between two characters that are alleles; alleomorphism; alternative inheritance.
- allelochemic, allelochemical** n. [Gr. *allelon*, one another; *chemeia*, pert. chemistry and chemical terms] 1. A chemical agent of natural origin involved in interaction between species or individuals; sometimes divided into four subgroups based on whether the emitter, the receiver, or both benefit in the interaction: allomones, kairomones, synomones and apneumones. 2. Xenomone.
- allelomimetic** a. [Gr. *allelon*, one another; *mimikos*, imitative] Referring to imitation of behavioral habits of another animal, usually of the same species.
- allelomorph** n. [Gr. *allelon*, one another; *morphe*, form] 1. Two contrasting, although closely parallel genetic characters. 2. A member of a Mendelian pair.
- allelopathy** n. [Gr. *allelon*, one another; *pathos*, suffer] The chemical effect of plants on other organisms in the environment.
- allelotropism** n. [Gr. *allelon*, one another; *tropein*, to turn] The mutual attraction between two cells or organisms.
- allelotype** n. [Gr. *allelon*, one another; *typos*, type] The repeated occurrence of alleles in a given population.
- allesthetic** see **allaesthetic**
- alligate** v.t. [L. *alligare*, to tie] To unite, fasten or suspend.
- alliogenesis** see **alloiogenesis**
- allobiosis** n. [Gr. *allos*, other; *biosis*, manner of life] Differentiation from the normal; a changed environment.
- allochore** n. [Gr. *allos*, other; *chorein*, to spread] Any organism occurring in two different habitats in the same geo-

- graphic region.
- allochroic** a. [Gr. *allos*, other; *chroia*, color of the skin] Changeable in color, or variation of color.
- allochronic** a. [Gr. *allos*, other; *chronos*, time] Not occurring at the same period of time; not contemporary.
- allochronic speciation** Speciation that does not occur at the same period of time, thus causing morphological discontinuity. see **synchronic speciation**.
- allochthonous** a. [Gr. *allos*, other; *chthon*, earth] Exotic; imported or migrated from another area; peregrine. see **autochthonous**.
- allographic** a. [Gr. *allos*, other; *graphein*, to write] Said of organisms that conceal themselves with coverings of other organisms or with inanimate materials.
- allogamy** n. [Gr. *allos*, other; *gamos*, marriage] Cross-fertilization. see **autogamy**.
- allograft** n. [Gr. *allos*, other; OF. *greffe*, graft] A piece of tissue or organ from one individual grafted to another of the same species.
- alloheteroploid** n. [Gr. *allos*, other; *heteros*, different; *aploos*, onefold; *eidos*, form] Heteroploid individuals whose chromosomes derive from various chromosome sets. see **autoheteroploid**.
- alloiogenesis** n. [Gr. *alloios*, of another kind; *genesis*, beginning] Alternation of sexual and parthenogenetic generations: alternation of generations.
- alloiometron** n. [Gr. *alloios*, of another kind; *metron*, measure] Measurable variability in the physical development within a species or race.
- allokinesis** n. [Gr. *allos*, other; *kinesis*, movement] Passive or reflex movement. **allokinetic** a. see **autokinesis**.
- allomeristic** a. [Gr. *allos*, other; *meros*, part] Refers to any organism differing in the number of parts of any organ from that which is customary in the group.
- allometric coefficient** The slope of the logarithmic growth curve of the measurement of an organ or part against that of the whole remainder or another part; sometimes re-

ferred to as the heterogonic or heteroausecic coefficient.

**allometric growth** The growth rate of one part of an organism differing from that of another part or of the body as a whole. see **heterauxesis**.

**allometrosis** n. [Gr. *allos*, other; *metros*, mother] Having different species or races living in an organized group.

**allometry** n. [Gr. *allos*, other; *metron*, measure] The study of relationship of growth. **allometric** a.

**allomixis** see **cross-fertilization**

**allomone** n. [Gr. *allos*, other; *hormaen*, to instigate] Any chemical secreted by an organism that causes another organism of different species to react favorably to the emitter. **allomonal** a.

**allomorphic evolution** A rapid increase in specialization.

**allomorphosis** n. [Gr. *allos*, other; *morphe*, form] Rapid development of specialized organs or increase of specialization in an organism. see **aromorphosis**.

**alloparalectotype** n. [Gr. *allos*, other; *para*, beside; *lektos*, chosen; *typos*, type] A specimen from the original collection, a sex other than that of the holotype, and described later than the original publication.

**allopatry** n. [Gr. *allos*, other; *patrios*, father land] Populations separated by spatial barriers preventing gene flow. **allopatric** a. see **sympatry**.

**allopelagic** a. [Gr. *allos*, other; *pelagos*, sea] Referring to open water; marine or freshwater organisms found at various depths.

**alloplasm** n. [Gr. *allos*, other; *plassein*, to mold] Cell organelles that serve a special purpose and are not of regular occurrence, such as the neuro- and myofibrils, cilia and flagella.

**alloplast** n. [Gr. *allos*, other; *plassein*, to mold] A cell organelle composed of more than one kind of tissue. see **homoplast**.

**allopolyploid** n. [Gr. *allos*, other; *polyploos*, many fold; *eidōs*, form] A polyploid produced by the chromosome doubling of a species or genus hybrid, that is, of an individual with two

unlike chromosome sets.

**alloscutum** n. [Gr. *allos*, other; L. *scutum*, shield] (ARTHRO: Chelicerata) In Acari, the dorsal part of the exoskeleton posterior to the scutum of larval ticks.

**allosematic color** Having protective coloration resembling that of dangerous or inedible species; aposematic color; Batesian mimicry. see **sematic**.

**allosomal inheritance** The inheritance of characters produced by genes in an allosome.

**allosome** n. [Gr. *allos*, other; *soma*, body] A chromosome deviating in size, form or behavior from other chromosomes, usually a sex-chromosome; heterochromosome. see **autosome**.

**allosynapsis** see **allosyndesis**

**allosyndesis** n. [Gr. *allos*, other; *syndesis*, a binding together] In polyploids, pairing of completely or partially homologous chromosomes that were introduced into the zygote by the same gamete at fertilization. see **autosyndesis**.

**allotetraploid** n. [Gr. *allos*, other; *tetraploos*, fourfold; *eidōs*, form] A tetraploid produced when a hybrid derived from a genetically different parent doubles its chromosome number; amphidiploid.

**allotherm** n. [Gr. *allos*, other; *therme*, heat] Any organism dependent on environmental temperature for its own body temperature. see **poikilothermal**, **ectotherm**.

**allotopotype** n. [Gr. *allos*, other; *topos*, place; *typos*, type] An allotype obtained from the original locality.

**allotriomorphic** a. [Gr. *allotrios*, abnormal; *morphe*, shape] Displaying an abnormal or unexpected shape.

**allotriploid** n. [Gr. *allos*, other; *triploos*, threefold; *eidōs*, form] A triploid with two similar and one dissimilar chromosome sets. see **autotriploid**.

**allotrophic** a. [Gr. *allos*, other; *trophe*, nourishment] Referring to organisms dependent upon other organisms for nutrition; heterotrophic.

**allotropism** n. [Gr. *allos*, other; *tropos*, turn] The propensity of attraction of certain cells or structures; allotropy.

**allotropous** a. [Gr. *allos*, other; *tropos*, turn] (ARTHRO: Insecta) Refers to insects that are not limited to or adapted to visiting certain kinds of flowers.

**allotropy** see **allotropism**

**allotype** n. [Gr. *allos*, other; *typos*, type] A paratype of the opposite sex to the holotype.

**allozygote** n. [Gr. *allos*, other; *zygotos*, yoked] A homozygote with only recessive characters.

**alluring coloration** (ARTHRO: Insecta) Patterns or colorings adapted by predators that attract other species; aggressive mimicry.

**alluring glands** Glandular structures that disperse an odor attractive to the opposite sex; sex pheromones.

**allux** n. [L. *ad*, to; *luxus*, dislocated] (ARTHRO: Insecta) In Curculionidae, the next to the last joint of the tarsus.

**alpha-chlorophyll** n. [Gr. *alpha*, a; *chloros*, green; *phyllon*, leaf] (ARTHRO: Insecta) Chlorophylic properties producing coloration. see **beta-chlorophyll**.

**alpha-female** n. [Gr. *alpha*, α A; L. *femina*, female] (ARTHRO: Insecta) In Formicidae, the intermediate form between the teratogyne and normal female.

**alpha taxonomy** That level of taxonomy involved with the characterization and naming of species. see **beta taxonomy**.

**alpine** a. [L. *alpinus*, of or like high mountains] Applied to organisms occurring in high mountain meadows; also referred to as alpestrine.

**altaceratubae** n. [L. *alter*, the other; Gr. *keras*, horn; *tuba*, trumpet] (ARTHRO: Insecta) In certain scale insects, ceratubae shaped like large broad cylinders with oblique openings, located at or near the margin of the pygidium.

**alteration theory** Explanation of the phenomenon of electromotive forces of nerve and muscle by changes in chemical composition of tissue in cross-section.

**alternate host** One that alternates with another in the life cycle of a parasite. see **intermediate host**.

**alternating cleavage** see **spiral cleavage**

**alternation of generations** The alternation of two or more generations reproducing in different ways; an alternation of sexual and asexual, or parasitic with a free-living cycle. see **alloiogenesis**, **digenesis**, **heterogamy**, **heterogenesis**, **heterogony**, **metagenesis**.

**alternative inheritance** see **allelism**

**altitude** see **height**

**altricial** a. [L. *altrix*, nourisher] Having young at hatching or birth that require care for sometime.

**altruism** n. [L. *alter*, the other] Behavior disadvantageous to the individual, but benefits other individuals of the species.

**alula** n.; pl. **-lae** [L. dim. *ala*, wing] (ARTHRO: Insecta) 1. In some Diptera, one of the membranous lobes in the region of the wing base, thought to be part of the vannal region. see **thoracic squama**, **alar squama**. 2. In some Coleoptera, the alula is folded beneath the elytron/jugum.

**alulet** n. [L. dim. *ala*, wing] (ARTHRO: Insecta) In Diptera, a lobe at the basal posterior part of the wing; wing appendage; posterior lobe. see **alula**.

**alutaceous** a. [L. *alutaceus*, soft leather] Pertaining to brown or brownish-yellow; leathery; covered with, or appearing like, minute cracks.

**alveator** n. [L. *alveatus*, hollowed out] (ECHINOD) A form of pedicellaria; usually two valved and recessed into an alveolus or depression in the endoskeleton.

**alveola** n.; pl. **-lae** [L. *alveolus*, small cavity] A small pit or depression on the surface of an organ; faveolus; alveolus. alveolar a.

**alveolar hydatid cyst** (PLATY: Cestoda) A larval form of *Echinococcus multilocularis* comprised of many compartments containing many protoscolices that infiltrate body tissues.

**alveolate** a. [L. *alveolus*, small cavity] Deeply pitted or having the appearance of a honeycomb.

**alveolus** n.; pl. **-eoli** [L. *alveolus*, small cavity] Any small cavity, pit or depression; alveola.

**amacrine** a. [Gr. *a*, without; *makros*, long; *inos*, fiber] (ARTHRO: Insecta) Pertaining to a unipolar nerve cell within a synaptic region of the brain, i.e., the antennal lobes or the medulla. **amacrinal** a.

**amalgamated lips** (NEMATA) Lips combined together giving a smooth contour, not discernibly separated from each other.

**amastigophore** n. [Gr. *a*, without; *mastix*, whip; *pherein*, to bear] (CNID) A nematocyst with no tube beyond the hempe; in microbasic types, the hempe is not more than three times the capsule length; in macrobasic types, the hempe is more than four times the capsule length. see **mastigophore**.

**amber** n. [Ar. *anbar* ambergris, a fossilized resin] A transparent, clear, pale yellow-brown gummy resin of coniferous trees in which insects and spiders were trapped and fossilized in the hard transparent state as much as 30 million years ago.

**ambient** a. [L. *ambire*, to go around] Moving around; surrounding.

**ambient vein** (ARTHRO: Insecta) 1. The vein that partially encircles the wing close to the margin. 2. The vein-like structure that serves to stiffen the margin of a wing.

**ambifenestrate** a. [L. *ambo*, both; *fenestra*, window] (NEMATA) A term used to describe two semifenestrae in the vulval cone formed by a narrow vulval bridge, but not surrounding the vulva. see **bifenestrate**.

**ambiguous** a. [L. *ambigere*, to wander about] Vague or doubtful in meaning; having more than a single meaning.

**ambilateral** a. [L. *ambo*, both; *latus*, side] Pertaining to or affecting both sides; bilateral.

**ambisexual** see **monoecious**, **hermaphrodite**

**ambital** see **ambitus**

**ambitus** n. [L. *ambitus*, going around] The periphery or outer edge of an organism. **ambital** a.

**amblychromatic** a. [Gr. *amblys*, dull; *chroma*, color] Staining only slightly, as opposed to trachychromatic.

**ambosexous** see **hermaphrodite**

**ambrosia** n. [Gr. *ambrotos*, immortal] (ARTHRO: Insecta) Fungi cultures cultivated by scolytid beetles to feed their larvae; sometimes used to designate that part of the fungus that grows out into the burrows and is eaten by the beetles. see **bee-bread**, **fungus garden**.

**ambulacral areas** (ECHINOD: Asteroidea) The radially arranged arms (typically 5) bearing the tube feet or podia. see **interambulacral areas**.

**ambulacral groove** (ECHINOD: Asteroidea) A groove or furrow bordered by large spines extending along the oral surface of each arm of sea stars, that contain two to four rows of small tubular projections called feet or podia.

**ambulacral ridge** (ECHINOD: Asteroidea) The internal ridge of the external ambulacral groove.

**ambulacriform** a. [L. *ambulare*, to walk; *forma*, shape] Resembling or having the form of an ambulacrum.

**ambulacrum** n.; pl. **-lacra** [L. *ambulare*, to walk] 1. (ARTHRO: Chelicerata) The adhesive disc of hooks that terminate the tarsus of ticks. 2. (ARTHRO: Insecta) The walking leg. 3. (ECHINOD) Plates with pores forming the test, arranged in 5 or more rows, where the podia of the water-vascular system project to the exterior.

**ambulate** v.i. [L. *ambulare*, to walk] To walk or move about.

**ambulatory** a. [L. *ambulare*, to walk] Having the power of walking or moving from place to place.

**ambulatory leg** see **pereopod**

**ambulatory rosette** (ARTHRO: Insecta) In Neuroptera, a prehensile "holdfast" organ located at the tip of the abdomen that aids in locomotion of larval snakeflies.

**ambulatory setae** 1. (ARTHRO: Insecta) Hairs or bristles on the ventral segments of the abdomen. 2. (NEMATA: Adenophorea) Hollow tubelike projections used for locomotion. see **adhesion tubes**.

**ambulatory wart** see **ampulla**

**ame-** see **amoe-** for words not found here

**ameiosis** n. [Gr. *a*, without; *meiosis*, to make smaller] Failure of meiosis that is replaced by a form of nuclear division not

involving the reduction of the chromosome number.

**ameiotic** a. [Gr. *a*, without; *meiosis*, to make smaller] Pertaining to maturation division of a gamete without the diploid number of chromosomes being reduced to the haploid.

**ameiotic parthenogenesis** Parthenogenesis without meiosis.

**amensalism** n. [Gr. *a*, without; L. *mensa*, table] A form of symbiotic relationship in which one of the organisms is inhibited and the other is not.

**ametabolic** a. [Gr. *a*, without; *metabole*, change] Without metamorphosis; ametamorphic.

**ametabolous metamorphosis** (ARTHRO: Insecta) Insects whose eggs hatch into nymphs closely resembling the adult form, differing only in size and life stages; without metamorphosis.

**ametamorphic** a. [Gr. *a*, without; *meta*, after; *morphe*, form] Having no metamorphosis.

**amethystine** a. [Gr. *amethystos*, not drunk] Pertaining to, or resembling amethyst, a bluish-violet color.

**amicon** n. [Gr. *a*, without; *mikros*, small] One of the smallest particles detectable with the electron microscope; smaller than one (1) nm and can only be seen as a diffuse illumination in the track of the beam.

**amicroscopic** a. [Gr. *a*, without; *mikros*, small; *skopein*, to view] Too small to be seen with either the light microscope or the electron microscope; less than about one (1) nanometer in diameter.

**amictic egg** Eggs that do not undergo a meiotic division and are therefore diploid producing females parthenogenetically. see **mictic egg**.

**aminosugar** n. [prefix names of chemical compounds containing one of the amino groups; Gr. *sakcharon*, sugar] A monosaccharide with an amino or substituted amino group in place of a nonglycosidic hydroxyl group.

**amitosis** n. [Gr. *a*, without; *mitos*, thread] Cellular division without the appearance of chromosomes or any mitotic figure. **amitotic** a. see **mitosis**.

**amixia, amixis** n. [Gr. *a*, without; *mixis*, a mixing] Absence of

interbreeding between members of the same species or races due to morphological, geographical or physiological isolation.

**ammochaeta** n.; pl. **-tae** [Gr. *ammos*, sand; *chaite*, long hair] (ARTHRO: Insecta) In Hymenoptera, specialized hairs or bristles on the head or lower lip of desert ants, used for removing sand from the strigils on the forelegs.

**ammonite** n. [Gr. *Ammon*, Jupiter] (MOLL: Cephalopoda) Any fossil ammonian shell curved into a spiral like a ram's horn, common in Paleozoic and Mesozoic rocks of all parts of the world.

**ammonitiferous** a. [Gr. *Ammon*, Jupiter; *ferre*, to carry] Said of rocks containing ammonites.

**ammonoid** a. [Gr. *Ammon*, Jupiter] (MOLL: Cephalopoda) Pertaining to a shell covered cephalopod.

**ammonotelic** a. [Gr. *ammoniakon*, temple of Jupiter Ammon; *telos*, end] The excretion of nitrogen principally as ammonia. see **uricotelic**.

**ammophilous** a. [Gr. *ammos*, sand; *philos*, loving] Sand-loving; living in or frequenting sand.

**amnion** n.; pl. **-nions, -nia** [Gr. *amnion*, membrane around the fetus] (ARTHRO) The inner cellular, membranous embryonic covering of various insects and other arthropods. **amniotic** a.

**amnios** n. [Gr. *amnion*, membrane around the fetus] (ARTHRO: Insecta) Cuticular covering of an embryo that is shed before or very shortly after hatching.

**amniotic cavity** The cavity between the amnion and the embryo in the developing egg of various invertebrates.

**amniotic fluid** Liquid surrounding the embryo while in the egg.

**amniotic folds** Lateral folds of the amnion that meet to enclose the germ band in the ovum.

**amniotic pore** (ARTHRO: Insecta) An opening to the amniotic cavity during embryonic development.

**amoeba, ameba** n. [Gr. *amoibe*, change] Any amoeba-like cell or corpuscle of the blood or other parts of an organism.

**amoebocyte** n. [Gr. *amoibe*, change; *kytos*, container] 1. Certain body cells or tissues capable of independent amoeba-like movement. 2. (PORIF) Any mesohyl cell where no special activity is evident. see **plasmatocyte**.

**amorph** n. [Gr. *a*, without; *morphe*, form] An inactive allele that acts as a genetic block to biosynthesis.

**amorpha** n. [Gr. *a*, without; *morphe*, form] (ARTHRO: Insecta) Those pupa that share no resemblance with the imago.

**amorphous** a. [Gr. *a*, without; *morphe*, form] Lacking distinctive form or structure; shapeless.

**AMP** Adenosine monophosphate

**ampherotoky** see **amphitoky**

**amphiapomict** n. [Gr. *amphi*, on both sides; *apo*, away; *miktos*, mixed] Biotypes that propagate facultatively, i.e. amphimictally and parthenogenetically.

**amphiasters** n.pl. [Gr. *amphi*, on both sides; *aster*, star] 1. The two asters in cell division, one at each end of the cell, from which the spindle fibers diverge. 2. (PORIF) Strep-tasters stellate at each end.

**amphibiotic** a. [Gr. *amphi*, on both sides; *biotikos*, pert. to life] Being aquatic during one period of the life history and terrestrial during the rest.

**amphibious** a. [Gr. *amphi*, on both sides; *bios*, life] Capable of living both on land and in the water.

**amphiblastula** n. [Gr. *amphi*, on both sides; dim. *blastos*, bud] A blastula in which the cells of one pole are markedly different in size or shape from the other pole.

**amphiblastula larva** (PORIF: Calcarea) A type of free-swimming larva possessing a central cavity, and two morphologically distinct types of cells, one anterior and the other posterior.

**amphicoelous** a. [Gr. *amphi*, on both sides; *koilos*, hollow] Being biconcave.

**amphicyrtic** a. [Gr. *amphi*, on both sides; *kyrtos*, curved] Having both sides curved, said of angles between curves; biconvex.

**amphid** n. [Gr. *amphi*, on both sides] (NEMATA) One of a pair of lateral chemosensory organs opening on or near the lip region; variable in size and shape according to taxa.

**amphid aperture** see **amphidial aperture**

**amphidelphic** a. [Gr. *amphi*, on both sides; *delphys*, womb] (NEMATA) Pertaining to uteri opposed; position and direction of the uteri, not the ovary. see **didelphic**.

**amphidetic** a. [Gr. *amphi*, on both sides; *detos*, bound] (MOLL: Bivalvia) Refers to the ligament extending both before and behind the umbo or beak. see **opisthodetic**, **parivincular**.

**amphidial aperture** (NEMATA) The amphid opening pore or orifice through which stimuli are received.

**amphidial duct** (NEMATA) The passage connecting the amphidial aperture and the amphidial pouch.

**amphidial gland** (NEMATA) A gland originating posterior to the nerve ring that connects with the anterior lateral amphids.

**amphidial nerve** (NEMATA) The nerve originating posterior to the nerve ring that extends anteriorly, connecting to the amphid.

**amphidial pouch** or **pocket** (NEMATA) The anterior cavity or chamber of the amphid; a fovea.

**amphidial tubes** (NEMATA) Passages containing the amphidial nerves connecting the fibrillar terminals and the sensilla.

**amphidiploid** see **allopolyploid**, **allotetraploid**

**amphidiscs**, **amphidisks** n.pl. [Gr. *amphi*, on both sides; *diskos*, round plate] (PORIF: Hexactinellida) Small spicules with hooks at both ends, grapnel shape; no six rayed spicules.

**amphigean**, **amphigaeon** a. [Gr. *amphi*, on both sides; *gaia*, the earth] Pertaining to both the Old and New Worlds.

**amphigenesis** n. [Gr. *amphi*, on both sides; *genesis*, beginning] Development induced by the fusion of two unlike gametes; amphigony.

**amphigonic** a. [Gr. *amphi*, on both sides; *gonos*, seed] Referring to sperm and ova being produced in separate gonads in different individuals; biparental reproduction. see **di-**

**gonic; syngonic.**

**amphigony** n. [Gr. *amphi*, on both sides; *gonos*, seed] biparental or bisexual reproduction. **amphigonus** a.

**amphihaploid** n. [Gr. *amphi*, on both sides; *haploos*, simple; *eidos*, form] Said of haploid types produced from amphidiploids.

**amphikaryon** n. [Gr. *amphi*, on both sides; *karyon*, nut] The nucleus of the zygote produced in the course of fertilization containing two haploid genomes. see **diplokaryon**.

**amphimict** n. [Gr. *amphi*, on both sides; *miktos*, mixed] Reproduction by amphimixis.

**amphimixis** n. [Gr. *amphi*, on both sides; *mixis*, mingling] The union of two gametes in sexual reproduction, as opposed to automixis.

**amphimorula** n. [Gr. *amphi*, on both sides; L. *morum*, mulberry] A morula derived from an amphiblastula.

**Amphineura, amphineuran** see **Polyplacophora**

**amphiodont** a. [Gr. *amphi*, on both sides; *odous*, tooth] (ARTHRO: Insecta) In Coleoptera, male stag beetles bearing mandibles only intermediate in size; mesodont. see **telodont, priodont**.

**amphion larva** (ARTHRO: Crustacea) In Malacostraca, larva of Amphionidacea, zoea and megalopa types; telson is narrow with spines in first stage and pointed with no spines in last stage.

**amphiploid** see **allopolyploid**

**amphipneustic** a. [Gr. *amphi*, on both sides; *pneustikos*, breathe] (ARTHRO: Insecta) Refers to aquatic larva having the first and last pairs of spiracles open and functioning. see **metapneustic; peripneustic**.

**amphipyrenin** n. [Gr. *amphi*, on both sides; *pyren*, fruit stone] The substance of the nuclear membrane of cell nuclei.

**amphisternous** a. [Gr. *amphi*, on both sides; *sternon*, breastbone] (ECHINOD: Echinoidea) Used to describe the sternum structure in certain sea urchins; two equal plates that meet the labrum.

**amphistome** a. [Gr. *amphi*, on both sides; *stoma*, mouth] (PLATY: Trematoda) Having a ventral acetabulum located at the posterior end.

**amphistomous** a. [Gr. *amphi*, on both sides; *stoma*, mouth] (PLATY: Trematoda) Bearing a sucker at each extremity.

**amphitelic** a. [Gr. *amphi*, on both sides; *telos*, end] In mitosis, pertaining to orientation of the two chromatids of each chromosome to different spindle poles at the first meiotic division as opposed to syntelic.

**amphitoky, ampherotoky** n. [Gr. *amphi*, on both sides; *tokos*, birth] Parthenogenesis in which unfertilized eggs develop into either sex; deuterotoky; gametotoky.

**amphitriaene** n. [Gr. *amphi*, on both sides; *triaina*, trident] (PORIF) A spicule with three divergent rays at each extremity.

**amphitrocha** n. [Gr. *amphi*, on both sides; *trochos*, wheel] (ANN) Larva bearing two rings of cilia that function in locomotion.

**amphocyte** see **amphophil**

**amphodynamous** a. [Gr. *ampho*, both; *dynamis*, power] Pertaining to an organism that may or may not enter a diapause phase, according to circumstances.

**amphogenous** a. [Gr. *ampho*, both; *gennaein*, to produce] Refers to females producing male and female offspring at a ratio of 1:1.

**amphophil, amphophile, amphophilic** a. [Gr. *ampho*, both; *philos*, love] Certain cells and tissues that have an affinity equally for acid and for basic dyes.

**amphoteric** a. [Gr. *amphoteris*, in both ways] 1. Possessing opposite characters. 2. Capable of acting either as a base or an acid.

**amphoterotoky** see **amphitoky**

**ample** a. [L. *amplus*, large] Large in size, capacity, volume or scope.

**ampleted** a. [L. *amplexus*, embracing] (ARTHRO: Insecta) Having the head set into a hollow or recess of the prothorax.

- amplexiform wing coupling** (ARTHRO: Insecta) Lepidopterous wing coupling by virtue of an extensive area of overlap between the fore and hind wing.
- ampliate** a. [L. *ampliatum*, made wider] To enlarge; to make greater.
- amplification** n. [L. *amplificare*, to enlarge] An enlargement or extension; expanding a statement or description.
- anamorphosis** n.; pl. **-ses** [Gr. *ana*, backwards; *morphosis*, forming] 1. A process of slow, steady evolution without apparent gross mutant variation. 2. (ARTHRO: Insecta) *a.* The increase of number of segments after hatching. *b.* Development in which the young gradually become more like the adult in body form after each ecdysis, as opposed to metamorphosis. **anamorphic** a. see **ametabolous, metamorphosis, epimorphosis**.
- anandric** a. [Gr. *an*, without; *aner*, man] (ANN: Oligochaeta) Designating earthworms without testes.
- anaphase** n. [Gr. *ana*, up; *phasis*, appearance] The period of mitotic division in which the daughter chromosomes move toward opposite poles.
- anaphylaxis** n. [Gr. *ana*, again; *phylax*, guard] A state of excessive sensitivity to a serum or foreign protein that can result in a state of shock, that may develop with marked circulatory disturbances and possible death. **anaphylactic** a.
- anaplasia** n. [Gr. *ana*, up; *plassein*, to form] Progressive ontogenetic development.
- anapleurite** n. [Gr. *ana*, up; *pleuron*, side] (ARTHRO: Insecta) A dorsal sclerite of the thoracic pleural region.
- anapolyxis** n. [Gr. *an*, without; *apo-*, separate; *lysis*, loosen] (PLATY: Cestoda) The detachment of a spent proglottid after it has shed its eggs. **anapolytic** a. see **apolyxis**.
- anapterygote** a. [Gr. *an*, not; *a*, without; *pterygotos*, winged] (ARTHRO: Insecta) Designates apterous insects that are derived from winged ancestors.
- anaptychus** n. [Gr. *an*, without; *apo-*, away from; *ptychos*, fold] (MOLL: Cephalopoda) A shelly plate found in some fos-

- sil cephalopods, thought to function as an operculum. see **synaptychus**.
- anarsenosomphic** a. [Gr. *an*, without; *arsen*, male; *somphos*, porous] (ANN: Oligochaeta) Designates earthworms without male terminalia, such as parthenogenetic morphs, cephalic regenerates, or abnormal individuals.
- anarthrous** a. [Gr. *an*, without; *arthron*, joint] Lacking a distinct joint or joints.
- anascan** n. [Gr. *an*, without; *askos*, sac] (BRYO: Gymnolae-mata) Cheilostomata in which the autozooids have a hydrostatic system including the flexible part of the frontal wall, thus lacking an ascus.
- anastomosing colony** (BRYO) A branching erect colony where branches join and rebranch to form an open network.
- anastomosis** n.; pl. **-ses** [Gr. *anastomosis*, formation of a network] A union or joining between two or more structures forming a network.
- anastral** a. [Gr. *an*, without; *aster*, star] Lacking an *aster*, with reference to mitosis.
- anastrophic** a. [Gr. *ana*, backwards; *strephein*, to turn] (MOLL: Gastropoda) In Prosobranchia, as in Architectonica, pertaining to a heterostrophic shell with the protoconch coiled about the same axis as the teloconch and the nucleus directed toward the base of the shell.
- anatomy** n. [Gr. *ana*, again; *temnein*, to cut] The science of internal morphology, as revealed by dissection. see **zootomy**.
- anatoxin** n. [Gr. *ana*, backwards; *toxikon*, poison] A toxin modified by heat or chemical treatment eliminating its toxic properties, but retaining its antigenic properties; toxoid.
- anatrepsis** n. [Gr. *anatrepein*, to turn over] 1. Increase of movement during blastokinesis. 2. (ARTHRO: Insecta) In blastokinesis, a term used to describe the movement of the embryo inside the egg from one pole to another; refers to different activities in different groups of insects, i.e., ventral to dorsal, dorsal to ventral. see **katatrepsis**.
- anatriaene** n. [Gr. *ana*, up; *triaina*, trident] (PORIF) A tetracti-

nal megasclere with three short recurved rays and a single long shaft.

**anauto-geny** a. [Gr. *an*, without; *autos*, self; *genes*, producing] (ARTHRO: Insecta) Refers to the necessity of a blood meal of certain Diptera before eggs can develop within the female. see **autogeny**.

**anaxial** a. [Gr. *an*, without; L. *axis*, axle] Lacking a distinct axis; asymmetrical.

**anaxon, anaxone** n. [Gr. *an*, without; *axon*, axis] A nerve cell having no apparent axon.

**ancestral** a. [L. *antecedere*, to go before] Referring to derivation from an earlier form or ancestor; primitive.

**ancestrula** n. [L. *antecedere*, to go before] (BRYO) The first formed colony founding zooid. *a*. In Stenolaemata and most Gymnolaemata, the zooid formed by metamorphosis of a sexually produced larva. *b*. In Phylactolaemata, the zooid formed from a statoblast.

**anchialine** a. [Gr. *anchi*, near; *hals*, salt] Pertaining to landlocked pools or cave lakes that have subterranean connections to the ocean.

**anchor** n. [L. *ancora*, anchor] 1. (ARTHRO: Crustacea) In Copepoda, enlarged first thoracic segment of an anchor worm. 2. (ARTHRO: Insecta) In Ephemeroptera, a distal fibrous knob of the egg, terminating an elongate adhesive thread coiled around the base. 3. (ECHINOD: Holothuroidea) An anchor-shaped ossicle or spicule of sea cucumbers. 4. (PLATY: Cestoda) In Monogenea, large curved hooks on the opisthaptor; hamuli.

**anchorate** a. [L. *anchora*, anchor] (PORIF) Pertaining to a chela with four clads at each end.

**anchor process** (ARTHRO: Insecta) An anterior process of some dipterous larvae; sternal spatula. see **breastbone**.

**anchylosis** see **ankylosis**

**anci** see **anko**

**ancipital** a. [L. *anceps*, double-headed] 1. Having two opposite edges or angles. 2. (MOLL) A two-edged, double-faced, double-formed shell having two varices that are continu-

ous.

**ancistroid** a. [Gr. *ankistron*, a hook; *eidos*, shape] Hook-shaped; barbed.

**ancyloid** a. [Gr. *ankylos*, hooked; *eidos*, shape] (MOLL) Shaped like the patelliform shell of the fresh-water limpet-like *Ancylus*, with the apex strongly directed anteriorly.

**andric** a. [Gr. *aner*, male] Male. see **gynic**.

**andrium** n. [Gr. *aner*, male] (ARTHRO: Insecta) In male Diptera, the posterior part of the postabdomen comprising abdominal somites 9 and 10, and including the copulatory apparatus.

**androconia** n.pl. [Gr. *aner*, male; *konia*, dust] (ARTHRO: Insecta) Specialized scales associated with aphrodisiac pheromone glands, on the wings of male butterflies; comparable scales may occur on legs or abdomen; scent scales.

**androecium** n. [Gr. *aner*, male; *oikos*, house] (ECHI) In some female bonellids, a specialized part, usually basal, of the nephridium where the male may be found.

**androgamete** n. [Gr. *aner*, male; *gametes*, husband] A spermatozoan; a male germ cell or gamete.

**androgenesis** n. [Gr. *aner*, male; *genesis*, beginning] Male parthenogenesis; the development of a haploid embryo from a male nucleus.

**androgenic gland** (ARTHRO: Crustacea) A gland located near the vas deferens responsible for development of male secondary sexual characteristics.

**androgenous** a. [Gr. *aner*, male; *genes*, producing] Pertaining to the production of males or male gametes.

**androgynous** see **hermaphrodite**

**androgyny** n. [Gr. *aner*, male; *gyne*, woman] Having male organs develop before female during maturation; protandrous hermaphrodite.

**android** n. [Gr. *aner*, male] Resembling a male.

**androsperm** n. [Gr. *aner*, male; *sperma*, seed] A male-producing spermatozoan; containing a Y-chromosome, limited

to one sex.

- androsynhesmia** n. [Gr. *aner*, male; *syn*, with; *hesmos*, swarm] A group of males gathered together during mating season. see **synhesmia**, **gynosynhesmia**.
- androtype** n. [Gr. *aner*, male; *typos*, type] The male type specimen of a species.
- andry** n. [Gr. *andros*, a man] (ANN: Oligochaeta) Pertaining to a testis containing segments.
- anecdysis** n. [Gr. *an*, without; *ekdysis*, molt] 1. Ecdysis in which successive molts are separated by long intermolt phases. 2. Terminal anecdysis when maximum size is reached and no further ecdyses occur.
- anecic** n. [Gr. *anekas*; upward] (ANN: Oligochaeta) Deep dwelling worms that come to the surface to feed or breed. see **endogean**; **epigean**.
- anellifer** n. [L. *anellus*, little ring; *ferre*, to bear] (ARTHRO: Insecta) In male Lepidoptera, the lateral parts of the anellus when joined to the inner surface of the valvae; sometimes a distinct structure.
- anellus** n. [L. *anellus*, little ring] (ARTHRO: Insecta) In male Lepidoptera, a sclerotization of the inner wall of the phallocrypt, forming a funnel-like cone around the aedeagus; penis funnel; ring wall.
- anelytrous** a. [Gr. *an*, without; *elytron*, sheath] Lacking elytra.
- anemochorous** a. [Gr. *anemos*, wind; *chorein*, to spread] Dispersed by the wind.
- anemoreceptor** n. [Gr. *anemos*, wind; L. *recipere*, to receive] A sensory receptor of air currents; trichobothrium.
- anemotaxis** n. [Gr. *anemos*, wind; *taxis*, arrangement] Orientation of an animal in response to air currents.
- anenteric** a. [Gr. *an*, without; *enteron*, gut] Lacking an alimentary tract.
- anepimeron** n. [Gr. *ana*, up; *epi*, upon; *meros*, part] (ARTHRO: Insecta) The upper portion of an epimeron above a distinct suture.
- anepisternite** see **mesopleuron**

- anepisternum** n. [Gr. *ana*, up; *epi*, upon; *sternon*, breastbone] (ARTHRO: Insecta) The upper division of the episternum. see **infraepisternum**.
- aner** n. [Gr. *aner*, male] (ARTHRO: Insecta) Male, especially in Formicidae.
- anestrus**, **anoestrus** n. [Gr. *an*, without; *oistros*, desire] A period of sexual inactivity; a non-breeding period.
- aneucentric translocation** One that involves the centromere of a chromosome; one daughter chromosome is acentric and the other dicentric.
- aneuploid** a. [Gr. *an*, without; *eu*, well; *aploos*, onefold] Refers to cells or individuals having one, two or a few whole chromosomes, more or less than the basic number of the species in question. see **heteroploid**, **euploid**.
- aneuronic** a. [Gr. *an*, without; *neuron*, nerve] Absence of innervation.
- aneurose** a. [Gr. *an*, without; *neuron*, nerve] 1. Without nerves. 2. (ARTHRO: Insecta) Term used for a wing with veins near the costa only.
- anfractuose** a. [L. *anfractus*, circuitous] Wavy, winding, turnings, sinuous.
- angiogenesis** n. [Gr. *angeion*, vessel; *genesis*, beginning] The development of blood vessels.
- angiostomatous** a. [Gr. *angeion*, vessel; *stoma*, mouth] Having a non-distensible mouth.
- angstrom** n. [after A. J. Angstrom] One hundred-millionth of a centimeter, or one-tenth of a nanometer (nm); a unit used in measuring the length of light waves.
- angulate** a. [L. *angulare*, to make angular] Having angles or sharp corners.
- angulation** n. [L. *angulus*, angular] An angular formation or edge where two surfaces meet at an angle.
- anguli frontales** (ARTHRO: Insecta) In immatures, the anterior projections from the frons situated laterad to a median projection, the nasale; may or may not be symmetrical.
- angustate antenna** (ARTHRO: Insecta) An antenna in which

the intermediate and terminal joints are thinner.

- angusticorn trumpet** (ARTHRO: Insecta) In Diptera, a respiratory structure of Culicidae pupae bearing the longest axis vertically and approximately in line with the stem, funnel-shaped when closed, with a split (meatal cleft) down one side allowing it to open widely at the water surface.
- angustirostrate** a. [L. *angustus*, narrow; *rostrum*, beak] Having a narrow rostrum or snout. see **latirostrate**.
- anholocyclic** a. [Gr. *an*, without; *holos*, whole; *kyklos*, circle] Having only parthenogenetic reproduction. see **holocyclic**.
- anhydrobiosis** n. [Gr. *an*, without; *hydor*, water; *biosis*, manner of life] A state of dormancy in various invertebrates due to low humidity or desiccation.
- anhydrous** a. [Gr. *an*, without; *hydor*, water] Being without water; completely lacking in water.
- animal** n. [L. *animalis*, a living being] Any member of a group of living organisms distinguished from plants by a definite body form, absence of rigid cell walls of cellulose, locomotion responses to external stimuli, and inability to manufacture foods from inorganic substances.
- Animalia** n. [L. *animalis*, a living being] A kingdom of organisms that contains the animals.
- animal starch** see **glycogen**
- anion** n. [Gr. *ana*, up; *ienai*, to go] Any ion bearing a negative charge. see **cation**.
- anisochele** n. [Gr. *anisos*, unequal; *chele*, claw] 1. (ARTHRO) A chela with two unlike parts. 2. (PORIF) A diactinal microsclele with unlike, recurved hooks, plates or flukes at each end. see **isochela**.
- anisocytic** a. [Gr. *anisos*, unequal; *kytos*, container] Having cells in the intestinal epithelium unequal in height in a given cross section.
- anisogametes** n.pl. [Gr. *anisos*, unequal; *gametes*, spouse] Outwardly dissimilar male and female gametes; heterogamete.
- anisogamy** n. [Gr. *anisos*, unequal; *gamos*, marriage] Gametes when fusing during fertilization vary in size, shape and

behavior. see **heterogamy**.

- anisoglottid** a. [Gr. *anisos*, unequal; *glottis*, mouth of the windpipe] (NEMATA: Secernentea) Having a glottoid apparatus with metarhabdions at different levels. see **isoglottid**.
- anisognathous** a. [Gr. *anisos*, unequal; *gnathos*, jaw] Bearing unequal jaws.
- anisomorpha** n. [Gr. *anisos*, unequal; *morphe*, form] (ARTHRO: Insecta) Insects whose metamorphosis differ in various ways.
- anisomorphic** a. [Gr. *anisos*, unequal; *morphe*, form] Varying in form, size or structure. see **isomorphic**.
- anisomyarian** a. [Gr. *anisos*, unequal; *myos*, muscle] 1. Having unequal muscles. 2. (MOLL: Bivalvia) Having the anterior adductor muscle reduced or absent. see **monomyarian**.
- anisotropic** a. [Gr. *anisos*, unequal; *tropein*, to turn] Doubly refracting, such as dark bands in the sarcomere of a muscle fiber. see **isotropic**.
- ankistroid** see **ancistroid**
- ankylosis, anchylosis** n. [Gr. *angcheein*, to press tight] 1. The union or fusion of parts into one structure. 2. A stiffness or immobility of a joint.
- anlage** n.; pl. **-en, -es** [Ger. *anlage*, predisposition] A primordium or cell group that constitutes identification of a part or organ. see **blastema**.
- annectent** a. [L. *annectere*, to bind together] Linking; an intermediate; connecting together.
- annelet** n. [L. dim. *annellus*, little ring] (ARTHRO: Insecta) In Hymenoptera, a small ring-joint between the basal scape and the funiculus of the antenna.
- Annelida, annelids** n.; n.pl. [L. *annulus*, ring; Gr. *eidos*, form] A phylum of segmented or cylindrical ringed worms, encompassing the Polychaeta, mainly free-living and marine, the Oligochaeta, mainly free-living, either terrestrial (earthworms), fresh water, or marine, and the Hirudinoidea or leeches, that are ectoparasitic, fresh water, marine, or

rarely terrestrial.

**annidation** n. [Gr. *an*, without; L. *nidus*, nest] Describing a mutant organism existing in a deme because of an ecological niche the normal organism is unable to utilize.

**annotate** n. [L. *annus*, year] (MOLL: Bivalvia) Depressed lines placed at varying distances across some shells, marking their yearly growth; annual ring; growth ring.

**annual** a. [L. *annus*, year] Occurring once a year, or lasting for one year.

**annual colony** A deme that lasts only one season and dies out.

**annual ring** see **annotate**

**annular** a. [L. *annulus*, ring] 1. Pertains to being ring-shaped; marked with rings or bands. 2. (ANN: Oligochaeta) Referring to the clitellum of earthworms encircling the body and continuing ventrally. see **saddle**.

**annular lamina** (ARTHRO: Insecta) In Hymenoptera, the lamina or sternal plate situated in front of the genitalia of Formicidae.

**annular spiracle** (ARTHRO: Insecta) 1. In immature Lepidoptera and Hymenoptera, simple, ring-like spiracles with a single opening with no accessory chambers. 2. In other immature insects, may be biforous, having two small or large accessory or secondary chambers usually adjacent to the margin; uniforous, when opening occurs on the margin, or multiforous if three or more openings are present.

**annulate** a. [L. *annulus*, ring] Composed of, or furnished with ring-like bands or annuli; may refer to structural bands or colored bands.

**annulates** n.pl. [L. *annulus*, ring] A group of segmented invertebrates including the arthropods, annelids and related forms.

**annulations** n.pl. [L. *annulatus*, ringed] Deep, transverse cuticular striae occurring at intervals (usually regular) giving the body a segmented appearance.

**annulet** n. [L. *annulus*, ring] A small ring into which a segment is divided by complete transverse constrictions, crenula-

tions, or plicae.

**annuli** pl. of **annulus**

**annulose** a. [L. *annulus*, ring] Bearing rings.

**annulus** n.; pl. **-li -luses** [L. *annulus*, ring] 1. Any ring-like circling of a joint, segment, spot or mark. 2. (BRYO: Phylactolaemata) The outer epidermal layer of a statoblast that encircles the protective capsule. 3. (NEMATA) The interstice area between the transverse striae of the body cuticle.

**annulus antennalis** (ARTHRO: Insecta) The encircling sclerite into which the basal segment of the antenna is inserted; antennal sclerite.

**annuluses** pl. of **annulus**

**annulus ventralis** (ARTHRO: Crustacea) In Decapoda, the seminal receptacle of a female crayfish.

**anodontia** n. [Gr. *an*, without; *odontos*, tooth] 1. Lacking teeth; edentate. 2. (MOLL: Bivalvia) Lacking hinge teeth.

**anodont** a.

**Anodontoda** see **Bivalvia**

**anoestrus** see **anestrus**

**anomalous** a. [Gr. *anomalos*, irregular] Deviating from the common or usual rule, form or type. **anomaly** n.

**anomoclad** n. [Gr. *anomoios*, dissimilar; *blados*, branch] (PORIF) A subglobular microsclere spicule produced by the swelling of the middle part of the spicule.

**anomphalous** a. [Gr. *an*, without; *omphalos*, navel] (MOLL: Gastropoda) Without an umbilicus.

**anoprocess** n.; pl. **-ses** [L. *anus*; *processus*, process] (ARTHRO: Insecta) In Neuroptera, the uppermost process of each half of the anal segment.

**anorganology** see **abiology**

**anorthogenesis** n. [Gr. *an*, without; *orthos*, straight; *genesis*, beginning] Adaptive changes of evolutionary significance based on preadaptations; zigzag evolution.

**anosmatic** a. [Gr. *an*, without; *osme*, smell] Lacking or impairment of the sense of smell.

**anoxybiont** n. [Gr. *an*, without; *oxys*, sharp; *bios*, life] An organism incapable of using oxygen as opposed to one that is aerobic.

**ansa** n. [L. *ansa*, handle] A loop or loop-like structure.

**ansiform** a. [L. *ansa*, handle; *forma*, shape] Looped, or loop-like in shape.

**antafossa** see **antennal fossa**

**antagonism** n. [Gr. *antagonistes*, competitor] 1. Inhibition or interference in growth of an organism due to unfavorable conditions created by the presence of another species. 2. Opposing action by two different muscles or structures. 3. Neutralizing ability of one drug or hormone upon another; chalone.

**antagonistic symbiosis** A symbiotic association in which one symbiont seeks to establish domination over the other. see **parasitism**.

**anteal** a. [L. *ante*, before] Being in front or forward.

**antealar** a. [L. *ante*, before; *ala*, wing] (ARTHRO: Insecta) Pertaining to being positioned anterior to the front wing.

**antealar sinus** (ARTHRO: Insecta) In Odonata, the transverse grooved area in front of the base of the front wings.

**anteapical** a. [L. *ante*, before; *apex*, summit] Proximal of the apex.

**anteapical cell** (ARTHRO: Insecta) A cell in the distal part of the wing.

**anteclypeus** n. [L. *ante*, before; *clypeus*, shield] (ARTHRO: Insecta) The anterior division of the clypeus when differentiated from the postclypeus by a sulcus or suture. see **clypeus**.

**antecosta** n. [L. *ante*, before; *costa*, rib] (ARTHRO: Insecta) The anterior marginal or submarginal interior tergal or sternal plate, on which the longitudinal muscles are attached.

**antecostal sulcus/suture** (ARTHRO: Insecta) The groove of the intersegmental sclerite that marks the base of the antecosta.

**antecoxal piece** (ARTHRO: Insecta) An inner sclerite between the trochantin and the episternum; the lateral sclerites of the clypeus.

**antecoxal sclerite** (ARTHRO: Insecta) A part of the metasternum just anterior to the hind coxae.

**antecubital** see **antenodal cross veins**

**antecurrent** see **prosocline**

**antefrons** n.pl. [L. *ante*, before; *frons*, forehead] (ARTHRO: Insecta) Frons situated anterior to the antennal base lines.

**antefurca** n.; pl. **-furcae** [L. *ante*, before; *furca*, fork] (ARTHRO: Insecta) The internal chitinous forked process projecting into the thoracic cavity from the anterior thoracic segment.

**antehumeral** a. [L. *ante*, before; *humerus*, shoulder] (ARTHRO: Insecta) Designating the area immediately anterior to the basal portion of the wing.

**antelabrum** n. [L. *ante*, before; *labrum*, lip] (ARTHRO: Insecta) The anterior part of the labrum when differentiated.

**antemarginal process** (ARTHRO: Insecta) In Scarabaeoidea, a process distad of the lateroproximal marginal region of the phallobase.

**ante mortem** a. [L. *ante*, before; *mors*, death] Before death. see **post-mortem**.

**antenna** n.; pl. **-nae** [L. *antenna*, feeler] 1. Analogous, unsegmented structures in mollusks, polychaete worms and rotifers. 2. (ARTHRO) A movable sensory appendage of various arthropods; usually segmented and located on the head above the mouth parts; most arthropods bear antennae, although some are greatly reduced; missing in all arachnids. 3. (ARTHRO: Crustacea) The second antennae proper; the second pair of appendages posterior to antennules; primarily sensory in function, but often adapted for other functions; derived from appendages on primitive third preoral somite; postantennal appendages; no homologous appendage in insects. see **antennua**, **antennule**.

**antennal appendage** (ARTHRO: Insecta) In Anoplura, protu-

berance on the first or third antennal segment of male biting lice.

**antennal carina** (ARTHRO: Crustacea) A prominent ridge extending posteriorly from a decapod antennal spine.

**antennal club** (ARTHRO: Insecta) The enlarged distal segment of a clubbed antenna.

**antennal fossa** (ARTHRO: Insecta) A cavity or depression in which the antenna is located; antennal groove; antafossa.

**antennal fovea** see **antennal groove**

**antennal gland** 1. (ARTHRO: Crustacea) In Malacostraca, a complex excretory gland with ducts opening on the second antenna; green gland. 2. (ARTHRO: Insecta) One of a pair of glands that open on the antenna.

**antennal groove** (ARTHRO) A groove or depression in the head of many arthropods, extending posteriorly from the basal segment of the antenna.

**antennal lobes** see **deutocerebrum**

**antennal muscle scar** (ARTHRO: Crustacea) In Ostracoda, an impression of the antennal muscle on the inner surface of a valve, situated in front of the adductor muscle scar, usually above the mandibular scar.

**antennal organs** (ARTHRO: Insecta) In Collembola, sensory structures of springtails situated on the distal segment of the antenna.

**antennal region** (ARTHRO: Crustacea) In Decapoda, the anterior marginal part bordering orbital region laterally, adjoining hepatic, pterygostomial, and occasionally also the frontal regions of the carapace.

**antennal scale** see **scaphocerite**

**antennal sclerite** (ARTHRO: Insecta) The sclerotic rim of the basal antennal socket. see **annulus antennalis**.

**antennal segment** (ARTHRO) That segment of an arthropod head from which the antennae arise, usually second segment; deutocerebral segment.

**antennal spine** (ARTHRO: Crustacea) A decapod spine situated on the anterior margin of the carapace, slightly below the

orbit.

**antennal support** (ARTHRO: Insecta) In Coleoptera, ring-shaped cranial projections of scarab larvae, to which the antennae are appended; the proximal, nonarticulated first antennal segment.

**antennal suture** (ARTHRO: Insecta) The external groove in the cranial wall surrounding the antennal socket. see **circumantennal sulcus**.

**antennaria** n. [L. *antenna*, feeler] (ARTHRO: Insecta) In immatures, an annular sclerite forming the periphery of each antennal sclerite.

**antennation** n. [L. *antenna*, feeler; suff. denoting act] (ARTHRO: Insecta) The act of touching with the antennae that function as a sensory probe or tactile signal to another insect.

**antennifer** n. [L. *antenna*, feeler; *ferre*, to carry] (ARTHRO) The single marginal point into which the basal scape of the antenna is inserted, allowing it freedom to move in all directions.

**antenniform** a. [L. *antenna*, feeler; *forma*, shape] Appearing like or shaped like an antenna.

**antennomere** n. [L. *antenna*, feeler; Gr. *meros*, part] (ARTHRO: Diplopoda) An antennal segment.

**antennua** n. [L. dim. *antenna*, feeler] (ARTHRO: Crustacea) The second antennae, when there are two pair.

**antennular fosette** (ARTHRO: Crustacea) A depression, pit or socket containing the basal portion of the antennule.

**antennular region** see **deutocerebral region**

**antennular scale** see **stylocerite**

**antennule** n. [L. dim. *antenna*, feeler] (ARTHRO: Crustacea) The first antenna; anteriormost appendage, primarily sensory in function, but often adapted for other functions in different species; derived from appendages on the primitive second preoral somite; homologous to antennae of insects. see **antenna**.

**antennodal** a. [L. *ante*, before; *nodus*, knob] Preceding a node or nodes.

**antenodal cross veins** (ARTHRO: Insecta) In Odonata, wing veins along the costal border between the base and the *nodus*, extending from the costa to the radius.

**anteocular** a. [L. *ante*, before; *oculus*, eye] Before the eye.

**antepectus** n. [L. *ante*, before; *pectus*, chest] (ARTHRO: Insecta) The underside of the prothorax.

**antepenultimate** a. [L. *ante*, before; *paene*, almost; *ultimus*, last] Pertaining to the second from the last segment of various invertebrates.

**antepleuron** see **episternum**

**antepnotum** n. [L. *ante*, before; Gr. *pro*, before; *notos*, back] (ARTHRO: Insecta) In Diptera, the anterior division of the pronotum.

**antepudendum** n. [L. *ante*, before; *pudenda*, external genitals, vulva] (NEMATA) Genital tube proceeding anterior from the vulva in monovarial amphidelphic descendants. **antepudendic** a.

**antepygidial bristle** (ARTHRO: Insecta) In Siphonaptera, one or more large bristles on the apical margin of the seventh tergum.

**anteriad** adv. [L. *ante*, before; *ad*, toward] Directed toward the anterior part of the body; directed forward, as opposed to posteriad.

**anterior** a. [L. *ante*, before] 1. Before or toward the front. 2. Pertaining to the direction in which the head tends to point when an animal is active. 3. (MOLL: Gastropoda) In a crawling gastropod, pertaining to the head being closest to that part of the apertural margin lying farthest from the shell apex; in high-spined conspiral shells, and some others, anterior is equivalent to abapical.

**anterior apophyses** (ARTHRO: Insecta) In female Lepidoptera, a pair of slender chitinized internal rods extending anteriorly from the ninth abdominal segment.

**anterior canal** see **siphonal canal**

**anterior cardiac chamber** see **proventriculus**

**anterior hard plate** (ARTHRO: Insecta) In Diptera, an irregular platelike anterior area of the clypeopalatum of Culicidae.

**anterior keel** (MOLL) The high point of the whorl next to the suture at the lower edge of the shell nearest to the anterior end.

**anterior lateral tooth** (MOLL: Bivalvia) A lateral tooth in front of the beak.

**anterior promontory** (ARTHRO: Insecta) In Diptera, the median area of the mesonotum, at the anterior end of the acrostichal area.

**anterior setae** see **ventral setae**

**anterior stigmatal tubercle** (ARTHRO: Insecta) Prominence on the thoracic and abdominal segments of caterpillars.

**anterior tentorial arms** (ARTHRO: Insecta) An apodeme arising from the anterior tentorial pits, meeting the posterior tentorial arm at a visible fusion point; sometimes bearing a small dorsal or ventral tentorial arm.

**anterior tentorial pits** (ARTHRO: Insecta) External depressions in the epistomal suture marking the base of the anterior tentorial arm(s).

**anterior tubercle** (ARTHRO: Crustacea) A swelling or small projection in the anterior region of the carapace of archaeanostracans; polygenetic, sometimes including the optic tubercle.

**anterobiprostatic** a. [L. *antero*, anterior; *bis*, twice; Gr. *prohistanai*, to set before] (ANN: Oligochaeta) Pertaining to the male terminalia of parthenogenetic earthworm morphs in which the posterior prostates of an acanthodrilin set are absent.

**anterodorsal** a. [L. *antero*, anterior; *dorsum*, back] Toward the front and the top or upper side.

**anterolateral region** (ARTHRO: Crustacea) The lateral part of the carapace bordering the subhepatic or hepatic regions.

**anteromesal** a. [L. *antero*, anterior; *mesos*, middle] In the front and along the midline of a body.

**anteroposterior axis** The longitudinal axis, from head to tail.

**anteroventral** a. [L. *antero*, anterior; *venter*, belly] In the front on the lower side.

- antesternite** n. [L. *ante*, before; Gr. *sternon*, breastbone] (ARTHRO: Insecta) The anterior ventral plate or spicule; basis-ternum; eusternum.
- anthelmintic, anthelminthic** a. [Gr. *anti*, against; *helmins*, worm] Pertaining to therapeutic agents used against intestinal helminths causing death or expulsion. see **vermicide, vermifuge**.
- anthobian** n. [Gr. *anthos*, flowers; *bios*, life] Feeding on flowers.
- anthoblast** n. [Gr. *anthos*, flower; *blastos*, bud] (CNID: Anthozoa) In stony corals, a young sessile polyp producing an anthocyathus.
- anthocaulus** n. [Gr. *anthos*, flower; *kaulos*, stalk] (CNID: Anthozoa) The stalk of a solitary coral after the separation of the disklike anthocyathus.
- anthocodium** n.; pl. **-ia** [Gr. *anthos*, flower; *kodeia*, head] (CNID: Anthozoa) The distal end of an alcyonarian coral; the upper tentacular part of the polyp that can be retracted into the calyx.
- anthocyanins** n.pl. [Gr. *anthos*, flower; *kyanos*, blue] Important plant pigments (flavones) that may contribute to the blue or red coloration of insects. see **anthoxanthins**.
- anthocyathus** n.; pl. **-ia** [Gr. *anthos*, flower; *kyathos*, cup] (CNID: Anthozoa) The disklike crown portion of solitary corals that separates from the stalk (anthocaulus).
- anthogenesis** n. [Gr. *anthos*, flower; *genesis*, beginning] The production of both males and females by parthenogenesis.
- anthophilous** a. [Gr. *anthos*, flower; *philein*, to love] Designating attraction to or feeding on flowers; anthobian.
- anthostele** n. [Gr. *anthos*, flower; *stele*, column] (CNID: Anthozoa) The stiff proximal part of certain stoloniferan polyps into which the tentacular portion is retracted.
- anthoxanthins** n.pl. [Gr. *anthos*, flower; *xanthos*, yellow] Plant pigments (flavones) responsible for the ivory to yellow color of some true bugs and Lepidoptera. see **anthocyanins**.
- Anthozoa, anthozoans** n.; n.pl. [Gr. *anthos*, flower; *zoon*,

- animal] Any coelenterate of the class Anthozoa, phylum Cnidaria, including the sea anemones and corals.
- anthracene, anthracine** n. [Gr. *anthrax*, coal] Coal black; shiny black with a bluish tint.
- anthraquinones** n.pl. (ARTHRO: Insecta) A group of orange or red pigments found in certain insects.
- anthropochorous** a. [Gr. *anthropos*, man; *chorein*, to spread] Refers to any disease or organism transported by man, usually unintentionally; peregrine.
- anthropogenic** a. [Gr. *anthropos*, man; *genes*, producing] Caused by, or resulting from, the influence of man.
- anthropomorphic** a. [Gr. *anthropos*, man; *morphe*, form] Attributing human attributes to animals.
- anthropophilous** a. [Gr. *anthropos*, man; *philein*, to love] Used to describe insects that prefer human blood.
- anthropozoic** a. [Gr. *anthropos*, man; *zoe*, life] Designating that period of time since man appeared upon the earth.
- anthropozoonosis** n. [Gr. *anthropos*, man; *zoon*, animal; *nosos*, disease] A disease of humans transmissible to other animals. see **zooanthroposis, zoonosis**.
- antiaposematic** a. [Gr. *anti*, against; *apo*, away; *sema*, signal] Referring to coloration that disguises a predator. see **parasemantic, aposematic**.
- antibiosis** n. [Gr. *anti*, against; *biosis*, manner of life] An association between two organisms in which one secretes a substance destroying or inhibiting the other.
- anticlinal** a. [Gr. *anti*, against; *klinein*, to bend] Radial; inclining in opposite directions; at right angles to the surface of a part.
- anticlypeus** see **anteclypeus**
- anticoagulant** a. [Gr. *anti*, against; L. *coagulare*, to curdle] Pertaining to any substance that prevents or delays the coagulation of blood.
- anticoagulin** n. [Gr. *anti*, against; L. *coagulare*, to curdle] (ARTHRO) The secretion of certain parasitic species that prevents or delays the coagulation of the host's blood.

- anticrista** n.; pl. **-ae** [Gr. *anti*, against; L. *crista*, crest] (MOLL: Cephalopoda) A cartilaginous outgrowth of the statocyst wall that protects the macula and crista from sudden inertial movements of the endolymph.
- anticryptic color** A color or color pattern used for concealment by a predator in order to facilitate attack on its prey. see **cryptic color**, **homochromy**.
- anticus** a. [L. *anticus*, foremost] Anterior; belonging to or toward the front; frontal.
- antidiuretic hormone** (ARTHRO: Insecta) A diuretic regulatory hormonal mechanism that enhances the rate at which fluid is secreted via the Malpighian tubules, and in certain insects, reduces resorption in the rectum.
- antidromic** a. [Gr. *anti*, against; *dromos*, running] Moving in a direction contrary to normal. see **orthodromic**.
- antigeny** a. [Gr. *anti*, against; *genes*, producing] Pertaining to sexual dimorphism.
- antilysin** n. [Gr. *anti*, against; *lyein*, to dissolve] Any substance that can counteract lysin.
- antimere** n. [Gr. *anti*, against; *meros*, part] Left and right halves of a bilaterally symmetrical object, or a homologous part repeated in segments arranged around an axis, as in radially symmetrical animals.
- antimetabolite** n. [Gr. *anti*, against; *metabole*, change] Any compound that interferes with normal cellular metabolism.
- antimitotic** a. [Gr. *anti*, against; *mitos*, thread] Refers to the action of physical or chemical agents that produce a consistent deviation in the mitotic cycle.
- antimorph** n. [Gr. *anti*, against; *morphe*, form] A mutant allele that inhibits the production of the ancestral allele.
- antineural** a. [Gr. *anti*, against; *neuron*, nerve] 1. Distal to a nerve. 2. Term used instead of ventral for certain invertebrates, such as Pogonophora. see **adneural**, **subneural**.
- antiperistalsis** n. [Gr. *anti*, against; *peri*, around; *stalsis*, contraction] Peristalsis occurring in reverse; reversed muscular contractions in the digestive tract.
- antipodal** a. [Gr. *anti*, against; *pous*, foot] Diametrically oppo-

- site; located on the opposite side.
- antipygidial bristles** (ARTHRO: Insecta) In Siphonaptera, bristles located on the seventh abdominal segment.
- antirostrum** n. [Gr. *anti*, against; L. *rostrum*, beak] (ARTHRO: Chelicerata) Terminal segmental appendages of some mites.
- antispadix** n. [Gr. *anti*, against; L. *spadix*, palm branch] (MOLL: Gastropoda) Four modified tentacles opposite the spadix of the male *Nautilus*, sp.
- antisquama** n.; pl. **-mae** [Gr. *anti*, against; L. *squama*, scale] (ARTHRO: Insecta) In Diptera, the upper lobe (alula) that moves with the wing; antitegula. see **squama**.
- antistyle** n. [Gr. *anti*, against; *stylos*, pillar] (ARTHRO: Insecta) The basal segment of the stylifer.
- antitegula** see **antisquama**
- antithetic generation** Alternation of generations in which the alternates are very different in appearance and origin.
- antitoxin** n. [Gr. *anti*, against; *toxikon*, poison] Any substance that neutralizes a toxin.
- antitype** n. [Gr. *anti*, against; *typos*, type] 1. An opposite type; a countertype. 2. A corresponding specimen of a type species, obtained at the same time and location of the type. This definition has no standing in the ICZN.
- antizoea** n. [L. *anti*, against; *zoe*, life] (ARTHRO: Crustacea) The first larval stage of the large, carnivorous marine mantis shrimps of the superorder Hoplocarida, that lack the raptorial claws. see **pseudozoea**.
- antlered larvae** (ARTHRO: Insecta) In some newly hatched Lepidoptera larvae, antler-like horns on the first thoracic segment and other horns (scoli) on the abdominal segments.
- antlia** n. [Gr. *antlia*, pump] (ARTHRO: Insecta) The spiral, tubular proboscis.
- antrorse** a. [L. *antero*, anterior; *versus*, turned] Directed or leaning upward or forward. see **detrorse**, **retrorse**.
- antrum** n. [L. *antrum*, hollow] 1. A hollow space or cavity. 2. A

sinus.

**anucleate** a. [Gr. *an*, without; L. *nucleus*, kernel] Lacking a nucleus.

**anural** a. [Gr. *an*, without; *oura*, tail] Lacking a tail.

**anuria** n. [Gr. *an*, without; *ouron*, urine] Absence of or inability to excrete urine.

**anus** n. [L. *anus*] The terminal orifice of the alimentary canal, through which unabsorbed food and waste products are voided; in some groups it is associated with the cloaca. see **uropore**.

**aorta** n. [Gr. *aorte*, the great artery] The main vessel carrying blood from the heart; the dorsal blood vessel.

**aortal chamber** The thoracic expansion of the aorta.

**aortic valve** The closure mechanism of the dorsal vessel, separating the aorta and the heart proper.

**apatetic color** Those colors that enable an organism to mimic either its environment or another species.

**apertum** n. [L. *aperire*, to open] (ARTHRO: Insecta) In Coleoptera, a basal cell opening on the hind wing.

**apertural** a. [L. *aperire*, to open] Pertaining to or on the same side as the aperture.

**apertural muscle** (BRYO: Gymnolaemata) One of either two pairs of muscles of cheilostomate autozooids, the occlusor muscle of the operculum or the diaphragmatic dilator muscle.

**aperture** n. [L. *aperire*, to open] 1. An opening or hole, cleft, or gap. 2. (ARTHRO: Crustacea) The postero-ventral opening into the mantle cavity of barnacles. see **orifice**. 3. (BRYO: Stenolaemata) The terminal skeletal opening of a zooid. 4. (MOLL) An opening at the last-formed margin of a shell, providing the outlet for the head-foot mass.

**apex** n.; pl. **apexes, apices** [L. *apex*, tip] 1. That portion of any structure opposite the base of attachment; the tip. 2. (ARTHRO: Crustacea) The upper angle of the scutum or tergum of certain barnacles. 3. (ARTHRO: Insecta) Wing tip. 4. (MOLL) *a*. In Polyplacophora, the beak or umbo of a valve. *b*. In Gastropoda, the first-formed end of a shell.

**aphagia** n. [Gr. *a*, not; *phagein*, to eat] Unable to ingest.

**apharyngeate cercariae** (PLATY: Trematoda) Larvae that develop in daughter sporocysts in pulmonate or prosobranch snails.

**Aphasmidia** see **Adenophorea**

**aphelenchoid bursa** see **bursa**

**aphideine** see **aphidilutein**

**aphidicolous** a. [NL. *aphis*, plant-louse; L. *colere*, to dwell] (ARTHRO) Pertaining to associating with aphid colonies, as certain ants.

**aphidilutein** n. [NL. *aphis*, plant-louse; L. *luteus*, yellow] The yellowish liquid found in plant lice. see **aphins**.

**aphidivorous** a. [NL. *aphis*, plant-louse; L. *vorare*, to devour] Feeding on aphids.

**aphins** n.pl. [NL. *aphis*, plant-louse] Fat soluble pigments derived from various aphids that impart a purple or black color to the whole insect.

**aphodus** n.; pl. **aphodi** [Gr. *aphodos*, departure] (PORIF: Desmospongiae) The short channel connecting the flagellated chamber with the excurrent canal. see **prosodus**.

**aphorism** n. [Gr. *aphorizein*, to define] The concise definition of a principle.

**aphotic zone** That zone of ocean water that lies below 800 meters and which receives little or no light.

**aphototropic** a. [Gr. *an*, without; *phos*, light; *tropein*, to turn] Turning away from light.

**aphrodisiac pheromone** (ARTHRO: Insecta) A pheromone that facilitates copulation.

**aphytal zone** Those waters in which the penetration of light is too poor to support photosynthesis.

**apian** a. [L. *apianus*, of bees] Of or pertaining to bees.

**apiary** n.; pl. **-ies** [L. *apiarium*, beehive] The area where bees are kept; a collection of hives maintained for honey production.

**apicad** adv. [L. *apex*, tip; *ad*, toward] Toward the apex.

- apical** a. [L. *apex*, tip] Refers to the apex or top, as of a conical or spherical structure.
- apical angle** 1. (ARTHRO: Insecta) The angle of a wing at its apex. 2. (MOLL: Gastropoda) In a plane through the axis, that angle subtended between two straight lines that touch adjacent whorls on opposite sides near the apex; identical with the spire angle if whorls increase at a regular rate.
- apical area** 1. (ARTHRO: Insecta) see *petiole*. 2. (MOLL: Polyplacophora) The short part of the periostracum and tegmentum on the head and intermediate valves that is adjacent to the posterior dorsal edge of a valve and which extends over the edge and onto the ventral side.
- apical carina** (ARTHRO: Insecta) In ichneumonid Hymenoptera, the posterior transverse carina.
- apical cell** 1. A cell situated at the apex of a structure distinguished by location, shape, size and function. 2. (ARTHRO: Insecta) Apical testicular cell of Orthoptera, Dictyoptera, Diptera and Homoptera, and some Lepidoptera, that supplies mitochondria to the spermatogonial cytoplasm during spermatogenesis; Verson's cell; Versonian cell. 3. (NEMATA) An epithelial cell that forms the gonoduct wall.
- apical chamber** (ARTHRO: Insecta) Pertaining to the germarium in the acrotrophic egg tubes.
- apical cross vein** (ARTHRO: Insecta) A cross vein near the apex of the wing.
- apical field** (ROTIF) The central anterior unciliated area of the corona.
- apicalia** n. [L. *apex*, tip] (GNATHO) Paired sensory cilia on the head.
- apical lip notches** (NEMATA) Indented lip margins at the junction of the lips.
- apical margin** (ARTHRO: Insecta) The outer margin of the wing. see **costal margin**, **anal margin**.
- apical organ** A sensory organ located at the apex of trochophore larvae and some cestodes.
- apical orifice** (MOLL) An opening at the top or apex of a shell.
- apical plate** An external sensory organ of a primitive nervous

- system or cluster of nerve cells at the anterior pole of the body of certain arthropods and annelids.
- apical scutellars** (ARTHRO: Insecta) In Diptera, the apical pair of marginal bristles on the scutellum; sometimes refers to the sub-apical scutellars, when the true apicals are absent.
- apical spur** 1. (ARTHRO: Insecta) The short bristles on the ventral surface of the tibia. 2. (MOLL) The initial pointed plug forming a posterior septum in truncate shells.
- apical system** (ECHINOD: Echinoidea) Plates surrounding the body organs of sea-urchins, found at the dorsal or aboral pole of the test. see **coronal system**.
- apices** pl. of **apex**
- apicobasal ridge or furrow** (ARTHRO: Crustacea) A longitudinal feature of barnacles, dividing the tergum from the remaining valve.
- apiculate** a. [L. dim. *apex*, tip] Pertaining to a short, abrupt point or points.
- apiculture** n. [L. *apis*, honeybee; *cultura*, cultivation] (ARTHRO: Insecta) The culturing of bees; beekeeping.
- apiculus** n. [L. dim. *apex*, tip] Any small apical tip or point.
- apid venom gland** (ARTHRO: Insecta) A type of venom gland in which the single venom gland is widened into a saclike reservoir that contains glandular elements, but no muscles. see **braconid venom gland**.
- apisthognathous** see **opisthognathous**
- apitoxin** n. [L. *apis*, honeybee; Gr. *toxikon*, poison] The main toxic constituent of bee venom.
- apivorous** a. [L. *apis*, honeybee; *vorare*, devour] Refers to feeding on bees.
- aplasia** n. [Gr. *an*, without; *plasma*, formed or molded] 1. The entire failure of organs or tissue to develop. 2. Incomplete or faulty development. **aplastic** a. see **agenesis**.
- apneumone** n. [Gr. *an*, without; *pneuma*, air] A substance emitted by a nonliving material that evokes a behavioral or physiological reaction favorable to the receiving organism, but detrimental to another species that may be found

in or on the nonliving material. see **allelochemic**.

**apneustic** a. [Gr. *an*, without; *pneustos*, breath] 1. Lacking external breathing organs. 2. (ARTHRO: Insecta) Lacking spiracles, or supplied with nonfunctional spiracles, as in aquatic forms.

**apobiotic** a. [Gr. *apo*, away; *biotikos*, of life] Of or pertaining to any change leading to diminished cells or tissues.

**apocentric** a. [Gr. *apo*, away; *kentron*, center] Deviating from the original type. see **archecentric**.

**apochete** n. [Gr. *apo*, away; *cheo*, pour] (PORIF) An exhalant canal that extends from the apopyles to apopore.

**apocrite** a. [Gr. *apo*, away; *krinein*, to separate] (ARTHRO: Insecta) Pertaining to Hymenoptera in which the first abdominal segment is fused to the reduced metathorax to form a narrow waist.

**apodal** a. [Gr. *a*, without; *pous*, foot] Lacking feet or legs; apodous.

**apodeme, apodema** n. [Gr. *apo*, away; *demas*, body] An invagination of the cuticle that serves for muscle attachment and for strengthening of the body wall. see **apophysis, apodome**.

**apoderma** n. [Gr. *apo*, away; *derma*, skin] (ARTHRO: Chelicerata) The membrane developed during resting stage of instars of certain Acari.

**apodictic, apodeictic, apodictal** a. [Gr. *apodeiktos*, proving fully] Being evident beyond contradiction; clearly proving.

**apodome** n. [Gr. *apo*, away; L. *domus*, roof] (ARTHRO) The internal portions of a skeleton, consisting of both apodeme and apophysis; sometimes used as synonymous with apodeme.

**apodous** see **apodal**

**apodous larvae** (ARTHRO) Larvae without legs and with reduced head, that require maternal deposition in or on a food source.

**apoenzyme** n. [Gr. *apo*, away; *en*, in; *zyme*, yeast] The protein portion of an enzyme that cannot function without a coenzyme. see **holoenzyme**.

**apogamete** n. [Gr. *apo*, away; *gamete*, spouse] A gamete formed by apomixis.

**apogamy** see **apomixis**

**apolar** a. [Gr. *an*, without; *polos*, pivot pole] Lacking a pole; without radiating processes.

**apolegamic** a. [Gr. *apolegein*, to choose; *gamos*, marriage] Pertaining to sexual selection.

**apolysis** n. [Gr. *apo*, away; *lysis*, loosen] 1. (ARTHRO) The first process of molting, characterized by the detachment of the old cuticle from the underlying hypodermal (epidermal) cells. see **ecdysis**. 2. (PLATY: Cestoda) The detachment of a gravid proglottid in tapeworms. **apolytic** a. see **an-apolysis**.

**apomict** n. [Gr. *apo*, away; *miktos*, mixed] Any organism produced by apomixis.

**apomictic (ameiotic) parthenogenesis** No reduction division occurs, so that the offspring have the same genetic constitution as the mother and all are female.

**apomixis** n. [Gr. *apo*, away; *mixis*, mixing] Botanical term sometimes used in invertebrates. see **parthenogenesis**.

**apomorph** n. [Gr. *apo*, away; *morphe*, form] A derived character.

**apomorphy** n. [Gr. *apo*, away; *morphe*, form] A term pertaining to derived characters, normally used in cladistic taxonomy. **apomorphic** a. see **plesiomorphy**.

**apophysary** see **apophysis**

**apophysis** n.; pl. **-ses** [Gr. *apo*, away; *phyein*, to grow] 1. An internal or external tubercular or elongate process of the body wall; a prominence, swelling or expansion. see **apodeme, apodome**. 2. (ARTHRO: Insecta) see **pleural apophysis, sternal apophyses**. 3. (MOLL) *a*. In Bivalvia, a large, styloid projection, one in each valve, extending from beneath the umbos to which the foot muscles are attached. *b*. In Polyplacophora, see sutural laminae.

**apophysegal plates** (ARTHRO: Insecta) In Orthoptera, plate- or blade-like sclerites covering the gonapophyses.

**apopore** n. [Gr. *apo*, away; *poros*, passage] (PORIF) An aper-

ture forming an exit from the apochete; may be equivalent to an oscule.

**apopyle** n. [Gr. *apo*, away; *pyle*, gate] (PORIF) An exhalent aperture from a choanocyte chamber.

**aporrhysa** n.pl. [Gr. *aporrhyein*, to flow away] (PORIF) The exhalent canals. see **epirrhysa**.

**aposematic** a. [Gr. *apo*, away; *sema*, signal] Warning coloration or structures that repel predators, also including movements, sounds, smells, etc. see **allosematic color, sematic**.

**aposeme** n. [Gr. *apo*, away; *sema*, signal] A population in which all the individuals, even though taxonomically distinct, share the same aposematic coloration.

**apostatic** a. [Gr. *apostates*, deserter] Widely departing from the norm; said of a phenotype that differs strikingly from the search image of a predator.

**a posteriori weighting** The weighting of taxonomic characters on the basis of their proved contribution to the establishment of sound classifications. see **a priori weighting**.

**aposymbiotic** a. [Gr. *apo*, away; *syn*, together; *bios*, life] Referring to an organism separated from its symbiotes; symbiote-free; usually refers to mutualistic symbiotes. see **mutualism**.

**apotele** n. [Gr. *apo*, away; *telos*, end] (ARTHRO: Chelicerata) The terminal eudesmatic segment of the appendages of mites, generally constituting two tendons and two articulation-points. **apotelic** a. see **pretarsus**.

**apotome** n. [Gr. *apo*, away; *tomos*, a cut] A part or subdivision appearing as if separated from the whole.

**apotorma** n.; pl. **-mae** [Gr. *apo*, away; *tormos*, socket] (ARTHRO: Insecta) In Scarabaeoidea larvae, a process that extends forward from the torma between the pternotorma and the interior end of the torma.

**apotype** see **hypotype**

**apotypic** a. [Gr. *apo*, away; *typos*, type] Varying from a type.

**apparatus** n.; pl. **-ratus, -ratuses** [L. *apparatus*, equipment] Any group of structures or parts that unite together in a

common function.

**apparition** n. [L. *appareo*, manifest] Something appearing.

**appeasement behavior** That which follows after the attack of one animal on another of the same species with the loser assuming a submissive attitude.

**appeasement substance** The secretion by a social parasite of attractive substances that reduce aggression in a host insect and aid the parasite's acceptance by the host colony.

**appendage** n. [L. *ad*, to; *pendere*, to hang] A structure attached or appended to a larger structure, as parts or organs that are attached to the body of various invertebrates.

**appendicle** n. [L. *ad*, to; *pendere*, to hang] A small appendage or appendix. **appendicular** a.

**appendiculate** a. [L. *ad*, to; *pendere*, to hang] Bearing or forming small appendages.

**appendiculate cell** (ARTHRO: Insecta) In Hymenoptera, a small cell just beyond the apex of the marginal cell of the wing.

**appendicule** n. [L. *ad*, to; *pendere*, to hang] (NEMATA) A large, single, ventral, extensible preanal supplementary male organ.

**appendiculum** n. [L. *appendicula*, small appendage] (CNID: Scyphozoa) The remainder of the partial veil on the pileus rim of jellyfish.

**appendifer** n. [L. *ad*, to; *pendere*, to hang; *ferre*, to carry] (ARTHRO: Trilobita) A ventral projection for the attachment of thoracic muscles.

**appendix** n.; pl. **-dixes, -dices** [L. *ad*, to; *pendere*, to hang] Any supplementary or additional piece or part appended to a regular structure.

**appendix interna** (ARTHRO: Crustacea) In Malacostraca, the median process of the pleopodal endopod uniting members of each pair; stylamblys.

**appendix masculina** (ARTHRO: Crustacea) In Isopoda, the modified second (sometimes first also) pleopod(s) in the form of a long, often grooved, rodlike organ that functions

as a copulatory organ or gonopod.

**appendotomy** n. [L. *appendix*, appendage; Gr. *tome*, a cutting] The loss of appendages. see **autospasy**, **autotilly**, **autotomy**.

**appose** v.t. [L. *ad*, to; *ponere*, to put] To place opposite or before; to put, apply, or add one thing to another, to place in juxtaposition.

**apposition** n. [L. *ad*, to; *ponere*, to put] 1. Juxtaposition. 2. The growth of a structure by the successive deposition of layers on its outside. see **intussusception**.

**apposition eye** (ARTHRO) The compound eye of diurnal insects and crustaceans in which the rhabdom reaches the crystalline cone, it absorbs oblique rays of light in the pigmented walls of the ommatidium and, produces a mosaic image. see **superposition eye**.

**apposition image** A mosaic image.

**appressed** a., adv. [L. *ad*, to; *premere*, to press] Pressed or closely applied against something; adherent.

**approximate** a. [L. *ad*, to; *proximare*, to come near] Situated near or close together.

**a priori weighting** The weighting of taxonomic characters on the basis of preconceived criteria. see **a posteriori weighting**.

**aprostatic** a. [L. *an*, without; *pro*, before; *stare*, to stand] (ANN: Oligochaeta) Lacking prostates.

**aptera** n.pl. [Gr. *an*, without; *pteron*, wing] (ARTHRO: Insecta) Insects without wings; formerly an ordinal term including the fleas, lice and other wingless forms.

**apterergate** n. [Gr. *an*, without; *pteron*, wing; *ergate*, worker] (ARTHRO: Insecta) A wingless worker in vespid wasps, that are normally winged.

**apterodicera** a. [Gr. *an*, without; *pteron*, wing; *dikeros*, two-horned] (ARTHRO: Insecta) A wingless insect bearing two antennae.

**apterogyne** n. [Gr. *an*, without; *pteron*, wing; *gyne*, female] (ARTHRO: Insecta) A wingless female social insect that is normally winged.

**apterous** a. [Gr. *an*, without; *pteron*, wing] (ARTHRO: Insecta) Wingless, without wings or winglike expansions; exalate.

**apterous neoteinic** see **ergatoid reproductive**

**apterygogenea** n.pl. [Gr. *an*, without; *pteryx*, wing; *genos*, race] (ARTHRO: Insecta) Insects that are wingless in all stages and assumed to be descended from wingless ancestors. see **pterygogenea**.

**Apterygota, apterygote** n. [Gr. *an*, without; *pterygion*, wing] A subclass of primitively wingless insects containing the bristletails, silverfish and rock jumpers. see **Pterygota**.

**aptychus** n. [Gr. *an*, without; *ptychos*, fold] (MOLL) A double calcareous plate found in many fossil ammonites, assumed to be an operculum.

**apyrase** n. [Gr. *an*, without; *pyr*, fire; *-ase*, enzyme] An enzyme that functions in the utilization of energy.

**apyrene** a. [Gr. *an*, without; *pyren*, kernel] (MOLL) Designates nonfunctional sperm with no flagella or chromatin. see **eupyrene**, **oligopyrene**.

**aquamarine** n. [L. *aqua marina*, sea water] Blue, blue-green or green in color.

**aquatic** a. [L. *aqua*, water] Pertaining to living or growing in water.

**aqueous** a. [L. *aqua*, water] Of or of the nature of water; watery.

**aqueous humor** The fluid in the anterior chamber of the eye. see **vitreous humor**

**aquiferous** a. [L. *aqua*, water; *ferre*, to bear] (MOLL) Supplying water or watery fluid, as the aquiferous canals.

**arachnactis** n. [Gr. *arachne*, spider; *aktis*, ray] (CNID: Anthozoa) The larval stage of anemone-like cerianthids.

**Arachnida, arachnid** n. [Gr. *arachne*, spider] A class of the phylum Arthropoda that includes the scorpions, mites, spiders, harvestmen and ticks, etc.

**arachnidism** n. [Gr. *arachne*, spider; *ismos*, denoting condition] (ARTHRO: Chelicerata) Envenomation by an arachnid, such as a spider, tick or scorpion. see **arachnism**.

- arachnidium** n. [Gr. *arachne*, spider] (ARTHRO: Chelicerata) The spinning apparatus of spiders, consisting of the spinning glands and their ducts and the spinnerets. **arachnidial** a.
- arachnism** n. [Gr. *arachne*, spider; *ismos*, denoting condition] (ARTHRO: Chelicerata) Poisoning, or poisoned condition due to envenomation by a spider. see **arachnidism**.
- arachnoid, arachnoideal** a. [Gr. *arachne*, spider; *eidos*, form] (ARTHRO: Chelicerata) 1. Resembling a member of the Arachnida. 2. Resembling a spider's web, thin and fine, filmy.
- arachnologist** n. [Gr. *arachne*, spider; *logos*, discourse] One who studies the arachnids.
- aragonite** n. [fr. Aragon, in Spain] 1. A calcium carbonate, dimorphous with calcite. 2. The innermost layer of a shell. 3. (CNID: Anthozoa) The skeleton of coral, produced by the calcicoblastic epithelium.
- arakoderan** a. [Gr. *arake*, bowl; *deros*, skin] (NEMATA: Secernentea) Pertaining to a caudal ala that completely surrounds the cloacal area. see **leptoderan**; **peloderan**.
- araneiform** a. [L. *aranea*, spider; *forma*, form] Spiderlike in appearance.
- araneology** n. [L. *aranea*, spider; Gr. *logos*, discourse] That branch of zoology that treats only of spiders.
- arboreal** a. [L. *arbor*, tree] Pertaining to or living in or among trees.
- arborescent** a. [L. *arbor*, tree] Tree-like in character or appearance; branching like a tree, as some species of mollusks and corals.
- arborizations** n.pl. [L. *arbor*, tree] A tree-like branching of terminal fibers of axons or collaterals.
- arbovirus** n. Any of a group of (ar)thropod-(bo)rne (virus)es, including the causative agents of yellow fever, viral encephalitis and certain febrile infections, that are transmitted to man by various mosquitoes and ticks.
- arc** n. [L. *arcus*, bow] Any object having a bowlike curvature.
- arcade** n. [L. *arcus*, arch] (NEMATA: Secernentea) Lateral col-

- lecting tubules of the excretory system of *Ascaris*.
- arcade cells** (NEMATA) The nine anteriormost cells that are believed to form the lips, two opposite each esophageal lumen radius and one opposite each sector.
- archaeocytes** n.pl. [Gr. *arche*, beginning; *kytos*, container] 1. (PORIF) Large, wandering amoebocytes with multiple phagosomes in the mesenchyme; nurse cells; trophocytes. 2. A totipotent amoeboid cell.
- archaestomatous** a. [Gr. *arche*, beginning; *stoma*, mouth] (ANN) Describing a group, Archaeostomata of former classifications, with a mouth derived directly from the blastopore of the embryo.
- archebiosis** n. [Gr. *arche*, beginning; *biosis*, manner of life] Abiogenesis.
- archecentric** a. [Gr. *arche*, beginning; *kentron*, center] Designating or pertaining to an original type. see **apocentric**.
- archedictyon** n. [Gr. *arche*, beginning; *diktyon*, net] (ARTHRO: Insecta) The irregular network of cuticular ridges on the wings of many fossils.
- archegenesis** n. [Gr. *arche*, beginning; *genesis*, beginning] Abiogenesis.
- archencephalon** see **archicerebrum**
- archenteric pouch** One of the paired, segmented, dorsoventral prominences of the archenteron from which the mesoderm derives.
- archenteron** n. [Gr. *arche*, beginning; *enteron*, intestine] The primitive digestive cavity of many invertebrates, formed by gastrulation; the gastrocoele; precursor to the gut.
- archeocyte** see **archaeocytes**
- archetype, architype** n. [Gr. *arche*, beginning; *typos*, type] A hypothetical ancestral type arrived at by the elimination of specialized characters of known later forms. see **phylogeny**.
- Archiacanthocephala** n. [Gr. *arche*, beginning; *akantha*, thorn; *kephale*, head] A class of Acanthocephala that are parasites of predacious birds and mammals; insects and myriapods are the intermediate hosts.

**archibenthic** a. [Gr. *arche*, beginning; *benthos*, depths of sea] Refers to the continental deep-sea *zone*, extending from the edge of the continental shelf (200-400 m.) to depths of about 800-1100 m. see **abyssal**.

**archicephalon** n. [Gr. *arche*, beginning; *kephale*, head] The primitive annelid-arthropod head; the prostomium.

**archocerebrum** n.; pl. **-bra** [Gr. *arche*, beginning; L. *cerebrum*, brain] 1. (ANN) The ganglionic nerve mass of a prostomium. 2. (ARTHRO) The primitive suprastomodial nerve mass of a prostomium; the primitive brain.

**archidictyon** see **archedictyon**

**archigastrula** n. [Gr. *arche*, beginning; *gaster*, stomach] A type of gastrula in which the endoderm is produced by invagination; emboly.

**archigenesis** see **abiogenesis**

**archinephridium** n. [Gr. *arche*, beginning; *nephros*, kidney] An excretory organ of many invertebrate larvae; a solenocyte.

**archiplasm** n. [Gr. *arche*, beginning; *plasma*, formed or molded] A former name for the substance of the spindle fibers and astral rays; was thought to exist during the entire cell cycle, but to only become visible after aggregation at mitosis.

**Archiptera** see **Pseudoneuroptera**

**architomy** n. [Gr. *arche*, beginning; *tome*, cut] (ANN) Designating reproduction by fission, with regeneration after separation of heads and/or tails. see **paratomy**.

**architype** see **archetype**

**archoophorans** n.pl. [Gr. *arche*, beginning; *pherein*, to carry] (PLATY: Turbellaria) 1. Individuals with modified cleavage in which yolk is stored in the oocytes; entolecithal eggs. see **neophorans**. 2. Archoophora A former division of the Tubellaria; a superorder.

**arciform** a. [L. *arcus*, bow; *forma*, shape] Being arcuate; shaped like a bow or arch.

**arctic** a. [Gr. *arktos*, bear] 1. Pertaining to the region of the North Pole within the Arctic Circle. 2. Pertaining to the high

latitude regions, that may or may not be inside the geographical Arctic Circle, from which tree growth is normally absent, but with plants and animals.

**arcticoid teeth** (MOLL: Bivalvia) Heterodont teeth intermediate between corbiculoid and lucinoid types.

**arctogaea** n. [Gr. *arktos*, bear; *gaia*, the earth] One of the primary zoogeographic zones comprising North America (except Central America), Europe, Asia and Africa.

**arcuate** a. [L. dim. *arcus*, bow] 1. Pertaining to being shaped like an arc; arch-like. 2. (MOLL: Bivalvia) Referring to the ventral edge in some pelecypods. 3. (PORIF) Referring to the chelate microsclere in the form of one to three curved plates; commonly three plates.

**arcuate vein** (ARTHRO: Insecta) The first jugal vein.

**arculus** n. [L. dim. *arcus*, bow] (ARTHRO: Insecta) A basal cross vein between the radius and the cubitus.

**are** n. [L. *area*, open place] A metric area measurement of a square, with each side 10 meters in length.

**area** n. [L. *area*, open place] (BRYO: Gymnolaemata) In anascans, the space occupied by the frontal membrane.

**arenaceous** a. [L. *arena*, sand; *-aceus*, having the nature of] Sandy, or the nature of sand.

**arenicolous** a. [L. *arena*, sand; *colere*, to inhabit] Burrowing in or inhabiting sand. see **psammophilous**.

**areocel** see **accessory cell**

**areola, areole** n.; pl. **-lae, -las (areoles)** [L. dim. *area*, small open place] 1. (ARTHRO: Crustacea) In crayfish, the longitudinal strip between the brachiocardiac grooves and posterior to the cervical groove on the dorsum. 2. (ARTHRO: Insecta) *a.* An accessory wing cell of Lepidoptera. see **basal cell**. *b.* In ichneumonid Hymenoptera, the pentagonal or hexagonal area on the propodeum enclosed by carinae. 3. (BRYO: Gymnolaemata) In cheilostomes, a small opening in the frontal wall connecting the endocyst with the ectocyst. 4. (ECHINOD) see scrobicula. 5. (NEMATATA) A small area within longitudinal striae delimited by transverse annuli. 6. (NEMATOM) Round or polygonal cuticular plates,

sometimes containing pores, that may exude a lubricant onto the cuticle surface, aiding tight-coiling behavioral movements. **areolar**, **areolate** a.

**areolation** n. [L. *area*, open space] 1. Any small space, bounded by some part differing in color or structure. 2. (ARTHRO: Insecta) Spaces founded by nervures in the wings. 3. (NEMATA) Transverse body striae extending into the lateral field.

**areole** see **areola**

**areolet** n. [L. dim. *area*, small open space] (ARTHRO: Insecta) A small cell in a wing.

**argentaffin** a. [L. *argentum*, silver; *affinis*, related] Of or pertaining to the taking of a silver stain; an argyrophil.

**argentaffin(e) cell** Any cell that stains readily by silver techniques.

**argenteous** a. [L. *argentum*, silver] Silver-like, silvery, white, shining.

**argentophilic cells** (ARTHRO: Insecta) In aquatic larvae, specialized cells for ion uptake in the anal papillae or rectal gill.

**argillaceous** a. [L. *argilla*, white clay] Containing or consisting of, or like clay; clayey.

**argyrophil** a. [Gr. *argyros*, silver; *philein*, to love] Pertains to staining readily with silver dyes; argentaffin.

**arista** n.; pl. **-tae** [L. *arista*, awn] A bristlelike appendage.

**aristate** a. [L. *arista*, awn] Having an arista; aristate antenna.

**aristopedia** n. [L. *arista*, awn; *podos*, foot] (ARTHRO: Insecta) A developmental deviation in which the arista may mature as a leg.

**Aristotle's lantern** (ECHINOD: Echinoidea) A complicated masticating apparatus consisting of several ossicles surrounding the mouth of sea urchins; called Aristotle's lantern because it resembles an early Greek lantern.

**aristulate** a. [L. dim. *arista*, awn] Bearing a short bristle.

**ark** n. [L. *arca*, chest] (MOLL: Bivalvia) A marine arcoid bivalve with an equivalve shell; a heavy box-like shell; an ark-

shell.

**arm** n. [A.S. *arm*, forelimb] 1. Anything resembling or corresponding to an arm. 2. (ECHINOD) *a.* In Asteroidea, the radial extension of the body surrounding the axis; the ambulacra. *b.* In Crinoidea, the radial evagination of the body extending from the theca; undivided distal branches. 3. (ECHI) The forked section of the proboscis. 4. (MOLL: Cephalopoda) *a.* In squids and cuttlefish, eight of the ten short and heavy appendages around the head, the other two larger dorsal appendages being tentacles. *b.* The tentacles of an octopod.

**armate cercaria** (PLATY: Trematoda) A larva of the xiphidocercariae group with oral and ventral suckers unequal, without a virgula organ and with a Y-shaped excretory bladder.

**armature** n. [L. *armare*, to arm] Defensive or protective structures of invertebrates, such as spinous or chitinous processes in the form of hooks, horns, teeth, spines and claws on various parts of the body.

**armilla** n.; pl. **-lae** [L. *armilla*, bracelet] Bearing a bracelet-like ring or annulus. **armillate** a.

**arolium** n.; pl. **-ia** [Gr. *arole*, protection] (ARTHRO: Insecta) A medium lobe or pad-like cushion of the foot. *a.* Between the claws of Orthoptera. *b.* The base of each tarsal claw of Hemiptera. *c.* Between the tarsal claws and comprising part of the pretarsus of Hymenoptera. see **pseudarolium**.

**aromorphosis** n.; pl. **-ses** [Gr. *airein*, to raise; *morphosis*, shaping] An advancement in organization of an organism, without a marked increase in specialization; an aromorph. see **allomorphosis**.

**arrhenogeny** n. [Gr. *arrhen*, male; *genos*, offspring] The condition of producing only male offspring. see **monogeny**, **thelygeny**.

**arrhenoidy** n. [Gr. *arrhen*, male; *eidos*, form] (NEMATA: Secernentea) Sex reversal from female to male; recognized by males having two testes, instead of one. **arrhenoid** a.

**arrhenoplasm** n. [Gr. *arrhen*, male; *plasma*, formed or molded] The male element of idioplasm.

**arrhenotoky** n. [Gr. *arrhen*, male; *tokos*, birth] The haplodiploid parthenogenesis in which males arise from unfertilized, haploid egg cells. see **thelyotoky**.

**arsenosomphic** a. [Gr. *arsen*, male; *somphos*, porous] (ANN: Oligochaeta) Pertaining to earthworms with male terminalia.

**artatendon** n. [L. *artus*, joint; *tendere*, to stretch] (ARTHRO: Insecta) The tendon articulating the post-tarsus.

**artefact** see **artifact**

**artenkreis** see **superspecies**

**arterial** a. [L. *arteria*, artery] Pertaining to an artery.

**arteriole** n. [L. dim. *arteria*, artery] A small artery.

**artery** n. [L. *arteria*, artery] A vessel conveying blood from the heart to the tissues.

**arthral** a. [Gr. *arthron*, joint] Pertaining to a joint.

**arthrium** n. [Gr. *arthron*, joint] (ARTHRO: Insecta) In Coleoptera, minute tarsal joints, trimera (3 tarsal joints) and tetramera (4 tarsal joints).

**arthrobranchia** n.; pl. **-iae** [Gr. *arthron*, joint; *branchia*, gills] (ARTHRO: Crustacea) In Decapoda, a gill attached to the articulating membrane between the appendage and body; arthrobranchiata.

**arthroderm** n. [Gr. *arthron*, joint; *derma*, skin] (ARTHRO) The outer covering of skin, or the outer body-wall.

**arthrodial membrane** (ARTHRO) Articular membranes that permits unrestricted motion; flexible joints.

**arthromere** n. [Gr. *arthron*, joint; *meros*, part] (ARTHRO) A segment, somite or metamere.

**arthrophragm** see **endophragm**

**arthropleure** n. [Gr. *arthron*, joint; *pleura*, side] (ARTHRO) That portion of the body that bears the limbs.

**Arthropoda, arthropod** n. [Gr. *arthron*, joint; *pous*, foot] A phylum of invertebrates that contains the chitinous segmented, exoskeletoned, jointed-legged animals, such as centipedes, millipedes, insects, crustaceans, spiders, scorpions, and many other less well-known types.

**arthropodin** n. [Gr. *arthron*, joint; *pous*, foot] (ARTHRO) A protein constituent part of the chitinoproteic structures.

**arthropodization** n. [Gr. *arthron*, joint; *pous*, foot] (ARTHRO) Evolutionary development of the combination of characteristics associated with arthropods, including the chitinous exoskeleton.

**arthrostracous** a. [Gr. *arthron*, joint; *ostrakon*, shell] (ARTHRO: Crustacea) Having the thorax and abdomen segmented, and bearing seven pairs of thoracic legs.

**article** n. [L. dim. *artus*, joint] 1. A distinct segment or jointed part or structure. 2. (ARTHRO) *a.* In Chelicerata, the serrated process on the chelicera of a tick. *b.* In Crustacea, a subdivision of the antennal or antennular flagella or appendage. *c.* In Insecta, a segment of a leg. see **segment**.

**articulamentum** n. [L. *articulare*, to divide] (MOLL: Polyplacophora) The shell layer between the tegmentum and hypostracum, that is composed of several separate components of crystalline shell structure; formerly the hard, semiporcellaneous shell layer projecting past the tegmentum forming the insertion plates and the sutural laminae.

**articular** a. [L. *articulare*, to divide] Pertaining to a joint.

**articular area** (ARTHRO: Insecta) The basal portion of a wing.

**articular corium** see articular membrane, corium

**articular furrow** (ARTHRO: Crustacea) A groove near the tergal margin of the *scutum*, or scutal margin of the *tergum*, forming part of articulation between the two valves of barnacles.

**articularis** n. [L. *articulare*, to divide] The pre-tarsus.

**articular membrane** (ARTHRO) The nonsclerotized, flexible membrane between the segments of arthropods, and the joints of arthropod appendages.

**articular pan** A cup or dish-like impression into which an articulation is fitted; frogga.

**articular ridge** (ARTHRO: Crustacea) In barnacles, a linear elevation on the scutum or tergum bordering the articular furrow and together forming an articulation between the two valves.

**articular sclerite** (ARTHRO: Insecta) A sclerite between an insect body and its appendage.

**Articulata** n. [L. *articulus*, joint] 1. (BRACHIO) A class of the Phylum Brachiopoda, having the valves articulated by teeth on the ventral (pedicle) valve and sockets on the dorsal (brachial) valve. 2. (BRYO) A division of Bryozoa containing tubular bryozoans in which colonies are erect, branched and attached by rhizoids. 3. (ECHINOD) A subclass of echinodermatan crinoids comprising sea lilies and feather stars.

**articulate** a. [L. *articulare*, to divide] Jointed; formed of segments; connected by a joint.

**articulated apex** see **clasp filament**

**articulate fascia** A band of contiguous spots.

**articulation** n. [L. *articulare*, to divide] A movable point of contact between two sclerotic parts of a structure.

**artifact, artefact** n. [L. *ars*, art; *facere*, to make] An appearance, or structure, produced by preparation of material that was not present in the original material before the manipulation.

**artificial classification** A classification based on convenient and conspicuous diagnostic characters, ignoring characters indicating relationship; often a classification based on a single character instead of an evaluation of all of the characters. see **classification, phylogeny**.

**ascaridin, ascaridine** n. [Gr. *askaris*, an intestinal worm] (NEMATA) A protein in the sperm.

**ascarylic acid** Material making up the refringent bodies or crystalloids in the oocytes of nematodes, that presumably form the vitelline membrane of the egg.

**Aschelminthes, aschelminths** n.pl. [Gr. *askos*, bag; *helmins*, worm] A taxon (phylum) of the animal kingdom, when recognized, that includes the (classes) Rotifera, Gastrotricha, Kinorhyncha or Echinodera, Nematomorpha or Gordiacea, and Nemata (=Nematoda).

**ascon** n. [Gr. *askos*, bag] (PORIF) 1. A simple sponge with unfolded pinacoderm and choanoderm. 2. Sometimes used to describe the small, simple, most primitive sponge Leu-

cosolenia .

**asconoid grade** (PORIF) A grade of construction in which the choanocytes line thin, short tubes. see **syconoid grade, leuconoid grade or type**.

**ascopore** n. [Gr. *askos*, bag; *poros*, channel] (BRYO: Gymnolaemata) In some Cheilostomata, a small opening in the frontal wall connecting the ascus to the external environment.

**ascus** n.; pl. **asci** [Gr. *askos*, bag] (BRYO: Gymnolaemata) In ascophoran cheilostomates, the exterior-walled, flexible-floored, sac beneath the frontal shield of an autozoid. see **anascan**.

**ascus sac** (MOLL: Gastropoda) In Sacoglossa, a storage area for the holder of outgrown teeth usually retained in a spiral or jumbled heap in the pharynx; ventral sac.

**asemic** a. [Gr. *asemos*, without mark] Pertaining to being without markings.

**aseptate** a. [Gr. *an*, without; L. *septum*, partition] Pertaining to being without a septa.

**aseptic** a. [Gr. *an*, without; *sepsis*, decay] Refers to being free of microorganisms, especially those causing decay, putrefaction, or poisoning.

**aseptic culture** A maintained population of organisms containing a single species and free of contamination by all other organisms.

**asetal** a. [Gr. *an*, without; L. *seta*, bristle] (ANN: Oligochaeta) Pertaining to being without setae; as in the peristomium and pygomere of earthworms.

**asexual** a. [Gr. *an*, without; *sexus*, sex] Not related to sex.

**asexual reproduction** Any method of reproduction not involving fertilization, as that by fission, fragmentation, spore production, budding, vegetative reproduction, and gemmule formation.

**asiphonate** a. [Gr. *an*, without; *siphon*, tube] Lacking a siphon.

**aspect** n. [L. *aspicere*, to look at] The general appearance, direction or view with respect to seasons, species or popula-

tions, an object or individual.

**aspection** n. [L. *aspicere*, to look at] Seasonal succession of ecological phenomena.

**asperate** a. [L. *asperare*, to roughen] Referring to having a rough and uneven surface.

**asperity** n.; pl. **-ties** [L. *asperare*, to roughen] 1. Roughness of surface. 2. (ARTHRO: Insecta) Spinelike structures arranged in rows or confined to specific areas; sculpturings or dotlike elevations.

**asperous** a. [L. dim. *asper*, rough] (MOLL) Used to denote very distinct elevated dots, more uneven than scabrous; rough to the touch.

**asperulous** a. [L. dim. *asper*, rough] Slightly rough.

**asphyxia** n. [Gr. *an*, without; *sphyzein*, pulse, respiration] Suffocation; suspended animation or apparent death resulting from a deficiency of oxygen. asphyxial a.

**asphyxiation** n. [Gr. *an*, without; *sphyzein*, pulse, respiration; L. *-tion*, denotes act] Act of causing asphyxia; suffocation.

**aspidium** n. [Gr. *aspidion*, a little shield] A drug used for the expulsion of tapeworms obtained from male Dryopteris filix-mas ferns from which it is extracted as oleoresin of aspidium.

**aspidosoma** n. [Gr. *aspis*, shield; *soma*, body] (ARTHRO: Chelicerata) In Acari, the dorsal region bordered laterally by the abjugal furrow that may be indistinct or incomplete, posteriorly by the disjugal furrow, and anteriorly by the circumcapitular furrows.

**asplanchnic** a. [Gr. *an*, without; *splanchnon*, entrail] Pertaining to the lack of an alimentary canal.

**asporogenic** a. [Gr. *an*, without; *spora*, seed; *genes*, producing] Pertaining to not producing or bearing spores. asporous a.

**assemblage** n. [L. *assimulare*, to bring together] A collection of organisms, or particular things.

**assembly** n.; pl. **-lies** [L. *assimulare*, to bring together] An assemblage of organisms; the smallest community recog-

nized in ecology.

**assimilation** n. [L. *ad*, near; *similis*, like] The basic nature of living matter to convert other substances into its own components. see **genetic assimilation**.

**association** n. [L. *ad*, near; *sociare*, to join] 1. A group assemblage of organisms in a specific geological area with one or two dominant species. 2. A climax plant community dominated by a particular species and named according to their characteristics.

**association neuron** An internuncial neuron, that connects sensory and motor neurons, or other association neurons of the central nervous system; a connector neuron.

**associes** n.pl [L. *ad*, near; *sociare*, to join] 1. A transitory or intermediate stage in the development of an association. 2. A developmental unit of a consociates.

**assortment** n. [L. *ad*, near; *sors*, lot] 1. To distribute or classify. 2. The normal separation of genes at meiosis.

**assurgent** a. [L. *assurgens*, to arise] Curving upward; ascending.

**astacene, astacin** n. [L. *astacus*, lobster] A carotenoid red pigment of some invertebrates.

**astaxanthin** n. [L. *astacus*, lobster; *xanthos*, yellow] (ARTHRO) A carotenoid biochrome of certain ingested vegetation found in certain insects and marine crustaceans.

**astegasimous** a. [Gr. *an*, without; *stege*, roof] (ARTHRO: Chelicerata) Referring to mites when the prodorsal sclerite does not project over the chelicerae. see **stegasimous**.

**stelocytтарous** a. [Gr. *an*, without; *stela*, pillar; *kyttaros*, cell of a honeycomb] (ARTHRO: Insecta) Pertaining to nests, especially of social wasps, in which the brood comb is directly attached to a support and lacking pillars. see **stelocytтарous**.

**aster** n. [Gr. *aster*, star] 1. Star-shaped figures that develop during mitosis. 2. (PORIF) A type of microsclere with several rays originating from the same center. see **chiaster**.

**asteriform** a. [Gr. *aster*, star; *forma*, shape] Of or pertaining to starlike or star-shaped.

**asteroid** a. [Gr. *aster*, star; *eidōs*, form] 1. Refers to starlike or resembling a star. 2. (ECHINOD) A stellate echinoderm of the subclass Asteroidea.

**Asteroidea** n. [Gr. *aster*, star; *eidōs*, form] A subclass of Sormasteroidea of the phylum Echinodermata, containing the stellate sea stars and star fish; characterized by having five-radiate to multi-armed rays, usually not sharply offset from the central disk.

**asthenia** n. [Gr. *asthenes*, feeble] Muscle weakness; debility.

**asthenobiosis** n. [Gr. *asthenes*, feeble; *biosis*, manner of life] (ARTHRO: Insecta) Hibernation or aestivation in certain generations of insects induced by non-elimination of uremic products by previous active generations.

**astichous** a. [Gr. *an*, without; *stichos*, row] Not arranged in a row or rows.

**astigmatic** a. [Gr. *an*, without; *stigma*, mark] Lacking stigmata; without a spiracle or breathing pore.

**astogenetic differences** (BRYO) Differences in the morphology of an asexual generation of zooids, and thereby restricted to zones of astogenetic change in the colony.

**astogeny** n. [Gr. *asty*, town; *genos*, descent] (BRYO) The development of a colony through a sequence of asexual generations of zooids with any extrazoidal parts.

**astomate** a. [Gr. *a*, without; *stoma*, mouth] 1. Lacking a mouth. 2. (ANN: Oligochaeta) In earthworms, a closed nephridium, without a nephrostome. 3. (NEMATA) Referring to a stoma lacking the cheilostome, but retaining an unexpanded esophastome.

**astragal** n. [Gr. *astragalos*, vertebra] (MOLL: Gastropoda) The step-sided, rounded elevations of a shell, that extend spirally around the whorls giving added strength.

**astral ray** 1. A ray seen in the cytoplasm that radiates from each centriole to the asters during cell division, thus forming the spindle. 2. A polar ray.

**astral sphere** see **astrosphere**

**astrocenter** see **centrosome**

**astrocyte** n. [Gr. *aster*, star; *kytos*, container] 1. A star-

shaped neuroglia cell. 2. Any star-shaped cell, especially in stroma tissues.

**astrorhizae** n.pl. [Gr. *aster*, star; *rhiza*, root] (PORIF) Starlike depressions on the surface of the calcareous skeleton.

**astrosphere** n. [Gr. *aster*, star; *sphaira*, ball] The central mass of an aster lacking rays.

**astrotaxis** n. [Gr. *aster*, star; *taxis*, arrangement] The orientation of certain organisms sensitive to polarized skylight, i.e., bees, ants and spiders.

**asymmetrical** a. [Gr. *asymmetros*, without symmetry] Not symmetrical; not alike on both sides of an axis; bilaterally unequal.

**asymmetry** n. [Gr. *asymmetros*, without symmetry] Lack of symmetry; unlikeness in form or development.

**asymptomatic** a. [Gr. *a*, without; *symptoma*, a sign of disease] Lacking subjective evidence of a disease.

**asynaptic** a. [Gr. *a*, without; *synapsis*, union] Pertaining to the complete failure or incomplete pairing of chromosomes during the first meiotic division. **asynapsis** n.

**asynchronous** a. [Gr. *a*, without; *syn*, together; *chronos*, time] Not simultaneous; not occurring at the same time.

**atactotrichy** n. [Gr. *ataktos*, not arranged; *trichos*, hair] Chaetotaxy in which all setae are not describable in distinct patterns and arrangements. see **primordiotrichy**.

**atavism** n. [L. *atavus*, ancestor] Recurrence of an ancestral character, after an interval of generations. **atavistic** a.

**ataxia** n. [Gr. *a*, without; *taxis*, arrangement] Lacking muscle coordination.

**atelia** n. [Gr. *ateles*, incompleteness] Incomplete or imperfect development.

**athecal** a. [Gr. *a*, without; *theke*, case] (ANN) Without spermathecae.

**athecate** a. [Gr. *a*, without; *theke*, case] 1. Lacking a theca. 2. (CNID: Hydrozoa) In Hydroids, lacking an investing cup or sheath.

**athericerous** see **aristate**

- athermobiosis** n. [Gr. *a*, without; *thermos*, hot; *biosis*, manner of life] 1. Dormancy induced by low temperatures in relation to an organism. 2. The process of waste elimination during a resting stage at low temperature.
- athrocyte** n. [Gr. *athroos*, collected; *kytos*, container] A sessile type of coelomocyte, phagocytic in function.
- athrocytosis** n. [Gr. *athroos*, collected; *kytos*, container] The ability of cells to absorb and retain particles in suspension.
- atmosphere** n. [Gr. *atmos*, vapor; *sphaira*, ball] 1. The outer circle of an ocellate spot. 2. The envelope of air around earth that supports life.
- atoke** n. [Gr. *a*, without; *tokos*, birth] (ANN: Polychaeta) The anterior sexless portion of certain marine worms. atokous a. see **epitoke**.
- atoll** n. [Mal. atoll] A circular coral reef surrounding a central lagoon.
- atom** n. [L. *atomus*, a small particle] 1. Any extremely small particle, dot or point. 2. An elementary particle which enters into a chemical reaction.
- ATP** adenosine triphosphate
- atracheate** a. [Gr. *a*, without; *trachia*, windpipe] Without tracheae, or visible constriction between head and prothorax.
- attractoid** a. [Gr. *atraktos*, spindle; *eidos*, form] Pertaining to spindle-shaped; fusiform.
- atrial** a. [L. *atrium*, vestibule] 1. Of or pertaining to an atrium. 2. (ANN) Referring to glandular tissue associated with a cleft or coelomic invagination containing the male pore.
- atrial bag** (BRYO) That part of a polypidial vesicle attached to the frontal wall of a developing zoid, from which the tentacle sheath is formed.
- atrial cavity** In procordates, a cavity located between the pharynx and the body wall.
- atrial cornua** (ANN: Hirudinoidea) Horns or hornlike prolongations of the atrium.
- atrial gland** (ANN) Prostates without stalks.
- atrial orifice** (ARTHRO: Insecta) The exterior opening of the

- spiracular atrium.
- atrial sac** (ANN: Oligochaeta) In primitive moniligastrid earthworms, the spermathecal diverticulum.
- atrichosy** n. [Gr. *a*, without; *trichos*, hair] The absence of setae due to evolutionary regression.
- atrichous** a. [Gr. *a*, without; *trichos*, hair] 1. Lacking flagella or cilia. 2. (CNID) Lacking spines or barbs, i.e., isorhizas, etc.
- atrichous isorhiza** (CNID: Hydrozoa) A small nematocyst with a smooth tubule. see **holotrichous isorhiza**, **basitrichous isorhiza**.
- atriobursal orifice** (ARTHRO: Chelicerata) The opening of the seminal receptacle of female spiders.
- atrium** n.; pl. **atria** [L. *atrium*, vestibule] 1. A cavity, division, entrance or passageway of various invertebrates. 2. (ANN) *a*. A diverticulum of the spermatheca; a tubular or capsular prostate. *b*. Male reproductive organ in leeches, consisting of a thin-walled *bursa*, a thick-walled glandular and muscular chamber and a pair of atrial cornua opening into the muscular median chamber. 3. (ARTHRO: Insecta) A specialized area of the trachea; *a*. A spiracular atrium. *b*. The preoral cavity in certain larvae. 4. (PORIF) A cavity into which many exhalant systems empty and conduct the contents to one or more usually terminal oclules. atriate a.
- atrium oris** (ARTHRO: Crustacea) The preoral cavity.
- atrocha** n. [Gr. *a*, without; *trochos*, wheel] (ANN: Polychaeta) A uniformly ciliated *larva*, lacking the preoral band. atrochal a.
- atrophy** n. [Gr. *a*, without; *trophein*, to feed] Decrease in size of a tissue, organ, or part after full development has been obtained; a condition induced from lack of use, pathological condition or lack of nourishment. see **hypertrophy**.
- atrous** a. [L. *ater*, black] Black in color.
- attachment disk** (ARTHRO: Chelicerata) The series of tiny zigzag lines or spots of silk that serve to anchor the draglines of spiders.
- attenuate** a. [L. *ad*, toward; *tenuis*, thin] To become thin,

slender, fine, extended, growing narrower, tapering.

- attinent** a. [L. *attignus*, touching] Touching, making contact.
- attitude** n. [L. *aptus*, suited] The posture or expression assumed by an organism.
- attractant** n. [L. *ad*, toward; *tractus*, draw] A chemical substance causing positive behavioral responses. see **pheromone**.
- attractor epimeralis muscle** (ARTHRO: Crustacea) In Decapoda, a prominent muscle inserting along the line of the brachiocardiac groove.
- attraction sphere** see **centrosome**
- attrition** n. [L. *ad*, toward; *tritus*, rub] A rubbing out or grinding down by friction.
- atyphlosolate** a. [Gr. *a*, without; *typhlos*, blind; *solen*, channel] Without longitudinal infolding of the intestinal wall; without a typhlosole.
- atypical** adv. [Gr. *a*, without; *typos*, shape] Irregular; not conforming to type.
- auditory** a. [L. *audire*, to hear] Pertaining to the organs or sense of hearing.
- auditory nerve** see **Muller's organ**
- auditory organ** Any specialized structure capable of being stimulated by sound vibrations, such as tympanal organs and auditory hairs.
- auditory peg** see **scolopale**
- aulaeum** n. [Gr. *aule*, courtyard] (ARTHRO: Insecta) In Diptera, a fringed plate found in the labium of many larvae.
- aulostomatous** a. [Gr. *oulos*, pipe; *stoma*, mouth] Bearing a tubular-shaped mouth.
- aurate** a. [L. *auris*, ear] Having ears or ear-like expansions.
- aureate** a. [L. *aurum*, gold] Golden yellow in color.
- aurelia** n. [L. *aurum*, gold] (ARTHRO: Insecta) A chrysalis or pupa of butterflies.
- aurelian** n. [L. *aurum*, gold] (ARTHRO: Insecta) A collector and breeder of butterflies; a lepidopterist.

- aureole** n. [L. *aurum*, gold] A circlet of color that dissipates outwardly.
- auricle** n. [L. *auricula*, little ear] 1. Any ear-shaped structure or small lobe-like appendage. 2. An atrium or chamber of the heart. 3. (ARTHRO: Insecta) *a*. In Hymenoptera, a flat plate forming a part of the pollen basket or corbicula of honeybees. *b*. In Anisoptera, ventrolateral outgrowths of tergum two; oreillets. 4. (CTENO) In Lobata, the four ciliated, delicate lobes projecting from the equatorial level. 5. (MOLL) *a*. Paired chambers that receive blood from each side of the body. *b*. In Bivalvia, an earlike protuberance on the dorsal part of the shell. 6. (PLATY: Turbellaria) A blunt lateral chemical receptor. 7. (ROTIF) Paired ciliated lateral coronal projections that aid in swimming. auricular a.
- auricular crura** (MOLL: Bivalvia) Internal, blunt ridges swelling distally to form low tubercles.
- auricularia larva** (ECHINOD: Holothuroidea) A free-swimming bilaterally symmetrical larva characterized by the main ciliated band being increased in length due to sinuosity. see **dipleurula**.
- auricular sulcus** (MOLL: Bivalvia) A furrow demarcating the auricle from the shell.
- auricular valve** 1. A mechanism that controls the flow of blood in various invertebrates. 2. (ARTHRO: Insecta) Pouches with incurrent ostioles in the heart that prevent the backflow or escape of hemolymph from this vessel.
- auriculate** a. [L. *auricula*, little ear] Bearing an auricle or auricles.
- auriculate antennae** (ARTHRO: Insecta) An antenna with basal joints expanded into an ear-like cover.
- auriculo-openings** see **ostium**
- auriculo-ventricular** a. [L. *auricula*, little ear; dim. *venter*, belly] (ARTHRO: Insecta) The outer valves of the heart between the auricle and the chamber.
- auriform** a. [L. *auris*, ear; *forma*, shape] Ear-shaped.
- aurophore** n. [L. *auris*, ear; *phoreus*, bearer] (CNID: Hydrozoa) In siphonophores, a portion of the float or pneumatopore.

phore.

**austral** a. [L. *australis*, south] Pertaining to a southern biogeographical region extending across North America between the transition and tropical zones, including the United States and Mexico, except the boreal mountains and tropical lowlands.

**Australian Realm** A zoogeographical region comprising Australia, New Zealand and Pacific islands.

**Austro-Columbian** see **Neotropical**

**autecology** n. [Gr. *autos*, self; *oikos*, house; *logos*, discourse] The ecology of an individual organism or species stressing the physical factors of the environment, as opposed to community studies. see **synecology**.

**authority citation** The practice of citing the name of the author of a scientific name or name combination, i.e., X-us Brown, X-us albus Brown, Y-us albus (Brown).

**autoagglutination** n. [Gr. *autos*, self; L. *agglutinare*, to cement to] The agglutination of an individual's cells by its own serum.

**autochthonous** a. [Gr. *autochthon*, from the land itself] Pertaining to aboriginal; indigenous; native; endemic; inherited. see **allochthonous**.

**autocopulation** see **hermaphroditism**

**autodeme** n. [Gr. *autos*, self; *demos*, people] Members of a taxonomic group that perform self-fertilization.

**autoevisceration** n. [Gr. *autos*, self; L. *ex*, out; *viscera*, entrails] (ECHINOD: Holothuroidea) Ejection of intestines and associated organs caused by adverse environmental conditions, severe disturbance, or seasonally; regeneration occurs within weeks.

**autofecundity** n. [Gr. *autos*, self; L. *fecundus*, fruitful] Self-fertilization, as in a few hermaphroditic animals.

**autogamy** n. [Gr. *autos*, self; *gamos*, marriage] Self-fertilization; the fusion of two nuclei originating from a single cell. see **allogamy**.

**autogenesis** n. [Gr. *autos*, self; *genesis*, beginning] Spontaneous generation; abiogenesis. autogenetic a.

**autogeny** n. [Gr. *autos*, self; *genesis*, birth] 1. Self-generation. 2. Endogeny. 3. (ARTHRO: Insecta) The ability of Culicidae females to develop mature eggs without a prior blood meal. autogenous a.

**autogony** see **autogenesis**

**autohemorrhage** n. [Gr. *autos*, self; *haimorrhagia*, a bleeding] (ARTHRO: Insecta) Voluntary exudation or ejection of nauseous or poisonous blood through a rupture of the skin as a deterrent against predators.

**autoheteroploid** n. [Gr. *autos*, self; *heteros*, different; *aploos*, onefold] A heteroploid derived from a single genome or from multiplication of its own chromosomes. see **alloheteroploid**.

**autoinfection** n. [Gr. *autos*, self; L. *inficere*, to taint] Infection of a host by microorganisms or parasites produced within or upon the body of the same individual host.

**autointoxication** n. [Gr. *autos*, self; L. *intoxicare*, to poison] Poisoning of an organism from a toxic substance produced within its own body.

**autokinesis** n. [Gr. *autos*, self; *kinesis*, motion] Voluntary movement. see **allokinesis**.

**autologous** a. [Gr. *autos*, self; *logos*, discourse] Referring to being obtained or derived from an individual organism. see **homology**, **heterology**.

**autolysis** n. [Gr. *autos*, self; *lysis*, loosen] The degradation of tissues after death of a cell by the contained autogenous enzymes. autolytic a. see **heterolysis**.

**automatism** n. [Gr. *automatos*, self-moving] The automatic activity of tissues, organs, or organisms.

**automictic meiotic parthenogenesis** A normal reduction division occurs, followed by the fusion of the two nuclei so that the diploid number of chromosomes is restored; often the female pronucleus fuses with the second polar body nucleus, or two cleavage nuclei may fuse; only females are produced. see **facultative meiotic parthenogenesis**.

**automixis** n. [Gr. *autos*, self; *mixis*, mingling] Obligatory self-fertilization; egg and sperm being derived from the same

individual, as opposed to amphimixis; automictic parthenogenesis.

**automorphic** see **idiomorphic**

**automutagen** n. [Gr. *autos*, self; L. *mutare*, to change; Gr. *gennaen*, to produce] Any mutagen produced in an organism as a normal or abnormal metabolite that may induce gene and chromosome mutations.

**autonomic** a. [Gr. *autos*, self; *nomos*, usage] Functioning due to internal causes; self-regulation; spontaneous. **autonomous** a. see **choronomic**.

**autoparasite** n. [Gr. *autos*, self; *parasitos*, parasite] A parasite existing at the expense of another parasite.

**autopelagic** a. [Gr. *autos*, self; *pelagios*, of the sea] Referring to organisms found only in the surface waters of the sea.

**autophagocytosis** n. [Gr. *autos*, self; *phagein*, to eat; *kytos*, container] The consumption of contractile muscular tissue by its own cells, as opposed to leucocytes.

**autophagy** n. [Gr. *autos*, self; *phagein*, to eat] The eating of an appendage shed from the body by autotomy or otherwise.

**autoploid** see **autopolyploid**

**autopolyploid** n. [Gr. *autos*, self; *polys*, many; *aploos*, one-fold; *eidos*, form] A polyploid originating from the doubling of a diploid chromosome set. see **allopolyploid**.

**autoskeleton** n. [Gr. *autos*, self; *skeleton*, dried body] (PORIF) The endoskeleton, comprised of spicules or spongin fibers secreted by the cells.

**autosomal linkage** The linkage of alleles on the same autosome.

**autosome** n. [Gr. *autos*, self; *soma*, body] Any chromosome other than a sex-chromosome; euchromosome. see **allosome**.

**autospasy** n. [Gr. *autos*, self; *spain*, to pluck off] (ARTHRO: Chelicerata) The loss of appendages by breaking them at a predetermined locus of weakness when pulled by an outside force; frequent in spiders and other arachnids.

**autosynapsis** see **autosyndesis**

**autosyndesis** n. [Gr. *autos*, self; *syndesis*, a binding together] The pairing of completely or partially homologous chromosomes contained in the same gametes at fertilization; autosynapsis. see **allosyndesis**.

**autotetraploid** n. [Gr. *autos*, self; *tetraple*, fourfold] A tetraploid containing 4 sets of chromosomes per cell.

**autothysis** see **sting autotomy**

**autotilly** n. [Gr. *autos*, self; *tillesthai*, to pluck] Loss of appendages by self-amputation. see **autospasy**.

**autotoky** n. [Gr. *autos*, self; *tokos*, birth] The production of progeny by a single organism, including hermaphroditism and parthenogenesis.

**autotomize** v.t. [Gr. *autos*, self; *temnein*, to cut] To shed a part intentionally; to effect autotomy.

**autotomy** n. [Gr. *autos*, self; *tome*, a cutting] The act of reflex self-mutilation of a part or appendage of various invertebrates, i.e., annelids, cnidarians, crustaceans and insects.

**autotriploid** n. [Gr. *autos*, self; *triploos*, threefold] A triploid in which the three diploid sets are identical. see **allotriploid**.

**autotrophic** a. [Gr. *autos*, self; *trophein*, to nourish] Capable of synthesizing all substances needed for nutrition from inorganic food substances. see **heterotroph**.

**autotype** see **heautotype**

**autozoecium** n. [Gr. *autos*, self; *zoon*, animal; *oikos*, house] (BRYO) A tube that encloses an autozoid.

**autozoid** n. [Gr. *autos*, self; *zoon*, animal; *eidos*, form] 1. (BRYO) *a*. A zoid having at some stages of ontogeny a protrusible lophophore, with or without the ability to feed. *b*. A common bryozoan containing feeding organs in the colony; capable of all life functions in a monomorphic colony. 2. (CNID: Anthozoa) In Alcyonaria, a feeding individual member of a polymorphic colony.

**autozooidal polymorph** (BRYO) An autozoid with a protrusible lophophore, with or without feeding ability, differing from ordinary feeding zooids in size, shape, tentacle number, or other features.

- auxiliaries** n.pl. [L. *auxilium*, aid] (ARTHRO: Insecta) In Hymenoptera, potential queen bees (gynes) that, in association with a queen, become workers. see **gyne**.
- auxilia** n.; pl. **-lae** [L. *auxilium*, aid] (ARTHRO: Insecta) Small plates between the unguitactor and the claws; the basipulvilli.
- auxiliary** a. [L. *auxilium*, aid] Referring to that which supplements, aids or supports.
- auxiliary vein** (ARTHRO: Insecta) In Diptera, the subcostal vein anterior to the radius.
- auxoautotroph** n. [Gr. *auxein*, to increase; *autos*, self; *trophe*, nourishment] Any organism capable of synthesizing the growth substances required in its development. see **auxoheterotroph**.
- auxocyte** n. [Gr. *auxein*, to increase; *kytos*, container] Any germ cell in the growth period, during which synapsis and tetrad formation occur.
- auxoheterotroph** n. [Gr. *auxein*, to increase; *heteros*, other; *trophe*, nourishment] Any organism that is incapable of synthesizing the growth substances required in its development.
- auxotroph** n. [Gr. *auxein*, to increase; *trophe*, nourishment] Nutritionally dependent cells, individuals or strains whose growth depends on a specific nutrient in addition to their basic food medium.
- avesiculate** a. [Gr. *a*, without; L. *vesicula*, small bladder] (ANN) *a*. Referring to a genital system without seminal vesicles. *b*. Refers to a nephridium without a bladder.
- avicular** a. [L. dim. *avis*, bird] Beak-like.
- avicularium** n.; pl. **-ria** [L. dim. *avis*, bird] (BRYO) An enlarged pedunculate operculum of polymorphs, resembling a bird's beak and more intricately reinforced than those of ordinary feeding autozooids.
- aviculoid** a. [L. dim. *avis*, bird; Gr. *eidos*, form] Having wing-like projections.
- axenic** a. [Gr. *a*, without; *xenos*, guest] Without, or free from associated organisms; aseptic. see **xenic**, **dixenic**, **mon-**

**oxenic, polyxenic, trixenic.**

- axial** a. [L. *axis*, axle] Of or pertaining to an axis; relative to the central axis of a cylindrical body or organ.
- axial cells** (MESO: Rhombozoa) Central cells, comprised of a nucleus and germinal cells (axoblasts).
- axial construction** (PORIF) A type of skeletal organization with certain components condensed to form a dense central region or axis.
- axial filament** 1. (ARTHRO: Insecta) see axoneme. 2. (PORIF) A protein core around which siliceous spicules are organized.
- axial gland** (ECHINOD) A dark elongated mass of spongy tissue extending along the length of the stone canal, forming part of the hemal system; sometimes called axial organ or genital stolon.
- axial gradient** Gradation in metabolic rate along the three main body axes, anterior-posterior, dorsoventral and median-lateral.
- axial organ** see **axial gland**
- axial stylet, axial spear** see **stomatostyle, odontostyle**
- axil** n. [L. *axilla*, armpit] (ECHINOD: Asteroidea) The angle formed by junction of rays or straight-sided arms with no interbrachial arcs.
- axil-arm** (ECHINOD: Crinoidea) A main-axil arm and its branches, exclusive of terminal branchlets (omega-ramule).
- axilla** n.; pl. **axillae** [L. *axilla*, armpit] (ARTHRO: Insecta) In Hymenoptera, a triangular or rounded sclerite on each side of the scutellum.
- axillaries** see **pteralia**
- axillaris** n. [L. *axillaris*, of an axil] (ARTHRO: Insecta) The second and third anal wing veins.
- axillary** a.; pl. **-ies** [L. *axilla*, armpit] 1. (ARTHRO: Insecta) Pertaining to the axilla. 2. (ECHINOD: Asteroidea) In an axil, applied to a single ossicle. 3. (ECHINOD: Crinoidea) A brachial supporting 2 arm branches.
- axillary cell** (ARTHRO: Insecta) A cell in the anal area of a

wing.

**axillary cord** (ARTHRO: Insecta) The posterior edge of the articular membrane of a wing base.

**axillary excision** (ARTHRO: Insecta) In Hymenoptera, a notch in the hind wing that is at the distal end of the second anal furrow between the 2nd and 3rd anal veins.

**axillary furrow** see **plica jugalis**

**axillary incision** (ARTHRO: Insecta) In Diptera, an incision on the inner margin of a wing, distinguishing the alula from the main part.

**axillary lobe** (ARTHRO: Insecta) One of the sclerites covering the base of a wing.

**axillary membrane** (ARTHRO: Insecta) The membrane of the wing base extending from the tegula at the base of the costal margin to the axillary cord at the base of the anal area.

**axillary plate** (ARTHRO: Insecta) In Odonata, a large plate hinged to the *tergum*, supported by an arm from the pleural wing process.

**axillary region** (ARTHRO: Insecta) That area of a wing base that contains the axillary sclerites.

**axillary sclerites** (ARTHRO: Insecta) Small plates between the notum and base of the wing, functioning in wing-flexing; sometimes called ossicles or pteralia.

**axillary vein** (ARTHRO: Insecta) A vein in the anal area of the hind wing.

**axis** n.; pl. **axes** [L. *axis*, axle] A line of reference around, along or across where symmetry is established or gradients measured.

**axis cylinder** An axon.

**axoblast** n. [Gr. *axon*, axle; *blastos*, bud] (MESO: Rhombozoa) Germinal cells of dicyemids that undergo cleavage and produce new individuals.

**axocoel** n. [Gr. *axon*, axle; *koilos*, hollow] (ECHINOD) The first pair of coelomic sacs in an embryo, that open to the surface by the hydropore.

**axon, axone** n. [Gr. *axon*, axle] A long-unbranched or sparsely branched, nerve fiber, which usually conveys impulses away from the cell-body of its neuron.

**axoneme** n. [Gr. *axon*, axle; *nema*, thread] The core of a cilium or *flagellum*, comprising microtubules; genoneme of a chromosome.

**axoplasm** n. [Gr. *axon*, axle; *plasma*, formed or molded] The cytoplasm or neuroplasm of an axis cylinder.

**azoic era** A geologic era embracing the first four or five billion years of earth history, antedating any record of organized life forms.

**azonic** a. [Gr. *a*, without; *zone*, belt] Not restricted to a zone or locality.

**azuophil** a. [F. *azur*, blue; Gr. *philein*, to love] Having an affinity for staining with azure-eosin combinations. see **eosinophil**.

**azygobranchiate** a. [Gr. *a*, without; *zygon*, yoke; *branchia*, gills] Pertaining to gills or ctenidia variously reduced on one side.

**azygous** n. [Gr. *a*, without; *zygon*, yoke] An unpaired appendage, structure or process. **azygous, azygote** a.

## B

- baccate** a. [L. *bacca*, berry] Berry-like in appearance; bacciform.
- bacillary** a. [L. *bacillum*, little stick] Rod-shaped, or consisting of rod-shaped structures.
- bacillary band** (NEMATA) A modification of the hypodermis, consisting of glandular and nonglandular cells.
- bacillary layer** see **brush border**
- bacilliform** a. [L. *bacillum*, little stick; *forma*, shape] 1. Rod-shaped. 2. (ARTHRO: Insecta) In certain male Diptera, refers to a pair of sclerites in the postabdomen joining the hypandrium and epandrium.
- back** n. [A.S. *baec*, the rear or dorsal part] The dorsal or upper surface.
- back-cross** A cross between a heterozygote and one of its parents.
- back-mutation** The reversion by mutation of a mutant gene to the form from which it was derived.
- bacteremia** n. [Gr. *bakterion*, small rod; *haima*, blood] The presence of bacteria in the hemolymph or blood of invertebrates, without production of harmful toxins or other deleterious effects.
- bacteriophagous** a. [Gr. *bakterion*, small rod; *phagein*, to eat] Feeding on bacteria.
- baculiform** a. [L. *baculum*, stick or rod; *forma*, shape] Appearing rod- or staff-like.
- baculite** n. [L. *baculum*, stick or rod] (MOLL: Cephalopoda) A straight shelled ammonite, extinct at the end of the Cretaceous Period.
- baenomere** n. [Gr. *bainein*, to walk; *meros*, part] (ARTHRO: Insecta) The leg-bearing thoracic segment.
- baenopoda** n. [Gr. *bainein*, to walk; *pous*, foot] (ARTHRO: Insecta) The thoracic legs.
- baenosome** n. [Gr. *bainein*, to walk; *soma*, body] (ARTHRO: Insecta) The thorax.
- Baer's disc** (PLATY: Trematoda) In Aspidogastrea, the large, ventral sucker. see **opisthaptor**.
- bailer** n. [F. *baille*, a bucket] (ARTHRO: Crustacea) An exopod of the maxilla of crayfish and lobsters that functions in regulating the flow of water in the gill chamber; scaphognathite.
- balanced lethals** Heterozygotes in which a gene mutation or chromosome structural change occurs that blocks normal development and is fatal before sexual maturity. see **lethal factor**.
- balanced load** A term describing a decrease in the overall fitness of a population due to the component genes that are maintained in the population because they add to fitness in different combinations, i.e., heterozygotes.
- balanced polymorphism** A polymorphism maintained in the same breeding population by a selective superiority of the heterozygotes over either type of homozygotes. see **transient polymorphism**.
- balancers** n.pl. [L. *bis*, two; *lanx*, plate, pan of a balance] (ARTHRO: Insecta) The halteres of Diptera.
- balanoid** a. [Gr. *balanos*, acorn; *eidōs*, like] Acorn shaped.
- balantin, balantine** n. [Gr. *balantidion*, little bag] (ANN: Oligochaeta) Male and prostatic pores in segment xix.
- Balbani's body/nucleus** The yolk nucleus.
- Balbani ring** (ARTHRO: Insecta) In chironomid Diptera, a large RNA puff on chromosome IV of the salivary glands during larval development.
- bold** a. [ME. *balled*, equivalent to ball, white spot] Lacking specific hair or other surface covering.
- Baldwin effect** The condition in which an organism can stay in a favorable environment, with modification of the phenotype by mutation and selection, until genetic assimilation has been achieved.

- ballonets** n.pl. [OHG. *balla*, a spherical body] (NEMATA: Saccernentea) Four inflated areas in the cephalic region, immediately posterior to the lips, that form a collarette in Gnathostomatidae; head bulb of some authors.
- ballooning** n. [OHG. *balla*, a spherical body] (ARTHRO: Chelicerata) Flying through the air on silken lines spun by spiders.
- band** n. [A.S. *bindan*, band] 1. A transverse marking broader than a line. 2. (ARTHRO: Insecta) *a.* In Diptera, the chromosome pairing of like chromomeres that produce the giant chromosomes. *b.* In male Lepidoptera, a descriptive term of a linear series of cornuti.
- barb** n. [L. *barba*, beard] 1. Any spine or hair-like bristle with a process projecting obliquely or crosswise from the surface. 2. A spine with teeth pointing backward.
- barbate, barbatus** a. [L. *barba*, beard] Tufts or fascicles of hair or short bristles; bearded; having tufts of hair.
- barbula** n.; pl. **-lae** [L. dim. *barba*, beard] (ARTHRO: Insecta) In Coleoptera, a tuft of hairs or short bristles at the sides of the abdomen near the anal region of scarabaeoid larvae.
- bark** n. [Sw. *bark*, rind] (PORIF) The outer casing of spongin of those having discontinuous fiber structure.
- baroreceptor, baroreceptor** n. [Gr. *baros*, weight; L. *capere*, to take] An organ perceiving changes in pressure.
- barotropism** n. [Gr. *baros*, weight; *tropein*, to turn] A response to pressure stimuli.
- barrier** n. [OF. *barre*, bar] An obstacle or obstruction that limits the spread or distribution of animals.
- barrier reef** see **coral reef**
- basad** adv. [L. *basis*, base; *ad*, to] Toward the base.
- basal** a. [L. *basis*, base] Pertaining to the base; near the point of attachment of a structure or appendage.
- basalar** a. [L. *basis*, base; *ala*, wing] (ARTHRO: Insecta) Pertaining to the sclerites below the wing base.
- basal bud** (BRYO: Gymnolaemata) The bud arising from the basal wall of the parent zooid. see **distal bud**.

- basal canal** (BRYO) The circumoral lacuna of the lophophore into which the internal lacunae of all the tentacles open.
- basal diaphragm** (BRYO: Stenolaemata) The diaphragm acting as the floor of the living chamber.
- basal disc** (BRYO: Stenolaemata) The encrusting proximal-most part of an ancestrula.
- basalia** a. [L. *basis*, base] (PORIF) Pertaining to spicules protruding from the lower surface of a sponge.
- basalis** n. [L. *basis*, base] (ARTHRO: Insecta) The main mandibular sclerite to which all other parts are joined.
- basal knobs** (NEMATA) The posterior knobs of the oral stylet. see **stylet knobs**.
- basal lamina** (PORIF) The attachment surface.
- basal margin** (ARTHRO: Crustacea) In Cirripedia, the lower edge of the *scutum*, *tergum* or other plates.
- basal plates** 1. (ECHINOD: Crinoidea) A cycle of 5 aboral calyx plates in primitive stalked crinoids. see **radial plates**. 2. (NEMATA) The circular base of the cephalic framework, composed of an annular structure with posteriorly directed rim, the basal ring, and six radial elements.
- basal platform** (BRYO: Gymnolaemata) In Cheilostomata, the multizoidal skeletal layers of the basal zooidal walls; basal plate.
- basal ring** (NEMATA) The annular structure that extends posteriorly from the outer margin of the basal plate of the cephalic framework.
- basal sclerites** (ARTHRO: Insecta) In Diptera, two lateral, vertical lamellae uniting ventrally to form a trough that lodges the pharynx.
- basal suture** (ARTHRO: Insecta) In Isoptera, the line along which the wing separates from the body and shedding takes place.
- basal window** (BRYO: Gymnolaemata) In Cheilostomata, the subcentral, uncalcified section of an encrusting colony's exterior basal zooidal wall.
- basal zooidal wall** (BRYO) In Stenolaemata and Gymnolae-

mata, the interior or exterior zooidal supporting wall, normally parallel to the orificial wall.

**base** n.; pl. **bases** [L. *basis*, base] 1. The bottom of anything. 2. The main ingredient in anything that is a fundamental element or constituent. 3. The portion of a body to which an appendage or structure is attached. 4. (MOLL) The extremity opposite the apex of a shell spire.

**basement membrane** 1. The noncellular membrane underlying the epidermal cells of the body wall that separates it from the body cavity. 2. (ARTHRO: Insecta) Applied also to the inner surface of the eye; the basilemma.

**basicarnal angle** (ARTHRO: Crustacea) In Cirripedia, the intersection of the basal and median dorsal margins of the dorsal plate (tergum).

**basicerite** n. [Gr. *basis*, base; *keras*, horn] (ARTHRO: Crustacea) In Decapoda, the second segment of the antennal stalk of shrimp (Caridea) that bear flattened exopods.

**basiconic peg** (ARTHRO: Insecta) Sensory organs in the form of short hairs or pegs projecting above the general surface.

**basicosta** n. [L. *basis*, base; *costa*, rib] (ARTHRO: Insecta) The basal part of the *coxa*, as indicated by the basicostal suture. **basicostal** a.

**basicostal suture** (ARTHRO: Insecta) A strengthening ridge that indicates the external basal part of the *coxa*, the basicosta.

**basicoxite** n. [L. *basis*, base; *coxa*, hip] (ARTHRO: Insecta) The narrow basal rim of the *coxa*.

**basifemoral ring** (ARTHRO: Chelicerata) In Acari, the suture in the basal segment of the *femur*, that separates the basifemur and telofemur of the leg.

**basifemur** n. [L. *basis*, base; *femur*, thigh] (ARTHRO: Chelicerata) In Acari, a segmental division of the *femur*, separated from the telofemur by the basifemoral ring.

**basilaire** see **jugum**

**basilar** a. [L. *basis*, base] Related to or situated at the base.

**basilateral angle** see **basitergal angle**

**basilemma** see **basement membrane**

**basimandibula** n. [L. *basis*, base; *mandibulum*, lower jaw] (ARTHRO: Insecta) In Orthoptera, a narrow sclerite between the mandible and gena; a trochantin.

**basimaxilla** n. [L. *basis*, base; *maxilla*, upper jaw] (ARTHRO: Insecta) The basal maxillary sclerite.

**basimetrical** n. [Gr. *basis*, base; *metrikos*, of measuring] The vertical or horizontal distribution of organisms at the sea-bottom.

**basinym** n. [Gr. *basis*, base; *onyma*, name] The name upon which new names of species or higher classifications has been based. see **isonym**.

**basiocludent angle** (ARTHRO: Crustacea) In Cirripedia, the intersection of basal and occludent margins of the scutum.

**basiophthalmite** n. [Gr. *basis*, base; *ophthalmos*, eye] (ARTHRO: Crustacea) The proximal segment of the eyestalk, that articulates with the distal segment (podophthalmite) bearing the corneal surface of the eye.

**basiperiphallus** n.; pl. **-li** [Gr. *basis*, base; *peri*, around; *phallos*, penis] (ARTHRO: Insecta) In Protura, the basal ring of the periphallus, into which the acroperiphallus is sometimes retracted.

**basipharynx** n. [Gr. *basis*, base; *pharynx*, gullet] (ARTHRO: Insecta) The epipharynx and hypopharynx combined.

**basipod(ite)** n. [Gr. *basis*, base; *pous*, foot] 1. (ARTHRO: Insecta) The second segment of a telopodite; the first trochanter. 2. (ARTHRO: Crustacea) see **basis**.

**basiproboscis** n. [Gr. *basis*, base; *proboskis*, trunk] (ARTHRO: Insecta) In Diptera, the basal portion of the proboscis; the rostrum.

**basipulvilli** n.pl. [L. *basis*, base; *pulvillus*, small cushion] (ARTHRO: Insecta) In Diptera, the small lateral sclerite at the base of the pulvillus.

**basirostral** a. [L. *basis*, base; *rostrum*, bill] At the rostrum base.

**basis** n; pl. **bases** [L. *basis*, base] 1. A general term for the base of any appendage. 2. (ARTHRO: Crustacea) *a.* A proto-

pod segment adjoining the coxa and carrying the exopod and endopod distally. *b.* The basipodite. *c.* A basal calcareous or membranous plate functioning in anchorage of sessile barnacles to the substrate.

**basiscopic** a. [Gr. *basis*, base; *skopein*, to view] Looking toward the base. see **acroscopic**.

**basiscutal angle** (ARTHRO: Crustacea) Intersection of basal and scutal margins of the tergum in thoracic barnacles.

**basisternum** n. [L. *basis*, base; *sternum*, breastbone] (ARTHRO: Insecta) That part of a thoracic sternum anterior to the sternacostal suture and/or the sternal apophyses; sternannum; antesternite. see **furcasternum**.

**basistylus** n. [Gr. *basis*, base; *stylos*, pillar] (ARTHRO: Insecta) 1. In Diptera, the basal segment of the gonopods. 2. In Protura, the basal part of the stylus. see **dististylus**.

**basitarsal ring** (ARTHRO: Chelicerata) A suture separating the basitarsus and telotarsus of the legs; mesotarsal ring.

**basitarsal scissure** (ARTHRO: Chelicerata) A scissure separating the basitarsus and telotarsus of the leg.

**basitarsus** n.; pl. **-si** [Gr. *basis*, base; *tarsos*, flat of the foot] (ARTHRO) 1. The proximal division of a tarsus; the metatarsus. 2. In Chelicerata, separated from the telotarsus by the basitarsal ring or scissure. **basitarsal** a.

**basitergal angle** (ARTHRO: Crustacea) Intersection of the basal and tergal margins of the scutum of thoracic barnacles.

**basitibial plate** (ARTHRO: Insecta) In Apoidea, a small plate or scalelike projection at the base of the hind tibia.

**basitrichous isorhiza**, **basitrich** (CNID) Isorhizal nematocyst with spines at the base of the tube only.

**basivalvula** n.; pl. **-lae** [L. *basis*, base; dim. *valva*, fold] (ARTHRO: Insecta) A small sclerite at the base of the first valvulae of the genitalia.

**basopinacocytes** n.pl. [Gr. *basis*, base; *pinax*, tablet; *kytos*, container] (PORIF) Cells that form the basal epithelium; in *Corvomeyenia*, a fresh-water sponge, they actively ingest and digest bacteria.

**batatiform** a. [L. *batata*, sweet potato; *forma*, shape] Resembling the shape of a sweet potato.

**Batesian mimicry** A form of deceptive mimicry in which a palatable species assumes the appearance of a species distasteful or poisonous to a predator; false warning color; allosematic color; pseudaposematic color. see **Mullerian mimicry**.

**bathmis** see **pterostigma**

**bathyal** a. [Gr. *bathys*, deep] That zone over the continental slope to a depth of perhaps 2000 meters.

**bathylimnetic** a. [Gr. *bathys*, deep; *limne*, marsh] Pertaining to or inhabiting the depths of fresh water lakes or marshes.

**bathymetric** a. [Gr. *bathys*, deep; *metron*, measure] 1. Pertaining to the science of measuring depths of oceans, seas or other large bodies of water. 2. Pertaining to the vertical or altitudinal distribution of organisms.

**bathymetric zone** One of the horizontal divisions of an ocean; one of the contour zones of the ocean or sea.

**bathypelagic** a. [Gr. *bathys*, deep; *pelagos*, sea] Living on or near the bottom in the depths of the ocean. see **epipelagic**, **mesopelagic**.

**battery** n.; pl. **-ies** [F. *battre*, to beat] (CNID: Hydrozoa) A group of nematocysts on the tentacles of hydras and some other hydroid polyps.

**batumen** n. [uncertain origin] (ARTHRO: Insecta) A layer of propolis, or hard cerumen plus various other materials that enclose the nest cavity of a colony of stingless bees.

**batumen plates** (ARTHRO: Insecta) Batumen walls partitioning portions of a larger cavity from that utilized as a nest cavity by stingless bees.

**bave** n. [F. *bave*, drivel] (ARTHRO: Insecta) The double thread of fluid silk spun by caterpillars.

**B-chromosome**, **supernumerary**, **accessory** or **extra chromosomes** Any chromosome of a heterogeneous category of chromosomes that differ in their behavior from normal or A-chromosomes.

**bdelloid** a. [Gr. *bdella*, leech; *eidos*, form] Being leech-like in

appearance.

**bead** n. [A.S. *gebed*, prayer] (MOLL: Bivalvia) A rounded rib protuberance.

**beaded** see **moniliform**

**beak** n. [OF. *bec*, beak] 1. Anything projecting and ending in a point. 2. (ARTHRO) *a.* In Chelicerata, the gnathosome of acarines. *b.* In Crustacea, the anteroventral projection of the free margin of the carapace; not equivalent to rostrum. *c.* In Insecta, the snout, proboscis, or rostrum; in Homoptera, usually 3-segmented, arising from the ventroposterior of the head and directed backward under the body. 3. (BRACHIO) The pedicel valve. 4. (BRYO) The avicularia. 5. (MOLL) *a.* An angular projection of the apex of an intermediate valve; a mucronate valve; a similar projection of the upper surface of the valve anteriorly and between the sutural laminae is termed a false beak. *b.* In Bivalvia, nose-like angle, along or above the hinge margin, marking the area of shell growth. *c.* In Cephalopoda, paired horny mandibles.

**beaked apex** (ARTHRO: Crustacea) In Balanomorpha, the upper angle of the tergum formed into a long narrow point.

**bean shaped** see **reniform**

**beard** n. [L. *barba*, beard] 1. Any tuft of filaments on any part of an organism. 2. (ARTHRO: Insecta) For Diptera, see **mystax**. 3. (MOLL) see **byssus**. **bearded** a.

**bedeguar, bedegar** n. [F. *bedeguar*, Per. *bad-awar*, wind-brought] (ARTHRO: Insecta) A cynipid gall of *Rhodites rosae*; a pin-cushion gall.

**beebread** n. (ARTHRO: Insecta) A bitter pollen stored by bees in the honeycomb that when mixed with honey is used for food by larvae and newly-emerged workers; cerago. see **ambrosia, fungus garden**.

**bee dance** (ARTHRO: Insecta) A series of movements performed by honeybees upon returning to the hive, that informs other bees of the location of the food source.

**bee lice** (ARTHRO: Insecta) Small, flattened, apterous dipteran flies that are commensal with honeybees, often epizoic on the workers or queens.

**bee milk** see **worker jelly**

**bees** n.pl. [A.S. *beo*, bee] (ARTHRO: Insecta) The flower-visiting, social or solitary, aculeate hymenopterous insects belonging to the superfamily Apoidea.

**beeswax** n. [A.S. *beo*, bee; *weax*, wax] (ARTHRO: Insecta) A wax secreted by glands on the ventral surface of the abdomen of worker bees that is used in the construction of honeycombs.

**belemnoid** a. [Gr. *belemnion*, javelin; *eidos*, form] Dartlike in shape.

**bell** n. [A.S. *belle*, bell] 1. Any bell-shaped structure. 2. (CNID) *a.* In Hydrozoa, the umbrella of jellyfish. *b.* In Scyphozoa, the nectophores of siphonophores. 3. (NEMATA) The bursa.

**Bellonci organ** see **organ of Bellonci**

**bell shaped** see **campanulate**

**belonoid** a. [Gr. *belone*, needle; *eidos*, form] Needle-like in shape.

**benthic** a. [Gr. *benthos*, depths of sea] Pertaining to the sea-bottom; maybe extended to include some of the benthic animals: crabs, snails, starfish, certain worms, clams, sponges, sea anemones, corals, bryozoans, crinoids, barnacles and tunicates.

**benthopotamous** a. [Gr. *benthos*, depths; *potamos*, river] Pertaining to organisms or plants living on the bottom of a river or stream.

**Bergmann's rule** The principal that the average body size is geographically variable in that the animals are larger in the cooler climates of the range of a species.

**Berlese's organ** see **Ribaga's organ**

**berry** n. [A.S. *berie*, berry] (ARTHRO: Crustacea) An egg of certain Decapoda.

**besomiform** a. [A.S. *besma*, broom; L. *forma*, shape] Broom shaped.

**beta** n. [Gr. *beta*] The second letter of the Greek alphabet ( β ) used to designate the second in a series, as -chlorophyll and -chlorophyll.

**beta-chlorophyll** (ARTHRO: Insecta) The chlorophyll that produces color.

**beta-female** see **teratogyne**

**beta taxonomy** A level of taxonomy involving the arrangement of species into a natural system of lower and higher taxa. see **alpha taxonomy**, **gamma taxonomy**.

**bialate** a. [L. *bis*, two; *alatus*, winged] Two-winged.

**biangular** a. [L. *bis*, two; *angulus*, corner, bend] Having two angles or double keeled.

**biarcuate** a. [L. *bis*, two; *arcuatus*, bent like a bow] Twice curved.

**biareolate** a. [L. *bis*, two; *areolatus*, small places] Two celled, or having two areolae. see **bilocular**.

**biarticulate** a. [L. *bis*, two; dim. *artus*, joint] Having two joints; diarticular.

**biaxial** a. [L. *bis*, two; *axis*, axle] Having two axes.

**bicanaliculate** a. [L. *bis*, two; *canalis*, a channel] Having two channels or grooves.

**bicarinate** a. [L. *bis*, two; *carina*, keel] Having two carinae or keel-like projections.

**bicaudal, bicaudate** a. [L. *bis*, two; *cauda*, tail] Possessing two tails or anal processes.

**bicellular** a. [L. *bis*, two; *cellula*, little cell] Composed of two cells.

**biciliate** a. [L. *bis*, two; *cilium*, eyelash] Furnished with two cilia, flagella, or elaters.

**biconcave** a. [L. *bis*, two; *concavus*, hollow or arched inward] Being concave on both sides; amphicoelous. see **amphicyrtic**.

**bicondylic** see **dicondylic**

**biconic** a. [L. *bis*, two; Gr. *konos*, cone] Being formed as two cones placed base to base.

**biconvex** a. [L. *bis*, two; *convexus*, arched outward] Being convex on opposite sides; lens-shaped. see **amphicyrtic**, **amphicoelous**.

**bicorn** a. [L. *bis*, two; *cornu*, horn] Bearing two horns; crescentlike.

**bicornuate** a. [L. *bis*, two; *cornutus*, horned] Having two horns or cephalic processes.

**bicornuate uterus** A uterus in which both uteri are fused, but have short lateral extensions.

**bicron** see **nanometer**

**bicuspidate** a. [L. *bis*, two; *cuspidatus*, pointed] Being double pointed; having two cusps or points.

**bidactyl** n. [L. *bis*, two; Gr. *daktylos*, finger] (ARTHRO) An appendage, ambulacrum, apotele, or claw with two lateral ungues. see **monodactyl**, **tridactyl**.

**bideficiency** n. [L. *bis*, two; *deficare*, to be wanting] A form of phanerotaxy, exhibited by the absence of two of the elements typically present in a particular organism. see **holotaxy**.

**bidentate** a. [L. *bis*, two; *dens*, tooth] Having two teeth.

**bidenticulate** a. [L. *bis*, two; dim. *dens*, tooth] Having two small teeth or tooth-like processes.

**bidesmotic** a. [L. *bis*, two; Gr. *desmos*, bond] Pertaining to two tendons attached at the base of the distal segment of an appendage; a eudesmotic articulation.

**bidiscoidal** a. [L. *bis*, two; Gr. *diskos*, circular plate; *eidōs*, form] Having two disc-shaped parts.

**bidiverticulate** a. [L. *bis*, two; *devertere*, to turn away] Having two diverticula.

**biemarginate** a. [L. *bis*, two; *emarginatus*, notched at the apex] Having two notches on the border or edge.

**biennial** a. [L. *bis*, two; *annus*, year] Occurring once every two years.

**bifacial** a. [L. *bis*, two; *facies*, face] Having opposite surfaces alike.

**bifarious** a. [L. *bis*, two; *fariam*, in rows] Being arranged in 2 rows, on either side of an axis; being oriented or pointed in opposite directions.

- bifasciate** a. [L. *bis*, two; *fascia*, band] With two broad well defined bands or fascia.
- bifenestrate** a. [L. *bis*, two; *fenestra*, window] (NEMATA: Secernentea) A term used to describe heteroderid fenestra divided by a broad vulval bridge so that it appears to be two distinct semi-fenestra. see **ambifenestrate**.
- bifid** a. [L. *bis*, two; *findere*, to split] Divided into two branches, arms, or prongs, or into two equal parts by a cleft; separated down the middle by a slit; divided by a groove into two parts.
- bifilar** a. [L. *bis*, two; *filum*, thread] Having two filaments, threads, or fibers.
- biflabellate** a. [L. *bis*, two; *flabellum*, fan] (ARTHRO) Twice fabelate; a form of antenna with each side of the joints having long flattened processes.
- biflagellate** a. [L. *bis*, two; *flagellum*, whip] Having two flagella; dikont.
- biflex** a. [L. *bis*, two; *flectere*, to bend] Bending in two directions.
- bifoliate colony** (BRYO: Stenolaemata) An erect colony formed by two layers of zooids budding back to back from the interior multizoidal median wall.
- bifollicular** a. [L. *bis*, two; *folliculus*, small sac] Having two follicles.
- biforate** a. [L. *bis*, two; *forare*, to bore] Having two perforations.
- biform** a. [L. *bis*, two; *forma*, form] Having two forms, or combining characteristics of two forms.
- biformes** n. [L. *bis*, two; *forma*, form] (ARTHRO: Crustacea) A carapace that reflects sexual dimorphism in differing valve proportions for each sex of the same species.
- biforous spiracle** (ARTHRO: Insecta) An immature's spiracle having two entrances (air tubes); annular-biforous spiracles.
- bifurcate** a. [L. *bis*, two; *furca*, fork] Divided into two branches, stems or knobs; two pronged.

- bigeminal** a. [L. *bis*, two; *geminus*, twin] Doubled; paired.
- bigener** n. [L. *bis*, two; *genus*, kind] A bigeneric hybrid.
- bigeneric** a. [L. *bis*, two; *genus*, kind] Pertaining to hybrids between species of different genera.
- bigiceriate, bigigeriate** a. [L. *bis*, two; *gigerium*, entrail] Having two gizzards.
- biguttate** a. [L. *bis*, two; *gutta*, drop, spot] Having two drop-like spots.
- bijugate** a. [L. *bis*, two; *jugum*, yolk] Being yoked two together; two-paired.
- bilabiate spiracle** (ARTHRO: Insecta) An elongate or annular spiracle of certain larvae with a pair of projecting lips interior to the peritreme; one having two lips at the slit-like entrance.
- bilamellar** a. [L. *bis*, two; *lamella*, plate] Having two lamellae or plates; two-lipped.
- bilaminar** a. [L. *bis*, two; *lamina*, thin plate] Consisting of two lamina or thin plates; diploblastic.
- bilaminate colony** (BRYO: Gymnolaemata) A cheilostomate colony with erect branches comprised of two layers of zooids, each with separate, but common exterior basal walls.
- bilateral** a. [L. *bis*, two; *latus*, side] Having two equal or symmetrical sides.
- bilateral cleavage** That in which the blastomeres exhibit marked bilateral symmetry.
- Bilateralialia, Bilatera** A former division of the animal kingdom containing all those forms that show bilateral symmetry.
- bilateral symmetry** Symmetry such that a body or part can be divided through the longitudinal axis by one mediosagittal plane into equivalent right and left halves, each for all practical purposes a mirror image of the other. see **radial symmetry**.
- biliary vessels** see **Malpighian tubules**
- bilineate** a. [L. *bis*, two; *lineatus*, of a line] Of or pertaining to two lines; marked with two lines.
- bilobate, bilobed** a. [L. *bis*, two; *lobus*, rounded projection]

Having two lobes.

**bilocular** a. [L. *bis*, two; *loculus*, compartment] Divided into two cells, chambers, compartments or loculi.

**bimaculate** a. [L. *bis*, two; *macula*, spot] Marked with two spots or stains.

**bimarginate** a. [L. *bis*, two; *margo*, border] Having two margins.

**bimineralic skeleton** (BRYO: Gymnolaemata) Zoarium or zooecium composed of layers of calcite and others of aragonite.

**bimuscular** a. [L. *bis*, two; *musculus*, muscle] Having two muscles.

**binary** a. [L. *binarius*, from *bini*, pair] 1. Composed of two units, elements or parts. 2. Refers to designations of two kinds of names. see **binominal nomenclature**.

**binary fission** A form of asexual reproduction in which a cell, or organism divides into approximately equal parts. see **transverse fission**.

**binary nomenclature** see **binominal nomenclature**

**binate** a. [L. *bini*, pair] Doubled; growing in pairs.

**binervate** a. [L. *bis*, two; *nervus*, nerve] Having two nerves or veins.

**binocular** a. [L. *bini*, pair; *oculus*, eye] Having two eyes.

**binodulose** a. [L. *bis*, two; *nodulus*, little knot] Having two nodes, knobs, or swellings of small size.

**binomen** n. [L. *bis*, two; *nomen*, name] The scientific designation of a species, consisting of a generic and a specific name. see **binominal nomenclature**, **trinominal nomenclature**.

**binomial nomenclature** A system of nomenclature using two names, first established for animals by Linnaeus in 1758 and now generally referred to as binominal nomenclature.

**binominal** a. [L. *bis*, two; *nomen*, name] Consisting of two words or names.

**binominal nomenclature** The system of nomenclature adopted by the International Congress of Zoology, by

which the scientific name of an animal is designated by both a generic and specific name.

**binotate** a. [L. *bis*, two; *nota*, mark] Having two rounded spots.

**binovular** a. [L. *bini*, pair; *ovum*, egg] Pertaining to two ova.

**binucleate** a. [L. *bis*, two; *nucleus*, kernel] Having two nuclei.

**bioassay** see **biological assay**

**biocellate** a. [L. *bis*, two; dim. *oculus*, eye] Having two ocelli.

**biocenose** n. [Gr. *bios*, life; *koinos*, common] A community of plants and animals that occupy a particular habitat; a biotic community. see **biocoenosis**.

**biochemistry** n. [Gr. *bios*, life; *chemeia*, chemistry] Biological or physiological chemistry; the chemistry of living organisms.

**biochore** n. [Gr. *bios*, life; *choros*, place] A subdivision of biocycle, comprising a group of similar biotopes large enough to form a recognizable habitat. see **chore**.

**biochrome** n. [Gr. *bios*, life; *chroma*, color] Any natural pigment found in a living organism. see **indigoid biochrome**, **quinone biochrome**, **schemochrome**.

**biocoen** n. [Gr. *bios*, life; *koinos*, common] All of the living components of an environment.

**biocoenosis** n.; pl. **-noses** [Gr. *bios*, life; *koinos*, common] 1. A community of organisms occupying a biotope. 2. An aggregation of fossils comprised of the remains of organisms living together. see **thanatcoenosis**.

**biocommunication** n. [Gr. *bios*, life; L. *communicare*, to communicate] The process of conveyance or transfer of information between non-human organisms.

**biocontrol** see **biological control**

**biocycle** n. [Gr. *bios*, life; *kyklos*, circle] Subdivisions of the biosphere: land, sea and freshwater.

biodegradable a. [Gr. *bios*, life; L. *de*, down; *gradatus*, step by step; *abilis*, tending to be] Substances that can be broken down by micro-organisms (mainly aerobic bacteria).

**biodemography** n. [Gr. *bios*, life; *demos*, people; *graphein*, to

write] A science concerned with the statistical study of the ecology and genetics of a given population.

**bioecology** n. [Gr. *bios*, life; *oikos*, house; *logos*, discourse] The study of the interrelationships of plants and animals and their environment.

**bioelectricity** n. [Gr. *bios*, life; *elektron*, amber] The electric phenomena within living tissues.

**bioenergetics** n. [Gr. *bios*, life; *energos*, active] The science of conditions and laws governing the manifestation of energy in living organisms.

**biogen** n. [Gr. *bios*, life; *genos*, beginning] The hypothetical protoplasmic unit of which cells are composed; precursor of bios.

**biogenesis** n. [Gr. *bios*, life; *genesis*, beginning] The doctrine that living organisms originate from antecedent life. see **abiogenesis**, **neobiogenesis**.

**biogenetic law** The recapitulation theory of Haeckel that "ontogeny recapitulates phylogeny". see **palingenesis**.

**biogenous** a. [Gr. *bios*, life; *gennaen*, to produce] Being produced from living in or on other living organisms; providing life.

**biogeny** n. [Gr. *bios*, life; *genesis*, beginning] The evolution of organisms, comprising ontogeny (individual) and phylogeny (tribal).

**biogeochemistry** n. [Gr. *bios*, life; *ge*, earth; *chemeia*, chemistry] The study of the distribution and movement of chemical elements within living organisms and their interaction with the geographical environment.

**biogeography** n. [Gr. *bios*, life; *ge*, earth; *graphein*, to write] That biological science dealing with the geographical distribution of plants and animals. see **zoogeography**.

**bioherm** n. [Gr. *bios*, life; *herma*, mound] A body of rock composed largely of sedentary organisms such as corals and mollusks.

**biological** a. [Gr. *bios*, life; *logos*, discourse] Pertaining to biology, the science of living things.

**biological assay**, **bioassay** The determination of the effect of

any stimulus, physical, chemical, biological, physiological, or psychological, by means of the response which it produces in living organisms or matter.

**biological classification** The arrangement of organisms into taxa on the basis of inferences concerning their genetic relationship.

**biological clock** An endogenous physiological rhythm, such as metabolic or behavioural rhythmical changes. see **circadian**.

**biological control** The reduction in population of undesirable animals and plants by the intentional introduction of a predator, parasite or disease; biocontrol.

**biological productivity** The increase in biomass, normally measured in protein-time units.

**biological races** Noninterbreeding sympatric populations that are morphologically alike, but physiologically different due to preference for food or other hosts. see **sibling species**.

**biological species** concept A concept at the species level stressing reproductive isolation, and the possession of a genetic program effecting such isolation; biospecies. see **species**.

**biology** n. [Gr. *bios*, life; *logos*, discourse] The scientific study of living things.

**bioluminescence** n. [Gr. *bios*, life; L. *luminescere*, to grow light] The production of light by living organisms, as occurs in the insect orders of Collembola, Homoptera, Diptera and Coleoptera, all ctenophores, some cephalopods, a large number of polychaetes, and certain diplopods; biophotogenesis.

**biolysis** n. [Gr. *bios*, life; *lysis*, to loosen] The disintegration of life or organic matter; the decomposition of organic matter as a result of the activity of living organisms; death. **biolytic** a.

**biomass** n. [Gr. *bios*, life; L. *massa*, quantity, bulk] The total weight of a population or other specified group of individuals per unit of area or volume.

**biome** n. [Gr. *bios*, life] A major biological community of living

organisms characterized by distinctive dominant vegetation and associated animals.

**biometeorology** n. [Gr. *bios*, life; *meteoros*, high in the air; *logos*, discourse] The science of the relationship of plants and animals to weather.

**biometer** n. [Gr. *bios*, life; *metron*, measure] An indicator organism that determines climate and condition acceptability.

**biometry** n. [Gr. *bios*, life; *metron*, measure] The statistical study of biological phenomena; the application of mathematics to the study of living organisms. see **biostatistics**.

**biomorphic** a. [Gr. *bios*, life; *morphe*, form] Concerning the development or change of form of a living organism by the formation of tissues.

**bion** n. [Gr. *bios*, life; *on*, being] 1. A living, independent organism; a living cell or unit; synonymous with "individual". 2. Sometimes used as a variant spelling of biome; a biont.

**bionomy, bionomics** see **ecology**

**biont** n. [Gr. *bion*, life; *on*, being] A living thing; a member of a biome.

**biophagous** a. [Gr. *bios*, life; *phagein*, to eat] Pertaining to an organism that feeds upon other living organisms or tissues.

**biophore, biophor** n. [Gr. *bios*, life; *phorein*, to carry] A hypothetical ultimate supramolecular unit capable of life.

**biophotogenesis** see **bioluminescence**

**biophysics** n. [Gr. *bios*, life; *physis*, nature] The application of the laws of physics to the study of living organisms.

**bioplasm** n. [Gr. *bios*, life; *plassein*, to mold] Protoplasm.

**bioplast** n. [Gr. *bios*, life; *plassein*, to mold] 1. A minute mass of living protoplasm. 2. An amoeboid cell.

**biopoiesis** n. [Gr. *bios*, life; *poiesis*, making] The origination of the first living thing, as well as the preceding chemical history.

**biopotentiality** n.; pl. **-ties** [Gr. *bios*, life; L. *potens*, powerful] The potential of a tissue developing into different structures.

**biopsy** n. [Gr. *bios*, life; *opsis*, sight] The study of tissues of

living organisms.

**biordinal crochets** (ARTHRO: Insecta) Crochets of larvae arranged in a single series or row, but having two alternating lengths. see **ordinal**.

**bios** n. [Gr. *bios*, life] Plant and animal life; organic nature.

**biosis** n. [Gr. *biosis*, manner of life] 1. The condition of being alive. 2. The condition of a specific mode of life.

**biospecies** see **biological species concept**

**biospeleology** n. [Gr. *bios*, life; *spelaiion*, cave; *logos*, discourse] The scientific study of cave-dwelling organisms.

**biosphere** n. [Gr. *bios*, life; *sphaira*, ball] That portion of the earth that contains living organisms, encompassing the soil, air and water.

**biostasis** n. [Gr. *bios*, life; *stasis*, a standing] The ability of organisms to tolerate environmental alterations without being changed themselves.

**biostatics** n.pl. [Gr. *bios*, life; *statos*, stationary] The science of the structure of organisms in relation to their function.

**biostatistics** n. [Gr. *bios*, life; *statos*, stationary] The branch of biometry that deals with vital statistics.

**biostrome** n. [Gr. *bios*, life; *stroma*, bed] (MOLL: Bivalvia) Bio-coenosis of hard shelled, sedentary organisms or sediment from them.

**biosynthesis** n. [Gr. *bios*, life; *synthesis*, composition] The formation of an organic compound by an organism.

**biosystem** see **ecosystem**

**biosystematics** n. [Gr. *bios*, life; *systema*, an ordered arrangement of things] The study of the biology of populations in respect to evolution and variation of a taxon; experimental taxonomy.

**biota** n. [Gr. *bios*, life] The fauna and flora of an area or region.

**biotic** a. [Gr. *biotikos*, of life] Of or pertaining to life.

**biotic insecticide** An organism used to suppress a local pest population.

- biotic potential** 1. The reproductive potential of a species. 2. An estimate of the rate of increase of a species in the absence of predators, parasites or other inhibiting factors.
- biotonus** n. [Gr. *bios*, life; *tonos*, tension] The ratio between assimilation and dissimilation of a hypothetical unit, cell, organ or organelle (biogen).
- biotope** n. [Gr. *bios*, life; *topos*, place] 1. An area that is uniform in its main climatic, soil and biotic conditions. 2. An ecological niche with suitable conditions for certain fauna and flora. see **biochore**, **core**.
- biotular** spicules (PORIF) Amphidiscs; having scalloped disks that may occur at both ends of the rhabdome.
- biotype** n. [Gr. *bios*, life; *typos*, type] A group of genotypically identical individuals; frequently used interchangeably with the term race.
- biovular** see **binovular**
- biovulate** a. [L. *bis*, two; *ovum*, egg] Having two ovules.
- biparasitic** a. [L. *bis*, two; *parasitus*, one who eats at the table of another] Being a parasite upon or in a parasite.
- biparental** a. [L. *bis*, two; *parentalis*, parent] Pertaining to or derived from two parents.
- biparietal** a. [L. *bis*, two; *paries*, wall] Provided with two paries.
- biparous** a. [L. *bis*, two; *parere*, to beget] Producing two young at a time.
- bipartite** a. [L. *bis*, two; *partitus*, divided] Having two distinct parts; bifid.
- bipartite uterus** A uterus with paired, tubular uteri that fuse at the point of junction with the vagina.
- bipectinate** a. [L. *bis*, two; *pecten*, comb] Having branches on two sides like the teeth of a comb.
- bipectunculate** a. [L. *bis*, two; *pectunculus*, small scallop] Minutely pectinate.
- bipennate** a. [L. *bis*, two; *penna*, feather] Twice pinnate. **bipenniform** a.
- bipinnaria larva** (ECHINOD: Asteroidea) The free-swimming,

bilaterally symmetrical larva; characterized by ciliated pre-oral and postoral bands and extending onto lobes projecting from the body; dipleurula larva. see **brachiolaria**.

- biplicate** a. [L. *bis*, two; *plicatus*, fold] Twice plaited or folded.
- bipocillus** n. [L. *bis*, two; *poculum*, cup] (PORIF) A spicule (microscelere) with a curved shaft and cup-shaped expansion at either end; in Iophon, one discoid end and one pointed or forked end.
- bipod** a. [L. *bis*, two; Gr. *pous*, foot] Having one pair of legs. bipody n. see **tetrapod**.
- bipolar** a. [L. *bis*, two; *polus*, pole] 1. Having two poles or processes. 2. Pertaining to the polar regions.
- bipolarity** n. [L. *bis*, two; *polus*, pole] 1. Being bipolar. 2. Pertaining to the polar regions, as comparing the flora and fauna between the northern regions and the southern regions, and with that in between. 3. Nerves having processes at both ends.
- biprostatic** a. [L. *bis*, two; *pro*, before; *stare*, to stand] Having two prostates.
- bipupillate** a. [L. *bis*, two; *pupilla*, pupil of the eye] 1. Having two pupils. 2. Having two ocelli or spots that resemble two pupils.
- biradial cleavage** Cleavage in which the tiers of blastomeres are symmetrical with regard to the first cleavage plane.
- biradial symmetry** A type of symmetry in which an organism consists of radially arranged parts, equally arranged on each side of a median longitudinal plane.
- biradiate** a. [L. *bis*, two; *radiatus*, rayed] Having two rays or spokes. see **diactinal**, **diaxon**.
- biramous** a. [L. *bis*, two; *ramus*, branch] Consisting of two branches.
- biramous appendage** (ARTHRO: Crustacea) An appendage with two rami; also antennule or antenna with two flagellar elements; not all appendages of a crustacean are biramous.
- biramous parapodium** (ANN) A parapodium having bundles of setae on both noto- and neuropodium.

- birefringent** a. [L. *bis*, two; *refringens*, refractive] Having double refraction, high or low according to the difference between the refractive indices.
- birostrate** a. [L. *bis*, two; *rostrum*, beak] Having two beak-like processes.
- birotulate spicules** (PORIF) A spicule having a disc or series of radial, umbrella-like spokes at both ends; amphidiscs.
- birth pore** Uterine pore; birth opening.
- bisegment** n. [L. *bis*, two; *segmentum*, piece] One of two equal segments of a line.
- biseptate** a. [L. *bis*, two; *septum*, partition] Having two partitions.
- biserial** a. [L. *bis*, two; *series*, row] Arranged in two rows, or subdivided into two series.
- biserial crochets** (ARTHRO: Insecta) Crochets of larvae with proximal ends arranged in two, usually concentric rows. see **serial crochets**.
- biserrate** a. [L. *bis*, two; *serra*, saw] Having two notched or saw-teeth.
- bisetose** a. [L. *bis*, two; *seta*, bristle] Having two bristle-like appendages.
- bisexual** a. [L. *bis*, two; *sexus*, sex] 1. Of or pertaining to both sexes. 2. A population composed of functional males and females. 3. An individual possessing functional male and female reproductive organs; hermaphrodite.
- bisinate** a. [L. *bis*, two; *sinuare*, to bend] Twice winding or bending; having two sinuations or notches.
- bistrate** a. [L. *bis*, two; *stratum*, layer] Having two layers of tissues.
- bisulcate** a. [L. *bis*, two; *sulcus*, groove] Of or pertaining to twice scored or grooved.
- bithecal** a. [L. *bis*, two; *theke*, case] 1. Having two thecae. 2. (ANN) Having two spermathecae.
- bituberculate** a. [L. *bis*, two; *tuberculum*, swelling] Having two tubercles or swellings.
- biuncinate** a. [L. *bis*, two; *uncus*, hook] Having two hooks.

- bivalent** a. [L. *bis*, two; *valens*, strong] 1. Having two completely or partially homologous chromosomes pairing during the first meiotic division. see **univalent**. 2. Double or joined in pairs; pertaining to an articulation permitting levator and depressor movements.
- bivalve** a. [L. *bis*, two; *valvae*, a folding door] Having two valves or parts; clamlike.
- Bivalvia, bivalves** n., n.pl. [L. *bis*, two; *valvae*, a folding door] A class of marine, estuarine or freshwater bivalve mollusks, in which the body is enclosed within two calcareous valves, or shells; other names for this class are Acephala, Conchifera, Pelecypoda, Conchophora, Dithra, Lamellibranchia, Lamellibranchiata, Elatobranchiata, Cormopoda, Tropicoda, Aglossa, Elatocephala, Anodontoda and Lipocephala.
- bivittate** a. [L. *bis*, two; *vitta*, band] Having two broad longitudinal stripes or vittae.
- bivium** n. [L. *bivius*, two-way] (ECHINOD: Asteroidea) Collectively, the two rays of a sea star, between which lies the madreporite. see **trivium**.
- bivoltine** a. [L. *bis*, two; It. *volta*, time] Having two sets of offspring a year. see **polyvoltine**.
- bivulvar** a. [L. *bis*, two; *vulva*, vulva] Having two vulvae in a single female.
- bladder** n. [A.S. *blaeddre*, bag] Any membranous sac or vesicle filled with air or fluid.
- blade** n. [A.S. *blaed*, leaf] 1. Any elongate, flattened, usually stiff structure shaped like a leaf, sword or knife. 2. (ARTHRO: Insecta) The lacinia or galea. 3. (NEMATA) see **lamina**.
- blastaea** n. [Gr. *blastos*, bud] Hypothetical animal ancestral to all metazoans; inferred from the blastula as a common stage in the development of higher invertebrate animals.
- blastema** n.; pl. **-temata** [Gr. *blastema*, bud] 1. Undifferentiated cells that later develop into an organ or structure. *a*. The part of an organism that gives rise to a new organism, as in asexual reproduction. *b*. That which often gives rise to regeneration of a lost part or appendage. see **anlage**.

- blastocephalon** n. [Gr. *blastos*, bud; *kephale*, head] (ARTHRO: Insecta) The head of an embryo.
- blastochrome** n. [Gr. *blastos*, bud; *ochema*, vehicle] (CNID) A reproductive bud in certain medusae.
- blastochyle** n. [Gr. *blastos*, bud; *chylos*, juice] Fluid contained in a blastocoel.
- blastocoel(e)** n. [Gr. *blastos*, bud; *koilos*, hollow] The primary cavity formed during the embryological development of animals; segmentation cavity; the subgerminal cavity.
- blastocyst** n. [Gr. *blastos*, bud; *kystis*, bladder] (PLATY: Cestoda) In Trypanorhynca, a posterior bladder of the metacestode into which the body is withdrawn.
- blastocyte** n. [Gr. *blastos*, bud; *kytos*, container] An embryonic cell before differentiation.
- blastoderm** n. [Gr. *blastos*, bud; *derma*, skin] The primary epithelium formed in early embryonic development of many invertebrates; germinal membrane.
- blastogenesis** n. [Gr. *blastos*, bud; *genesis*, beginning] 1. Development by asexual reproduction, or of an organ or part from a blastema. 2. The transmission of inherited characters by germ plasm. see **embryogenesis**.
- blastogenic** a. [Gr. *blastos*, bud; *genos*, birth] Originating in germ cells.
- Blastoidea, blastoids** n., n.pl. [Gr. *blastos*, bud; *eidos*, form] A class of extinct echinoderms of the former Subphylum Pelmatozoa; Ordovician to Permian.
- blastokinesis** n. [Gr. *blastos*, bud; *kinesis*, movement] Displacements, rotations and revolutions of an embryo within an egg.
- blastomere** n. [Gr. *blastos*, bud; *meros*, part] Cells formed during primary cleavage of an egg, before the formation of a distinct gastrula stage.
- blastophore** n. [Gr. *blastos*, bud; *phorein*, to bear] 1. The external opening of the enteron of a gastrula. 2. (ANN) The endodermal cells brought into an internal position in the embryo during the mitotic division.
- blastopore** n. [Gr. *blastos*, bud; *poros*, passage] The mouth-

- like opening from the archenteron to the exterior during the gastrula stage of development.
- blastostyle** n. [Gr. *blastos*, bud; *stylos*, pillar] (CNID: Hydrozoa) The living axial portion of a modified gonangium, from which numerous medusae are budded.
- blastozoid** n. [Gr. *blastos*, bud; *zoion*, animal; *eidos*, form] A zoid or individual produced by asexual reproduction. see **oozoid**.
- blastula** n., pl. **-lae** [Gr. dim. *blastos*, bud] A stage near the end of cleavage, in the form of a hollow sphere bounded by a single layer of cells.
- blister** n. [A.S. *blastr*, a swelling] Any vesicle or raised spot on the surface of an organism.
- Blochmann's body** (ARTHRO) Any intracellular organisms in the egg; mainly bacteria; thought to be symbiotic.
- blood** n. [A.S. *blod*, blood] The variously colored or colorless fluid circulating in the vascular system or body cavity of animals, usually containing respiratory pigments, and carrying oxygen, food-materials, excretions, etc.
- blood cells** Cellular elements of the blood; hemocytes; plasmatocytes.
- blood channel** (ARTHRO: Insecta) In predacious larvae, a channel, either internal (duct or tube) or external (excavation or groove), usually extending the full length of the inner margin of the mandible.
- blood gills** (ARTHRO: Insecta) Thin walled respiratory or osmoregulatory evaginations continuous with the hemocoel and filled with blood, occurring *in*, but not confined to aquatic larvae.
- blood rooms** (ARTHRO: Crustacea) In Conchostraca, a network of anastomosing cavities in the body that function in blood circulation.
- blood sinus** (MOLL: Bivalvia) A blood vessel which is irregular in shape without specialized walls.
- blood tube** see **blood channel**
- blood vessel** Any vessel or canal facilitating blood circulation.

**blotch** n. [OF. *block*, a clod of earth] A large irregular spot or marking.

**blunt** v. [uncertain origin] To dull; to neutralize or dilute.

**boat-shaped** see **navicular**, **scaphoid**

**body** n. [A.S. *bodig*, body] 1. The physical structure of an organism. 2. The main part of an organism as compared to its limbs or appendages. 3. The trunk. 4. The corpus.

**body cavity** The principal cavity between the body wall and internal organs of an organism: coelom, pseudocoelom or hemocoelom.

**body of Giardini** see **chromatin body**

**body ring** (ARTHRO: Crustacea) In Notostraca, the combined tergite and sternite of a single somite, with or without legs.

**body somite** (ARTHRO: Crustacea) A unit division comprising thorax and abdomen. see **cephalic somite**.

**body valve** see **intermediate valve**

**body wall** 1. The integument, the outer layer of many invertebrates, comprising the epidermis (hypodermis) and the cuticle. 2. (BRYO) The wall enclosing the body cavity of a colony and its parts. 3. (ECHI) The dermal, glandular, muscular and epithelial tissues that make up the wall of the trunk.

**body whorl** see **last whorl**

**bolsters** n.pl. [A.S. *bolster*, support] (MOLL) A pair of supports and muscle attachments for the radula.

**bolus** n. [Gr. *bolos*, lump] Any rounded mass, such as collected or chewed food.

**bombifrons** n.pl. [F. *bombe*, convex; L. *frons*, forehead] (ARTHRO: Insecta) A rounded, blister-like protuberance on the forward part of the head.

**bombous** a. [F. *bombe*, convex] A curved or rounded surface; blister-like.

**bombycic acid** (ARTHRO: Insecta) An acid utilized by certain moths to dissolve the gum binding the silk threads of the cocoon at imago emergence.

**bombycinous** a. [Gr. *bombycinus*, silken] Of silk, or pale yel-

low resembling fresh spun silk.

**book gill** (ARTHRO: Chelicerata) In Merostomata, a gill composed of thin plates or lamella.

**book lung** (ARTHRO: Chelicerata) A series of leaf-like respiratory pouches of arachnids, located on the internal ventral surface of the abdomen, and believed to be modified insunken gills.

**bopyridum** n. [NL. *Bopyrus*, type genus] (ARTHRO: Crustacea) In Malacostraca, a postlarva of an epicaridean isopod that attaches to a permanent host.

**Bordas' gland** (ARTHRO: Insecta) A paired, or fused into one, accessory gland of the sting apparatus of certain Hymenoptera, composed of multiple, densely packed cells whose canaliculi end with a gathering duct; function unknown.

**boreal** a. [L. *boreas*, north wind] Of or belonging to the northern biogeographical region.

**borer** n. [A.S. *borian*, bore] 1. An invertebrate that bores. 2. (ARTHRO: Insecta) An adult or larva that makes channels in woody or vegetable tissue. 3. (MOLL: Bivalvia) A pelecypod that burrows in stone or wood. 4. (MOLL: Gastropoda) One that bores through the shell of an oyster or other mollusk.

**boss** n.; pl. **bosses** [F. *bosse*, hump] 1. Any protruberant part, prominence or swelling. 2. (ARTHRO: Chelicerata) In Arachnida, a smooth lateral prominence at the base of a chelicera of spiders. 3. (ARTHRO: Crustacea) An umbo. 4. (ARTHRO: Insecta) In Diptera, a sclerotized, elevated area at the base of the ventral brush in certain Culicidae larvae. 5. (ECHINOD: Echinoidea) The base of a spine on a sea urchin test. 6. (MOLL: Gastropoda) A rounded elevation of a shell, larger than a tubercle.

**bosselated** a. [F. *bosse*, hump] Being covered with small knob-like projections, composed of or covered with small protuberances.

**bothridial seta** (ARTHRO: Chelicerata) Various shaped seta inserted into a bothridium.

**bothridium** n.; pl. **-ria** [Gr. dim. *bothros*, trench] 1. (ARTHRO: Chelicerata) A chitinous cavity or projecting cup in which a bothridial seta is inserted; (bothridial seta + bothridium =

trichobothrium). 2. (PLATY: Cestoda) One of 4 muscular lappets on the scolex of a tapeworm, often highly specialized with many types of adaptations for adhesion.

**bothriotrichia** n.pl. [Gr. *bothros*, trench; *trichos*, hair] (ARTHRO: Insecta) Slender seta arising from indentions in the tegument. **bothronic** a.

**bothrium** n.; pl. **-ria** [Gr. *bothros*, trench] (PLATY: Cestoda) Dorsal or ventral grooves on the scolex that may be variously modified in the form of ruffles, or fused so as to form a tubular structure.

**botrucnids** n.pl. [Gr. *botrys*, bunch of grapes; *knide*, nettle] (CNID: Anthozoa) The septal filaments of certain mesenteries of tube anemones.

**botryoidal** a. [Gr. *botrys*, bunch of grapes; *eidos*, form] In the form of a bunch or cluster of grapes.

**botryoidal tissue** (ANN: Hirudinoidea) Connective tissue present in the enteric canals.

**botryology** n. [Gr. *botrys*, bunch of grapes; *logos*, discourse] The science of organizing objects or concepts into groups and clusters.

**bottle-shaped** see **lagena**, **ampulla**, **ampulliform**

**bouquet stage** A meiotic prophase stage, including leptotene, zygotene and pachytene, in certain species where the chromosomes are oriented by one or both ends towards one point of the nuclear envelope.

**bourrelet** n. [F. *bourrelet*, circular pad] 1. A ridgelike prominence or rounded edge. 1. (ARTHRO: Insecta) see parameres. 2. (ECHINOD) A raised prominence on the interambulacral plates at the edge of the mouth. 3. (MOLL: Bivalvia) A ligamental area anterior and posterior to the resilifer.

**bourses copultrices** see **copulatory chamber**

**bouton** n. [F. *bouton*, bud] (ARTHRO: Insecta) A lappet-like terminal process of the glossa of bees; spoon; flabellum.

**bowlike** see **arc**, **arcuate**

**box** n.; pl. boxes [A.S., fr. 1. *buxus*, boxwood] (MOLL: Bivalvia) A pair of empty, attached hinged (valves) shells of oysters.

**brachelytra** n.pl. [Gr. *brachys*, short; *elytron*, sheath] (ARTHRO: Insecta) Having shortened wing covers or elytra. **brachelytrous** a.

**brachia** n.pl. [L. *brachium*, arm] 1. Processes like arms. 2. (ARTHRO: Insecta) *a.* Paired, unfused processes resembling arms surrounding the aedeagus; clasper; paramere. *b.* A tracheal or blood gill. 3. (BRACHIO) see **brachidium**.

**brachial** a. [L. *brachium*, arm] 1. Pertaining to an arm-like process or appendage. 2. (ARTHRO: Insecta) Pertaining to the fore wing.

**brachial canal** (CNID: Scyphozoa) A canal in the oral arm of medusae.

**brachial basket** (ARTHRO: Insecta) In Odonata, a barrel-like chamber in the anterior two-thirds of the rectum that functions by the intake and expulsion of water; rectal gills.

**brachial valve** (BRACHIO) A valve containing any skeletal support for the lophophore, generally smaller than the pedicle valve; dorsal valve.

**brachidium** n.; pl. **brachidia** [L. dim. *brachium*, arm] (BRACHIO) The internal skeleton or brachial support for the lophophore, consisting of a calcareous loop or spire.

**brachiolaria** n.; pl. **-lariae** [L. dim. *brachium*, arm] (ECHINOD: Asterozoa) The free-swimming, ciliated larva that develops from the bipinnaria and is characterized by three additional arms extending from the anterior part of the ventral surface, anterior to the preoral loop.

**brachiole** n. [L. dim. *brachium*, arm] (ECHINOD: Crinozoa) The slender arm or arms extending from the ambulacral groove.

**brachiophores** n. [L. *brachium*, arm; Gr. *phorein*, to bear] (BRACHIO) Blades of the secondary shell projecting from the side of the notothyrium and forming anteromedian boundaries of sockets in some brachial valves.

**Brachiopoda**, **brachiopods** n.; n.pl. [Gr. *brachys*, short; *pous*, foot] A phylum of relatively small, solitary coelomates enclosed within a bivalved shell and usually attached to the substrate by a pedicle; common called lamp shells; brachiopods have one of the longest and best recorded fos-

sil histories in the animal kingdom.

**brachitaxis** n.; pl. **-taxes** [Gr. *brachium*, arm; *taxis*, arrangement] (ECHINOD: Crinoidea) A series of brachials extending from radial or biradial to the distal extremity of the arm.

**brachium** see **brachia**

**brachycerous** a. [Gr. *brachys*, short; *keras*, horn] Bearing short antennae.

**brachydactyly** n. [Gr. *brachys*, short; *daktylos*, digit] Abnormally short digits.

**brachymeiosis** n. [Gr. *brachys*, short; *meiosis*, to make smaller] Meiosis with the second meiotic division omitted.

**brachypleural** a. [Gr. *brachys*, short; *pleuron*, side] (ARTHRO: Insecta) Pertaining to shortened pleura or side plates.

**brachypodous** a. [Gr. *brachys*, short; *pous*, foot] Bearing a short stalk or legs.

**brachypterous** a. [Gr. *brachys*, short; *pteron*, wing] (ARTHRO: Insecta) Having short or abnormally short wings that do not cover the abdomen. see **macropterous**.

**brachypterous neoteinic** see **nymphoid reproductive**

**brachyptery** see **brachypterous**

**brachystomatous** a. [Gr. *brachys*, short; *stoma*, mouth] (ARTHRO: Insecta) Having a short proboscis, as certain Diptera.

**brachytrachea** n.; pl. **-eae** [Gr. *brachys*, short; *tracheia*, windpipe] (ARTHRO: Chelicerata) In Acari, an elongate, sac-like structure, sometimes branched, that functions in respiration.

**brachyurous** a. [Gr. *brachys*, short; *oura*, tail] Having a reduced abdomen; having a short tail.

**braconid venom gland** (ARTHRO: Insecta) A type of venom gland where numerous gland tubes end basically in the reservoir that has muscles but no glandular elements. see **apid venom gland**.

**bract** n. [L. *bractea*, small leaf] (CNID: Hydrozoa) A protective medusoid (hydrophyllium or phyllozoid) siphonophoran

with a simple or branched gastrovascular canal.

**bracteiform** a. [L. *bractea*, small leaf; *forma*, shape] Bractlike.

**bracteose** a. [L. *bractea*, small leaf] With numerous bracts.

**bradyauxesis** n. [Gr. *bradys*, slow; *auxesis*, growth] A form of heterauxesis in which the growth process of a part is less than that of the whole. see **isauxesis**

**bradygenesis** n. [Gr. *bradys*, slow; *genesis*, beginning] Retarded development in ontogeny. see **tachygenesis**.

**bradytelic** a. [Gr. *bradys*, slow; *telos*, completion] Pertaining to evolution, evolving slowly; slower than the standard rate. see **horotelic**.

**brain** n. [A.S. *braegen*, brain] 1. The nervous center of invertebrates. 2. (ARTHRO) The cephalic nerve mass; the encephalon, the supraesophageal ganglion; the archicerebrum. 3. (NEMATA) The nerve ring and associated ganglia.

**brain hormone** (ARTHRO: Insecta) A secretion of the brain activating the prothoracic glands.

**branch** n.; pl. **branches** [OF. *branche*, branch] 1. That which puts forth branches. 2. A primary division of a taxonomic group. 3. A gill.

**branched** see **ramify**

**branchia** n.; pl. **-chiae** [Gr. *branchia*, gills] Respiratory organs; a gill; a ctenidium.

**branchial** a. [Gr. *branchia*, gills] Pertaining to gills or branchiae.

**branchial aperture** The exterior opening of a gill chamber.

**branchial basket** (ARTHRO: Insecta) In Odonata, a chamber of the rectum that contains the rectal gills.

**branchial carina** (ARTHRO: Crustacea) In Decapoda, that part of the carapace extending posteriorly from the opening (orbit) in the anterior face over the branchial region.

**branchial chamber** (ARTHRO: Crustacea) That area between the body and carapace enclosing the branchiae; the gill chamber.

**branchial cleft** A gill slit.

**branchial crown** (ANN: Polychaeta) A structure surrounding the terminal mouth composed of ciliated, bipinnate filaments functioning in suspension filter feeding and respiration; tentacular crown.

**branchial glands** 1. (ARTHRO: Crustacea) Masses of connective-tissue cells, lacking ducts, that surround the venous channels in branchiae. 2. (MOLL: Cephalopoda) Glands along the gill where they connect with the mantle; site of hemocyanin production.

**branchial heart** (MOLL: Cephalopoda) One of two hearts that pumps blood to the gills of squid.

**branchial passage** (MOLL: Bivalvia) A passage in gills that carries parts of the exhalant water system.

**branchial plume** (ANN: Polychaeta) In certain Sabellidae and Serpulidae, a structure around the terminal mouth comprised of semicircular lobes bearing a few to a series of grooved, ciliated filaments or radioles, each with a series of paired ciliated side branches or pinnules functioning in filter feeding and respiration.

**branchial ray** A gill ray.

**branchial region** (ARTHRO: Crustacea) In Decapoda, the lateral part posterior to the pterygostomial region, overlying the branchiae.

**branchial siphon** (MOLL) The incurrent siphon.

**branchiate** a. [Gr. *branchia*, gills] Having gills or branchiae.

**branchicolous** a. [Gr. *branchia*, gills; *colere*, to inhabit] Parasitizing gills.

**branchiform** a. [Gr. *branchia*, gills; *forma*, shape] Shaped like gills.

**branchiocardiac** a. [Gr. *branchia*, gills; *kardia*, heart] Pertaining to gills and heart.

**branchiocardiac carina** (ARTHRO: Crustacea) That part of a carapace dividing the branchial and cardiac region.

**branchiocardiac groove** (ARTHRO: Crustacea) In Decapoda, an oblique groove on each side of the carapace separating the branchial and cardiac regions.

**branchiocardiac sinus** (ARTHRO: Crustacea) One of several sinus channels that facilitates blood flow from the gills to the pericardial sinus and then to the heart.

**branchiopallial** a. [Gr. *branchia*, gills; L. *pallium*, mantle] (MOLL) Pertaining to the gill and mantle.

**branchiopneustic** a. [Gr. *branchia*, gills; *pneustikos*, of breathing] (ARTHRO: Insecta) Pertaining to a form of respiration in larvae where the spiracles are functionally replaced by gills.

**branchiostegal area** (ARTHRO: Crustacea) That part of a carapace extending laterally and ventrally over the branchiae.

**branchiostegal spine** (ARTHRO: Crustacea) In Decapoda, a spine on the carapace between the antennal and pterygostomial spines.

**branchiostegite** n. [Gr. *branchia*, gills; *stegos*, roof] (ARTHRO: Crustacea) Expanded dorsal and lateral branchial region of the carapace that covers the gills.

**branchireme** n. [Gr. *branchia*, gills; *remus*, oar] (BRACHIO) Any limb.

**branchitellum** n.; pl. **branchitella** [Gr. dim. *branchia*, gills; *telos*, end] (MOLL: Bivalvia) A point on the posteroventral shell margin of oysters at the aboral end of the gills near the palliobranchial fusion.

**breakage plane or joint** The site of autotomy in invertebrates.

**breastbone** n. [A.S. *breost*, front of the chest; *ban*, bony] 1. The sternum. 2. (ARTHRO: Insecta) In certain dipterous larvae, a horny ventral process behind the oral opening, representing the labium; anchor process; sternal spatula.

**breathing pore** see **spiracle**

**brephic** a. [Gr. *brephos*, embryo] 1. Pertaining to an early stage of development. 2. (BRACHIO) The juvenile stage in shell development after protegulum, shown by presence of growth lines; from neanic shells, distinguished by absence of radial ornamentation.

**brevaceratuba** n.; pl. **-tubae** [L. *brevis*, short; *cera*, wax; *tuba*, trumpet] (ARTHRO: Insecta) A wax gland of scale in-

sects with an outlet short of the margin of the pygidium.

**breviate** a. [L. *brevis*, short] 1. Shortened; smaller than normal. 2. (ARTHRO: Insecta) Used to describe antennae that are about the length of the head.

**brevicaudate** a. [L. *brevis*, short; *cauda*, tail] Having a short tail.

**brevilingual** a. [L. *brevis*, short; *lingua*, tongue] Having a short tongue.

**breviorate antennae** (ARTHRO: Insecta) A term to describe antennae extending passed the head, but short of the body length. see **brevissimate antenna**.

**breviped** a. [L. *brevis*, short; *pes*, foot] Having short legs.

**brevipennate** a. [L. *brevis*, short; *penna*, wing] Having short wings.

**brevirostrate** a. [L. *brevis*, short; *rostrum*, beak] Having a short beak or rostrum.

**brevissimate antennae** (ARTHRO: Insecta) Antennae length shorter than head length.

**bridge** n. [A.S. *brycg*, bridgework] 1. Chromosome arrangement at anaphase of meiosis produced from a dicentric strand. 2. (ARTHRO: Insecta) In Odonata, a connecting wing vein.

**bridge cross vein** (ARTHRO: Insecta) A cross vein anterior to the bridge vein.

**bridging host** An intermediate host that allows a parasite to go to a previously unsuitable host.

**bridle** see **frenulum**

**brin** n. (ARTHRO: Insecta) A filament of silk of silkworms; when coated with sericin, two adhere together, forming the bave.

**Brindley's gland** (ARTHRO: Insecta) In certain adult Heteroptera, simple sac-like structures of the scent gland system, occurring in the hemocoel below the first visible abdominal tergite, towards the lateral margin.

**bristle** n. [A.S. *byrst*, hair] Any of various stiff, coarse hairs or hairlike structures.

**bristle setae** (NEMATA: Adenophorea) Ambulatory setae func-

tioning in traction.

**brit** n. sing. & pl. [Corn. *bryth*, speckled] The minute marine animals, mainly crustaceans, that form an important link in the food chain of the aquatic environment.

**brochosomes** n.pl. [Gr. *brochos*, cord; *soma*, body] (ARTHRO: Insecta) In leafhoppers, ultramicroscopic reticulated bodies, products of the Malpighian glands.

**bromatium** n.; pl. bromatia [Gr. *broma*, food] A hyphal swelling on the fungus cultured by fungus ants on organic debris in underground galleries.

**bronchia** see **trachea**

**brood** n. [A.S. *brod*] The individuals hatched at the same time from eggs by a single parent and normally mature at about the same time.

**brood canal** (ARTHRO: Insecta) In Stylopidea, the passage between the female parasite and its puparium; a brood chamber.

**brood capsule** (PLATY: Cestoda) A small hydatid cyst containing 10 to 30 protoscolices; parasites of carnivores.

**brood chamber** 1. (ARTHRO: Crustacea) *a*. In Cladocera, a dorsal space between the trunk and enveloping carapace containing developing eggs and newly hatched young. *b*. In Peracarida, a space arising from the coxae of the thoracic limbs, forming a marsupium in which eggs develop directly, without external metamorphosis. 2. (ARTHRO: Insecta) see brood canal. 3. (BRYO) *a*. In Gymnolaemata, water-filled space partly enclosed by the body wall of one or more polymorphs, in which embryos grow during development. see **ovicell**. *b*. In Stenolaemata, a zooidal or extrazooidal internal coelomic chamber that encloses eggs developing into larvae. 4. (ECHINOD) see marsupium. 5. (MOLL: Gastropoda) In female Argonauta, a beautiful, calcareous, bivalve case secreted by the two dorsal arms into which the eggs are deposited; females retain and usually remain with the posterior of her body in the case; when disturbed, she withdraws completely into the retreat.

**brood pouch** Any space or sac-like cavity utilized as a uterus, in which eggs or embryos are developed; a brood chamber,

ovisac or marsupium.

**broom shaped** see **besomiform**

**brown bodies** 1. (ANN: Oligochaeta) Spheroidal, ellipsoidal or discoidal masses, free in the coelomic cavities, containing corpuscles or brown debris, setae, cysts of parasites, nematodes and various other foreign bodies. 2. (BRYO) In Stenolaemata and Gymnolaemata, an encapsulated mass of degenerating cells from the lophophore, gut, muscles and other nonskeletal parts of a zooid, retained in the body cavity or expelled after regeneration of feeding and digestive organs. see **brown deposit**. 3. (ECHINOD: Holothuroidea) Small clumps of amoebocytes, parasites and other ejection found in the coelom.

**brown deposit** (BRYO: Stenolaemata) Granular deposits of iron oxide or pyrite believed to be fossilized organic material of organs or brown bodies of degenerated organs.

**brownian movement** The continual vibratory movement of small particles dispersed in a fluid medium, as a result of bombardment by the molecules of the medium.

**Brunner's organ** (ARTHRO: Insecta) A soft tubercle at the base of the hind femur of grasshoppers, against which the caudal tibiae press when at rest.

**brush border** Projections of microvilli free on the surface of epithelial cells that produce a brush-like appearance.

**brushes** n.pl. [OF. *brousse*, brushwood] 1. A cluster of bristles, stout hairs or scales. 2. (ARTHRO: Insecta) *a.* In Diptera, anterior "mouth bristles" of some mosquito larvae, that may or may not be prehensile; posterior or respiratory siphon area bristles. *b.* In Lepidoptera, anterior pheromone hair-like scales of noctuid moths, or posterior abdominal brush of smooth hairs, function unknown.

**brush-organs** (ARTHRO: Insecta) In male Lepidoptera, anterior pheromone-producing paired glands, storage organs and distributive brushes functioning to elaborate and disperse sex attractants.

**brustia** (ARTHRO: Insecta) Small spines or setae on the mandibles.

**Bryozoa, bryozoans** n.; n.pl. [Gr. *bryon*, moss; *zoon*, animal]

A phylum of sessile aquatic coelomates, formerly subdivided into Ectoprocta and Entoprocta, and commonly called moss animals.

**bucca** n.; pl. **buccae** [L. *bucca*, cheek] 1. The cheek. 2. (ARTHRO: Insecta) That area on both sides of the head below the compound eye and just above the mouth opening.

**buccal** a. [L. *bucca*, cheek] Pertaining to the mouth or cheek.  
**bucally** adv.

**buccal appendage** (ARTHRO) Any articulating mouth part.

**buccal cavity** 1. The mouth or oral cavity. 2. (NEMATA) The stoma.

**buccal cone** (ARTHRO: Chelicerata) In Acarina, that portion of the mouthparts composed of hypostome and labrum.

**buccal field** (ROTIF) A division of the corona; pertaining to the area surrounding the mouth.

**buccal fissure** The mouth opening.

**buccal frame** (ARTHRO: Crustacea) In Brachyura, the structural region of the cephalon that encloses the mouthparts.

**buccal funnel** (ARTHRO: Insecta) In Siphunculata, that portion of the fore-intestine that extends into the pharynx.

**buccal groove** (ARTHRO: Crustacea) In Nephropidae, a transverse groove that connects the gastroorbital and antennal grooves crossing the mandibular elevation behind the antennal spine.

**buccal mass** (MOLL) A bulging mass comprising the radula and associated structures.

**buccal tentacles/cirri** (ANN) Elongate or digitiform food gathering appendages in or around the mouth.

**buccal tube** 1. (ARTHRO: Insecta) see food meatus. 2. (ROTIF) The tubular, ciliated area between the mouth and mastax.

**buccate** a. [L. *bucca*, cheek] Having distended or protuberant cheeks.

**bucciniform** a. [L. *buccinum*, a horn-shaped mollusk; *forma*, shape] (MOLL: Gastropoda) Resembling a trumpet shape; resembling the shape of a Buccinum mollusk.

**buccopharyngeal** a. [L. *bucca*, cheek; Gr. *pharynx*, throat] 1.

Pertaining to the cheeks and pharynx. 2. Pertaining to the mouth and pharynx.

**buccopharyngeal armature** see **cephalopharyngeal skeleton**

**buccopharyngeal/salvatory gland** (MOLL: Gastropoda) In precocious Prosobranchia, a gland producing a sulfuric acid-containing secretion that is injected into its victim.

**bucculla** n.; pl. **bucculae** [L. dim. *bucca*, cheek] (ARTHRO: Insecta) One of two ridges on the underside of the head on either side of the beak or rostrum.

**Bucephalus cercaria** (PLATY: Trematoda) Larva of the furcocercous group with the oral sucker on the midventral surface as in adults, with the tail arising from a large bulbous structure instead of a stem.

**Buchner funnel** A funnel with an interior perforated plate on which filter paper is placed that functions in vacuum filtration.

**bud** n. [ME. *budde*, bud] A young individual produced by budding, prior to detachment from the parent.

**budding** n. [ME. *budde*, bud] 1. The asexual reproduction of a new individual as the result of an outgrowth or bud from the parent organism. 2. (ARTHRO: Insecta) see **colony fission**.

**buffered populations** Populations of organisms affecting one another in such a way as to maintain a population density mean.

**buffer species** An alternative food for a predator, thereby, buffering the effect of the predator on its normal prey.

**Bugel organ** (ARTHRO: Insecta) A sense organ attached to the back of the tympanum, containing two scolopidia supported by an apodemal ligament and an invagination of the tympanal frame.

**bulb** n. [L. *bulbus*, a swelling] Any hollow globose organ.

**bulbose, bulbous, bulbar** a. [L. *bulbus*, a swelling] Pertaining to or resembling a bulb.

**bulbus ejaculatorius** (ARTHRO: Insecta) Ductus ejaculatorius. *a.* In some Hymenoptera, the swollen almost spherical

structure. *b.* In Lepidoptera, the distal part. *c.* In Diptera, a muscled, syringe-like structure.

**bullae** n.; pl. **bullae** [L. *bullae*, bubble] 1. A rounded prominence, blister- or knob-like. 2. (ARTHRO: Crustacea) A structure secreted by the head and maxillary glands of certain parasitic female copepods that serves as an anchor for attachment to gill filaments of fish. 3. (ARTHRO: Insecta) *a.* Weakened spots on concave wings that allows them to bend. see **stigma**. *b.* In diaspid Hemiptera, located in the terminal outlet of wax glands (*ceratuba*) at the inner end. *c.* In scarabaeoid Coleoptera, a sclerite that closes the trachea. 4. (NEMATA: Secernentea) In Heteroderidae, knob-like structures within the vulval cone of cysts near the underbridge or fenestra.

**bullate** a. [L. *bullae*, bubble] Having a blister-like appearance, inflated, swollen.

**bulliform** a. [L. *bullae*, bubble; *forma*, shape] Bubble-shaped.

**bundle** n. [A.S. *byndeale*, a binding] 1. A band or group fastened together. 2. A group of nerves, muscles or other fibers; a fascicle.

**burden** n. [A.S. *byrthen*, load] The total number of infectious parasites of an individual. see **intensity**.

**burrow** n. [uncert. origin] A hole or excavation used as a shelter and habitation, or place of retreat. see **fossorial**.

**bursa** n.; pl. **bursae** [L. *bursa*, purse] 1. Any pouch or sac, a sac-like cavity. 2. A lateral cuticular extension adanal, or surrounding the tail of male nematodes and acanthocephalans that functions as claspers or guides during copulation; has also been applied by various workers to all caudal alae. 3. (ECHINOD: Crinoidea) In Ophiurida, formed by infoldings of the body wall of the oral disc to either side of the base of each arm, functioning in gas exchange or as bursal slits. see **bursa copulatrix**.

**bursa copulatrix** 1. A genital pouch of numerous invertebrates. 2. In certain male nematodes and acanthocephalans, a modified caudal ala or alae, circular or oval, may be divided into two lateral symmetrical or asymmetrical lobes, separated by a dorsal lobe, and supported by rays or pa-

pillae; bursa. 3. (ARTHRO: Insecta) A female copulatory pouch developed from the tubular vagina in the genital chamber for reception of the male aedeagus. see **genital chamber**. 4. (MOLL) A copulatory pouch or sac for receiving sperm that will be stored for only a brief period; copulatory bursa. see **seminal receptacle**. 5. (PLATY: Turbellaria) In planarians, a blind pouch that holds the secretions from the penis and adenodactyl gland (muscular organ), which then activates the sperm.

**bursal slits** (ECHINOD: Crinoidea) Genital openings of the bursa of Ophiurida, through which water circulates for respiration, and ripe sex cells pass for fertilization or are retained as brood until rupture of the aboral disk. see **ophio-pluteus**.

**bursa seminalis** see **seminal bursa**

**bursicon** n. [L. dim. *bursa*, purse] (ARTHRO: Insecta) A hormone associated with hardening and darkening of the cuticle following ecdysis.

**bursiform** a. [L. *bursa*, purse; *forma*, shape] Formed like a purse.

**buschelformigen Korper** see **racemose glands**

**butt** see **hampe**

**buttness** n. [OF. *bouterez*, to thrust] 1. (ARTHRO: Insecta) In Culicidae pupae, a sclerotized, thickened basolateral part of the paddle; external buttness; external thickening; nervure. 2. (MOLL: Bivalvia) A radiating ridge on the interior that reinforces the hinge process.

**byssaceous** a. [Gr. *byssos*, fine flax] Composed of fine filaments.

**byssal foramen** (MOLL: Bivalvia) An opening in the right valve for passage of byssus in Anomiidae oysters.

**byssal gape** (MOLL: Bivalvia) An opening between the valve margins for the passage of the byssus.

**byssal gland** (MOLL: Bivalvia) A viscid secreting gland producing the byssal threads that anchors the organism to rocks and solid objects; also called byssal pit. see **byssus**.

**byssal notch** (MOLL: Bivalvia) A small opening or notch located

on the ventral margin for the passage of the byssus from the byssal gland.

**byssal sinus** (MOLL: Bivalvia) Corresponds to the byssal notch of the right valve, but shallower and on the left valve in the Pectinacea.

**byssus** n.; pl. **byssi**, **byssuses** [L. *byssos*, fine flax] 1. (MOLL: Bivalvia) Fibers or small bundles of silky threads by which they anchor themselves to the substratum; beard. 2. (NEMATA: Adenophorea) A series of elaborately branched projections at the poles of mermithid eggs, by which they attach to plants.