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# Online Dictionary of Invertebrate Zoology: H

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# H

**habitat** n. [L. *habitare*, to dwell] The particular kind of environment where a race, species or individual lives.

**habitat selection** The capability of a dispersing individual to select a particular (species-specific) environment.

**habitat type** The ecotype.

**habitude** n. [L. *habitus*, condition] General appearance or conformation of an animal.

**habroderes** n.pl. [Gr. *habros*, graceful; *deire*, neck] (KINOR) In Echinoderidae, the fourth juvenile stage to adulthood in which the midterminal spine is missing, and a series of molts results in the loss of posterior middorsal spines until the adult complement is reached.

**hackled band** (ARTHRO: Chelicerata) In cribellate spiders, composite threads spun by the cribellum and combed by the calamistrum setae.

**haem-** for words not found here see **hem-**

**haemocoel** see **hemocoel**

**haemocyte** see **hemocyte**

**haemolymph** see **hemolymph**

**haemostatic diaphragm or membrane** (ARTHRO) In some arthropods, an obstruction device between femur and trochanter preventing fluid loss after autotomy; an occlusive diaphragm.

**haemoxanthine** n. [Gr. *haima*, blood; *xanthos*, yellow] (ARTHRO: Insecta) An albuminoid protein in the hemolymph, providing oxygen and nutritive materials.

**haft organ** see **frontal organ**

**hair** n. [A.S. *haer*, hairy] Seta; chaeta; trichome. see **pubescence**.

**hair pads** (ARTHRO: Insecta) 1. A group of sensory hairs combined to form pads near joints together with internal pro-

prioceptors that are involved in the normal bearing of the limbs; also involved for measuring the vector of external forces, and contributing to orientation of the animal. 2. A pad on the compound eyes of the honey bee and between the eyes of locusts controlling the self-generated flight speed.

**hair plates** see **hair pads**

**haliotoid** a. [Gr. *hals*, salt, sea; *otos*, ear; *eidos*, like] Ear-shaped.

**Haller's organ** (ARTHRO: Insecta) A complex sensory setal field within one or more pits, on the dorsal aspect of tarsus I of ticks and mites, providing sites for contact or olfactory chemoreception.

**halmatometamorphosis** n. [Gr. *halmatos*, leap; *metamorphosis*, transform, change] (ARTHRO: Insecta) The process of degeneration of larval structures and development of specialized structures adapted for arthropod endoparasitic life.

**halocline** n. [Gr. *hals*, salt, sea; *klinein*, to slope] That area of sharp vertical salinity change in the ocean or other saline water.

**halophile** n. [Gr. *hals*, salt, sea; *philos*, love] An organism adapted to living in a salty environment.

**halter** n.; pl. **halteres** [Gr. *halter*, balancer] (ARTHRO: Insecta) In Diptera, sense organs consisting of a basal lobe, a stalk and an end knob on each side of the metathorax, representing a reduced hind wing; balancers.

**hamabiosis** see **neutralism**

**hamate, hamiform** a. [L. *hamus*, hook] Hooked; bent at the end resembling a hook; aduncate.

**hamatype** n. [Gr. *hama*, together; *typos*, type] Obs. A specimen from the type lot of a species, not specified as a holotype or paratype; a special group of topotypes.

**hammock** n. [Sp. *hamaca*, swinging couch] (ARTHRO: Insecta) Has been used to describe the hammock-like covering of a caterpillar.

**hampe** n. [F. *shank*, stalk] (CNID) The basal tube portion of the

nematocyst; the butt.

**hamula** n. [L. *hamulus*, little hook] (ARTHRO: Insecta) A trigger-like hook securing the springing organ (furcula) of springtails; a retinaculum.

**hamular hook** (ARTHRO: Insecta) In some male Odonata, a curved hook receiving the end of the basal lobe of the posterior hamuli.

**hamulohalterae** n.pl. [L. *hamulus*, little hook; Gr. halter, balancer] (ARTHRO: Insecta) In Homoptera, giant mealybug halters developed from the metathoracic wing-buds furnished with one or more hooklets that engage in a basal pocket of the corresponding fore wing.

**hamulus** n., pl. -li [L. *hamulus*, little hook] 1. A hook or hook-like process. 2. (ARTHRO: Insecta) *a.* In certain Hymenoptera, a row of minute hooks along the costal margin of the hind wing to unite the front and hind wings in flight; has been spelled humule. *b.* In male Odonata, one of a pair of anterior(is) and posterior(is) clasps of the genitalia (fenestra) for grasping the female. *c.* In Siphonaptera, one of a pair of movable sclerites originating from the lateral wall of the aedeagal palliolum. 3. (PLATY: Trematoda) In monogenetic forms, large hooks on the opisthaptor; anchors.

**hamus** n.; pl. **hami** [L., hook] (ARTHRO: Insecta) 1. In Heteroptera, an abrupt spur-like vein in the hind wings. 2. In Lepidoptera, the retinaculum.

**Hancock's glands** (ARTHRO: Insecta) In Orthoptera, large, glandular, sex-attractant pits of male tree crickets that secrete a fluid which the female ingests during the mating act.

**Hancock's organ** (MOLL: Gastropoda) A succession of parallel folds on each side of the mouth in the groove between the cephalic shield and the foot in some Opisthobranchia; lateral sensory areas.

**hapaloderes** n.pl. [Gr. *hapalos*, tender; *deire*, neck] (KINOR) The first three juvenile stages of Echinoderidae in which a midterminal, lateral and middorsal spines are present. see **habroderes**.

**haplobiont** n. [Gr. *haplos*, simple; *bios*, life] An organism

characterized by one morphological distinct generation.

**haplo-diploidy** (ARTHRO: Insecta) A normal reduction division occurring in the oocyte, fertilized eggs developing into females, unfertilized eggs into males; characteristic of Hymenoptera and some other groups of insects.

**haploid** a. [Gr. *haplos*, single] Having one set of chromosomes; gametes are usually haploid. see **diploid**.

**haplometrosis** n. [Gr. *haplos*, single; *metros*, mother] (ARTHRO: Insecta) In Hymenoptera, the founding of a new colony by a single fertilized, egg laying queen; monometrosis. **haplometrotic** a. see **temporary haplometrosis, pleometrosis**.

**haploneme** a. [Gr. *haplos*, single; *nema*, thread] (CNID) Bearing threads of uniform diameter or slightly dilated at the base, but without a hampe; nematocysts, anisorhizas and isorhizas.

**haploneural** a. [Gr. *haplos*, single; *neuron*, nerve] Supplied with one simple nerve.

**haplont** n. [Gr. *haplos*, simple; -on, individual] An organism with haploid somatic nuclei; monoplont.

**haplophase** n. [Gr. *haplos*, single; *phasis*, look] The haploid phase or generation of the life cycle (meiosis to fertilization); gamophase. see **diplophase**.

**haploisis** n. [Gr. *haplos*, single; -sis, act of] Meiotic reduction.

**haptolachus** n. [Gr. *haptos*, fasten or join; *lachos*, part] (ARTHRO: Insecta) In scarbaeoid larvae, that part of the posterior epipharynx behind the pedium, usually below the crepis, comprised of the nesia, sensillae and crepis; proximal sensory area.

**haptomerum** n.; pl. **haptomeri** [Gr. *haptos*, fasten or join; *meron*, a part] (ARTHRO: Insecta) The medio-anterior region of the epipharynx of scarbaeoid larvae composed generally of sensory spots, sometimes setiferous.

**haptor** n. [Gr. *haptos*, fasten or join] 1. Organ of attachment; an acetabulum. 2. (PLATY: Trematoda) The pre-oral, oral or ventral sucker.

**Hardy-Weinberg law** The law stating that the frequency of

genes in a large randomly mating population remains constant in the absence of mutation, migration and selection.

**harmonic growth** see **Przibram's rule**

**harmonic mean** Reciprocal of the arithmetic mean.

**harmosis** n. [Gr. *harmosis*, adapting] Total response of an organism to a stimulus; includes reaction and adaptation.

**harpagones** n. pl.; sing. **harpago** [Gr. *harpago*, grappling hook] (ARTHRO: Insecta) 1. Moveable periphallid processes of males located on the ninth abdominal segment usually having a clasping function. 2. In mosquitoes, basal lobes on the mesal margin of the dorsal surface of the gonocoxites; the basal dorsomesal lobes. 3. The harpes of Lepidoptera.

**harpes** n.pl. [Gr. *harpe*, sickle] (ARTHRO: Insecta) In Lepidoptera, a part of the male genitalia being one or more processes; clasper.

**harpoon seta** (ANN) A stout pointed seta with recurved barbs near the apex.

**hastate** a. [L. *hasta*, spear] 1. Triangular or spear-shaped with the base diverging on each side into an acute lobe. 2. (PO-RIF) Pertaining to spicules of uniform diameter coming to an abrupt, sharp point.

**hastisetae** n.pl. [L. *hasta*, spear; *seta*, bristle] (ARTHRO: Insecta) Spear-headed setae found especially in tufts on tergites of the caudal segments of some larval dermestid beetles.

**hatching** n. [ME. *hacchen*] Emergence from an egg shell.

**hatching membrane** The embryonic cuticle between the larval cuticle and the chorion that is shed during hatching or shortly afterward.

**hatching spines/tooth** see **egg burster**

**haustellate** a. [L. dim. *haustus*, sucking] For sucking; possessing a haustellum.

**haustellum** n. [L. dim. *haustus*, sucking] A part of a beak or proboscis; mouthparts specialized for sucking.

**haustrulum** n. [L. dim. *haustum*, pump] (NEMATA: Se-

cernentea) The cavity of the valvular apparatus in the posterior bulb of rhabditid esophagi.

**Hautkörper** see **skin bodies**

**Hayes' plate/sense cone** see **nesium**

**H-band** The region in the center of the A-band of a sarcomere characterized by myosin filaments and absence of actin filaments.

**head** n. [A.S. *haefod*] 1. The anterior body region. 2. (ANN: Polychaeta) The prostomium and peristomium. 3. (ARTHRO) Bearing the eyes, antennae and mouth parts. 4. (NEMATA) Comprising the lips and sensory organs, oral opening and supporting head skeleton.

**head apodeme** (ARTHRO: Crustacea) In crayfish, fused endopleurite and endosternite forming an area for muscle attachment at the anterior end of the skeleton.

**head bulb** see **ballonets**

**head-fans** (ARTHRO: Insecta) In Diptera, fan-like rays on the main part of the torma of mature larva of Simuliidae that function as filtering organs in running water, or a raking function in Crozetia .

**head gland** (PLATY: Trematoda) Glands of cercaria which produce a secretion emitted into the matrix of the tegument that is thought to function in the postpenetration adjustment of the schistosomula.

**head valve** (MOLL: Polyplacophora) The anterior valve of chitons.

**heart** n. [A.S. *heorte*] Sometimes used to describe the pulsating dorsal blood vessel.

**heart chamber** (ARTHRO: Insecta) One of the segmental swellings of the dorsal blood vessel; ventricle.

**heautotype** n. [Gr. *heautou*, of itself; *typos*, image] A specimen used by the original describer as an illustration of his species and compared with the type or cotype; a hypotype.

**hectocotylus, heterocotylus** n. [Gr. *hekatón*, hundred; *kotyle*, a cup] (MOLL: Cephalopoda) A penislike process or arm utilized in spermatophore transfer to the mantle cavity of the female, in some species breaking off in the process.

**heel** n. [A.S. *hela*, heel] (ARTHRO: Insecta) In Hymenoptera larvae, padlike prolongation of the base of the tarsungulus opposing the claw.

**height** n. [A.S. *hiehthu*, height] 1. (MOLL: Gastropoda) The length parallel to the shell axis through the columella. 2. (MOLL: Bivalvia) The greatest vertical dimension through the beak at right angles to a line bisecting the adductor scars; altitude.

**heli** pl. of **helus**

**helical** a. [Gr. *helix*, a spiral] Spirally coiled; heliciform.

**helicocone** a. [Gr. *helix*, a spiral; *konos*, cone-like] (MOLL: Gastropoda) An expanding cone-like spiral tube that is the form of most shells.

**heliophil**, **heliophilic**, **heliophilous** a. [Gr. *helios*, sun; *philein*, to love] Thriving in a high intensity of light.

**heliophobic** n. [Gr. *helios*, sun; *phobos*, fear] Shade loving.

**heliotaxis** n. [Gr. *helios*, sun; *taxis*, arrangement] Taxis with sunlight as the stimulus. see **phototaxis**.

**heliotropism** n. [Gr. *helios*, sun; *trope*, a turning] Tropism with sunlight as the stimulus.

**helix** n.; pl. **helices** [Gr. *helix*, a spiral] Having a spiral form.

**helmet** n. [OF. *helme*] (NEMATA) An internal thickening in the cephalic region, often set off by a groove, and denoted by a lack of ornamentation of the anterior exterior cuticle. see **cane**.

**helminth** n. [Gr. *helmins*, worm] Any parasitic worm of vertebrates.

**helminthiasis** n. [Gr. *helmins*, worm; -iasis, disease] A worm disease induced in or on a host.

**helminthic** a. [Gr. *helmins*, worm] Pertaining to worms.

**Helminthology** n. [Gr. *helmins*, worm; *logos*, discourse] A branch of zoology dealing with the natural history of parasitic worms, especially flatworms and roundworms.

**helocerous** a. [Gr. *helos*, nail; *keros*, horn] Having a clavate antenna.

**helotism** n. [Gr. *Heilotas*, slave class] Symbiosis in which one

animal enslaves another forcing it to labour on its own behalf. see **consortism**.

**helus** n.; pl. **heli** [Gr. *helos*, nail] (ARTHRO: Insecta) In scarabaeoid larvae, a coarse fixed spine located near the hapterum.

**hemal** a. [Gr. *haima*, blood] Pertaining to blood.

**hemapoiesis** see **hematopoiesis**

**hematal** see **hemal**

**hematocyte**, **hematocyte** see **hemocyte**

**hematodocha**, **haematodocha** n. [Gr. *haima*, blood; *doche*, receptacle] (ARTHRO: Chelicerata) A fibro-elastic sac at the base of the palpus of certain male spiders that fills with hemolymph and becomes distended during pairing.

**hematogenic**, **hematogenous** a. [Gr. *haima*, blood; *genos*, birth] 1. Forming blood, hematopoietic. 2. Relating to anything produced from, derived from, or transported by the blood.

**hematophagus** see **hemophagus**

**hematopoiesis** n. [Gr. *haima*, blood; *poietes*, maker] The formation of blood cells; also spelled haematopoiesis, haemopoiesis, hemopoiesis.

**hemelytron** n.; pl. **-tra** [Gr. *hemisys*, half; *elytron*, sheath] (ARTHRO: Insecta) A fore wing in which only the basal portion is hardened; wing-covers; also spelled hemelytran, hemelytrum, hemielytron. **hemelytral** a. see **elytron**, **tegmen**.

**hemerophilic** a. [Gr. *hemeros*, cultivated; *philos*, loving] Having the ability to withstand culture and human interference with the environment. see **hemerophobic**.

**hemerophobic** a. [Gr. *hemeros*, cultivated; *phobos*, fear] Lacking the ability to withstand culture and human interference with the environment. see **hemerophilic**.

**hemianamorphosis** n. [Gr. *hemisys*, half; *ana*, on; *morphe*, form] Post-embryonic development beginning as anamorphic and later becomes epimorphic.

**hemibranch** n. [Gr. *hemisys*, half; *branchos*, gill] Gill filaments

only on one side; demibranch.

**hemicephalous** a. [Gr. *hemisys*, half; *kephale*, head] (ARTHRO: Insecta) Referring to dipteran larvae with reduced head capsule retractable within the thorax; an intermediate condition between eucephalous and acephalous; hemicephalic.

**hemidesmosome** n. [Gr. *hemisys*, half; *desmos*, bond; *soma*, body] Attachment process of the epidermal cell to the cuticle; process from the cuticle to which microtubules are attached. see **desmosome**, **tonofibrillae**.

**Hemimetabola** n. [Gr. *hemisys*, half; *metabole*, change] A division of insects in some classifications (=Exopterygota) in which the nymphs live an aquatic life as opposed to the adult form.

**hemimetabolous metamorphosis** (ARTHRO: Insecta) Simple or gradual metamorphosis in which the nymphs are generally similar in body form to the adults, but resemble the adults more with each instar.

**hemiomphalous** a. [Gr. *hemisys*, half; *omphalos*, the navel] (MOLL: Gastropoda) Having the opening of the umbilicus partly plugged.

**hemiphragms** n.pl. [Gr. *hemisys*, half; *phragma*, wall] (BRYO: Stenolaemata) Shelf-like skeletal projections into the zooid living chamber alternating from opposite sides of the zoecia; hemiphragms in any single zooid usually comparable in morphology. see **hemisepta**.

**hemipneustic** a. [Gr. *hemisys*, half; *pnein*, to breath] Having 8 functional spiracles. see **polypneustic**.

**hemiseptum** n.; pl. **hemisepta** [Gr. *hemisys*, half; L. *septum*, wall] (BRYO: Stenolaemata) Shelf-like projections into zooid living chambers; usually on proximal walls, but also in pairs on proximal and distal walls which differ in morphology. see **hemiphragms**.

**hemispondylium** n.; pl. **-ia** [Gr. *hemisys*, half; *spondylos*, back] (BRACHIO) In Thecideidae, one of two small plates attached to a median septum and not to the valve floor or side walls, bearing the median adductor muscles.

**hemisyrinx** n. [Gr. *hemisys*, half; *syrinx*, pipe] (BRACHIO) A

median, conical chamber on the spondylium floor, posteriorly marked by a pair of lateral ridges.

**hemitergite** n. [Gr. *hemisys*, half; L. *tergum*, back] (ARTHRO: Insecta) 1. Any tergite that is divided into two plates. 2. Adult male Embiidae with tergum 10 divided into a pair of asymmetrical plates. 3. In female Apoidea, the divided 7th gastral tergum.

**hemitrope** a. [Gr. *hemisys*, half; *tropos*, a turn] Being half turned around; half inverted.

**hemizonid** n. [Gr. *hemisys*, half; L. *zona*, girdle] (NEMATA: Secernentea) A nerve commissure from the nerve ring that is highly refractive at the point it joins the ventral nerve cord near the excretory pore. see **cephalids**, **hemizonion**, **caudalid**.

**hemizonion** n. [Gr. *hemisys*, half; L. *zona*, girdle] (NEMATA: Secernentea) A small nerve commissure slightly posterior to the hemizonid.

**hemizygous** a. [Gr. *hemisys*, half; *zygon*, yoke] A gene with no allele; gene in a haploid organism; sex linked gene as in xy-xx; gene in a part of a chromosome where the corresponding part has been deleted.

**hemocoel**, **haemocoel** n. [Gr. *haima*, blood; *koilos*, hollow] 1. (ARTHRO) The main body cavity, the embryonic development of which differs from that of a true coelom, but which includes a vestige of that true coelom that emanates from the blood spaces of the embryo, or remnants of the blastocoel after invasion of the latter by the mesoderm. 2. (MOLL) The main body cavity.

**hemocoelous viviparity**, **haemocoelous** (ARTHRO: Insecta) A form of viviparity in which development occurs in the hemocoel.

**hemocyanin** n. [Gr. *haima*, blood; *kyanos*, dark blue] A blue oxygen carrying respiratory protein containing copper in the prosthetic group instead of iron; found in many invertebrate species.

**hemocyte**, **haemocyte** n. [Gr. *haima*, blood; *kytos*, container] A mesodermal cell, sessile or circulating, in the hemocoel or hemolymph of insects and other invertebrates. see

**granular hemocyte.**

**hemocytoblast** see **prohemocyte**

**hemocytopoietic organs** see **hemopoietic organs**

**hemoglobin** n. [Gr. *haima*, blood; L. *globos*, sphere] A red oxygen respiratory protein with iron in the prosthetic group with molecular weights varying from 17,000 to 2,750,000, differing in absorption spectrum and oxygen-combining properties.

**hemolymph, haemolymph** n. [Gr. *haima*, blood; L. *lymph*, water] 1. (ARTHRO) Fluid within the hemocoel. 2. (NEMATA) The pseudocoelomic fluid.

**hemolysis, haemolysis** n. [Gr. *haima*, blood; *lyein*, to dissolve] The breakdown or destruction of red blood corpuscles. **hemolytic** a.

**hemophagous** a. [Gr. *haima*, blood; *phagein*, to eat] Ingesting blood.

**hemopoietic** a. [Gr. *haima*, blood; *poietes*, maker] Pertaining to any blood forming cell or organ.

**hemopoietic organs** (ARTHRO: Insecta) Discrete encapsulated organs, reported in Hemiptera, Coleoptera, Diptera, Lepidoptera and Hymenoptera, functioning in the formation of blood cells; hemocytopoietic organs; also spelled **haemopoietic**.

**hemozoin** n. [Gr. *haima*, blood; *zoon*, animal] A pigment found in a host produced by a malarial parasite from the hemoglobin of the host.

**henidium** n. [Gr. dim. *henos*, one] (BRACHIO) Deltidial plates that lose the line of fusion during growth.

**Hensen gland** (MOLL: Cephalopoda) A gland found in the head near the eyes that synthesize leucocytes; white body.

**hepatic** a. [L. *hepaticus*, liver] Pertaining to liver; liver colored.

**hepatic caecum/cecum** pl. **caeca/ceca** Pouchlike diverticulum generally connected with the mesenteron in many invertebrates. see **hepatopancreas**.

**hepatic cells** see **nephrocytes**

**hepatic groove** (ARTHRO: Crustacea) In Decapoda, a groove

connecting cervical, postcervical and branchiocardiac grooves.

**hepatic pouches** see **caecum**

**hepatic region** (ARTHRO: Crustacea) In Decapoda, an area contiguous with antennal, cardiac and ptergostomial regions.

**hepatic spine** (ARTHRO: Crustacea) In Decapoda, located below and behind the lower branch of the cervical groove.

**hepatopancreas** n. [Gr. *hepar*, liver; *pan*, all; *kreas*, flesh] A branched digestive gland of the cephalothorax of various invertebrates, functioning as both liver and pancreas.

**herbivore** n. [L. *herba*, plant; *vorare*, to eat] Animals that feed on plants. **herbivorous** a.

**hereditary** a. [L. *hereditas*, heirship] Biological traits transmitted from one generation to another.

**heredity** n. [L. *hereditas*, heirship] The transmission of genes from parents to offspring, controlling biological traits.

**hermaphrodite** n. [Gr. *hermaphroditos*, combining both sexes] An individual bearing recognizable male and female tissues and producing male and female gametes at some period of the life cycle; monoecious; androgynous; ambisexual; ambosexous; protandry. see **intersex**. **hermaphroditic** a.

**hermaphroditic duct** (MOLL: Gastropoda) In Pulmonata, the duct that connects the ovotestes and carrefour area.

**hermaphroditism** n. [Gr. *hermaphroditos*, combining both sexes] Possession of gonads of both sexes by a single individual; autocopulation.

**hermatype corals** (CNID) Reef building species of corals. **hermatypic** a. see **ahermatypic corals**.

**hesmosis** see **swarming**

**heteractinal** a. [Gr. *heteros*, different; *aktis*, ray] (PORIF) Spicules having a disc of six to eight rays in one plane and a single perpendicular ray.

**heterauxesis** n. [Gr. *heteros*, different; *auxesis*, growth] Disproportionate growth of a structure in relation to the rest of

the body; heterogonic or allometric growth. see **bradyauxesis**, **isauxesis**, **tachyauxesis**.

**heteroacanthus armature** (PLATY: Cestoda) Hooks arranged in semicircles from the internal surface to the external surface of the tentacles without chainettes. *a.* Atypica : differing numbers of hook rows on the internal and external surface of the tentacles. *b.* Typica : same number of hook rows, etc.

**heteroallelic** a. [Gr. *heteros*, different; *allelon*, reciprocal] Genes having mutations at different mutational sites (non-identical alleles). see **homoallelic**.

**heteroausecic coefficient** see **allometric coefficient**

**heteroblastic** a. [Gr. *heteros*, different; *blastos*, bud] Similar organs arising from different germ layers in different species. see **homoblastic**.

**heteroblastic change** Rapidly altered structures during transition from juvenile to adult.

**heterobrachial** a. [Gr. *heteros*, different; *brachion*, arm] Chromosome arms of unequal length.

**heterocentric** a. [Gr. *heteros*, different; *kentron*, midpoint] Dicentric chromosomes or chromatids whose centromeres are of unequal strength; frequently behave as monocentric chromosomes.

**heterochelate** a. [Gr. *heteros*, different; *chele*, claw] (ARTHRO: Crustacea) Having the chelae of left and right chelipeds varying in size and shape.

**heterochromatin** n. [Gr. *heteros*, different; *chroma*, color] Non or poorly staining part of the chromosome inactive in heredity, as contrasted with euchromatin. **heterchromatic** a.

**heterochrome** a. [Gr. *heteros*, different; *chroma*, color] Having different colors. see **homochrome**.

**heterochromosome** n. [Gr. *heteros*, different; *chroma*, color; *soma*, body] 1. Any chromosome differing from the autosomes in size, shape or behavior. 2. A sex-chromosome; an allosome.

**heterochronism** n. [Gr. *heteros*, different; *chronos*, time]

Changes in the relative time of appearance and rate of development for characters already present in ancestors. **heterochronic** a.

**heteroclite** n. [Gr. *heteros*, different; *clitos*, hill] (MOLL: Bivalvia) A folded or twisted commissural plane.

**heterocotylus** see **hectocotylus**

**heterodactyl** a. [Gr. *heteros*, different; *daktylos*, finger] (ARTHRO: Chelicerata) Having claws, apoteles or ungues differing from each other. **heterodactyly** n. see **homodactyl**

**heterodont** a. [Gr. *heteros*, different; *odous*, tooth] Having a variety of tooth types.

**heterodynamic** a. [Gr. *heteros*, different; *dynamis*, power] Genes not simultaneously influencing the same developmental process.

**heterodynamic life cycle** 1. A life cycle in which there is a period of dormancy. 2. A life cycle that includes a rest period not caused by environmental conditions. see **homo-dynamic life cycle**.

**heteroecious, heteroicous** a. [Gr. *heteros*, different; *oikos*, house] Parasitic upon two unlike hosts, either by successive generations or in a single life history. see **metoecious parasite**; **heteroxenous**.

**heterogamete** see **anisogametes**

**heterogametic** a. [Gr. *heteros*, different; *gamete*, spouse] Pertains to the sexual form that gives rise to two different types of sexual gametes in meiosis; in xy and xo systems this is usually male; digametic. see **homogametic**.

**heterogamy** n. [Gr. *heteros*, different; *gamos*, marriage] 1. Alternation of bisexual with parthenogenetic reproduction. 2. The preference of an individual to mate with an unlike phenotype or genotype. see **homogamy**. 3. see **anisogamy**.

**heterogeneous** a. [Gr. *heteros*, different; *genos*, kind] Possessing different characteristics. see **homogeneous**.

**heterogenesis** n. [Gr. *heteros*, different; *genesis*, descent] Form of reproduction that has sexual and asexual or parthenogenetic forms; alternation of generations; xeno-



genesis. see **metagenesis**.

**heterogenetic** a. [Gr. *heteros*, different; *genesis*, descent] Pertaining to meiotic chromosome pairing in hybrids when pairs are derived from different ancestors. see **homogenetic**, **heterogonic life cycle**.

**heterogenic** a. [Gr. *heteros*, different; *genos*, race] Containing more than one allele of a gene.

**heterogomph** n. [Gr. *heteros*, different; *gomphos*, peg] (ANN) A compound seta with an asymmetrical joint between shaft and blade. see **homogomph**.

**heterogonic coefficient** see **allometric coefficient**

**heterogonic life cycle** Life cycle involving alternation of parasitic and free-living generations. see **homogonic life cycle**.

**heterogony** n. [Gr. *heteros*, different; *gonos*, seed] 1. Study of relative growth. see **allometric growth**. 2. Alternation of generations. see **heterogamy**. 3. Both males and females present in a colony.

**heterogynous** a. [Gr. *heteros*, different; *gyne*, woman] Having more than one type of female.

**heteroideus** a. [Gr. *heteros*, different; *idios*, personal] (ARTHRO: Insecta) Pertaining to larvae with a mesoseries of crochets bearing a well developed median series of hooks flanked on each end by smaller or rudimentary crochets. see **homoideus**.

**heterology** n. [Gr. *heteros*, different; *logos*, discourse] The lack of similarity between structures due to different components or of a different derivation. see **anology**, **homology**.

**heterolysis** n. [Gr. *heteros*, different; *lysis*, loosen] Disintegration of a cell or tissue by an external agent, either by lysins or enzymes. see **autolysis**.

**heteromedusoid** a. [Gr. *heteros*, different; *Medousa*, *Medusa*] (CNID: Hydrozoa) In Hydroida, a sessile gonophore of a styloid type.

**heteromerous** a. [Gr. *heteros*, different; *meros*, part] 1. Non-uniformity in number of parts between organisms of the

same species, or organs on the same individual. see **homeomerous**. 2. (ARTHRO: Insecta) In Coleoptera, the tarsi are usually 5,5,4 segments in both sexes, occasionally 4,4,4, and rarely 3,4,4 in males, very rarely 3,3,3.

**Heterometabola** n. [Gr. *heteros*, different; *metabole*, change] In some classifications the division of Exopterygota excluding Hemimetabola.

**heterometabolous**, metamorphosis a. [Gr. *heteros*, different; *metabole*, change] (ARTHRO: Insecta) Developing by incomplete or direct metamorphosis where there is no pupal stage; the immature resemble adult insects and are known as nymphs.

heteromorph n. [Gr. *heteros*, different; *morphe*, form] (ARTHRO: Crustacea) An adult female dimorphic ostracod, recognizable by carapace structure.

**heteromorphic** a. [Gr. *heteros*, different; *morphe*, form] 1. Deviating from the normal form. 2. At different life stages progressing to another form; heteromorphous 3. Homologous chromosomes differing in size or form.

**heteromorphosis** n.; pl. **-ses** [Gr. *heteros*, different; *morphosis*, forming] The replacement of an organ or part in an abnormal position, especially one lost or removed; homoeosis. see **homomorphosis**.

**heteromorphous** a. [Gr. *heteros*, different; *morphe*, form] 1. Heteromorphic. 2. (ARTHRO: Insecta) Successive instars with differing forms and marked differences in development. see **hypermetamorphosis**.

**heteromorphous armature** (PLATY: Cestoda) Hooks that change radically in size and shape from internal to external surface of the tentacle.

**heteromyarian** a. [Gr. *heteros*, different; *mys*, muscle] (MOLL: Bivalvia) Having adductor muscles unequally developed. see **homomyarian**.

**heteroneme** n. [Gr. *heteros*, different; *nema*, thread] (CNID) A nematocyst with an open tip with a definite hampe.

**heteronereid** n. [Gr. *heteros*, different; *Neris*, family Neridae] (ANN: Polychaeta) A specialized, free swimming, sexually dimorphic marine worm that gives off sex products into

the water and dies after spawning. see **epitoky**.

**heteronereis** see **epitoky**

**heteronomous** a. [Gr. *heteros*, different; *nomos*, usage] Having unlike segments; differing in development or function.

**heteronomous hyperparasitoid** (ARTHRO: Insecta) In Hymenoptera, a species in Adelinidae in which the female develops as a hyperparasitoid of one host, while the male develops as a normal parasitoid on another host; an adelphoparasite. see **diaphagous parasitoid**, **heterotrophic parasitoid**.

**heteronomous parasitoid** (ARTHRO: Insecta) In Hymenoptera species Aphelinidae, a parasitoid exhibiting heteronomy.

**heteronomous segmentation** Relative dissimilarity and specialization of certain body segments. see **homonomous**.

**heteronychia** n. [Gr. *heteros*, different; *onyx*, claw] (ARTHRO: Chelicerata) One or more legs with a different number of claws than the other legs in a particular mite stase.

**heteropalpi** n.pl. [Gr. *heteros*, different; L. *palpus*, feeler] (ARTHRO: Insecta) Palpi that differ in number of segments between male and female.

**heteroparthenogenesis** n. [Gr. *heteros*, different; *parthenos*, virgin; *genesis*, beginning] Cyclic parthenogenesis.

**heteroploid** a. [Gr. *heteros*, different; *aploos*, onefold; *eidos*, form] Designating a chromosome number deviating from the somatic number characteristic of the species; chromosome numbers may be either euploid or aneuploid.

**heteropod** a. [Gr. *heteros*, different; *pous*, foot] (MOLL: Gastropoda) Pertains to pelagic snails with a compressed foot adapted for swimming.

**heteropycnosis, heteropyknosis** n. [Gr. *heteros*, different; *pyknos*, dense] Certain chromosomes or regions of chromosomes that are out of phase in their coiling cycle and staining properties. **heteropycnotic, heteropyknotic** a.

**heterorhabdic** a. [Gr. *heteros*, different; *rhabdos*, rod] (MOLL: Bivalvia) Pertaining to plicate lamellibranchiate gill in which the filament in the bottom of the depression between two successive plicae is longer than the other filaments. see

**homorhabdic**.

**heterosis** n. [Gr. *heteros*, different; -sis, process of] Selective superiority of heterozygotes; hybrid vigor.

**heterosomal** a. [Gr. *heteros*, different; *soma*, body] Chromosomal structural changes involving two or more nonhomologous chromosomes.

**heterosome** n. [Gr. *heteros*, different; *soma*, body] Sex chromosome; a heterochromosome.

**heterostrophic** a. [Gr. *heteros*, different; *strophe*, turn] (MOLL: Gastropoda) Pertaining to a protoconch when the whorls appear to be coiled in the opposite direction to those of the teloconch.

**heterosyllid** see **epitoky**

**heterotaxis** n. [Gr. *heteros*, different; *taxis*, arrangement] Abnormal arrangement of parts or organs.

**heterotopy** n. [Gr. *heteros*, different; *topos*, place] Phyletic change in the location from which an organ differentiates in ontogeny. **heterotropic** a.

**heterotrichous anisorhiza** (CNID) A nematocyst open at the tip with a slightly swollen base, with spines on the whole thread, but those at the base are larger.

**heterotroph** n. [Gr. *heteros*, different; *trophe*, nourishment] An organism requiring organic compounds among the food substances as its source of carbon; organotroph; sometimes used as synonymous with chemoheterotroph. **heterotrophic** a. see **autotrophic**.

**heterotrophic parasitoid** (ARTHRO: Insecta) In Hymenoptera, a species in Adelinidae in which the male is a parasitoid of a different host species than the female. see **diaphagous parasitoid**, **heteronomous hyperparasitoid**.

**heterotropic** a. [Gr. *heteros*, different; *tropos*, turn] Sex chromosome that does not have an exactly homologous partner (xx-xy or xx-xo).

**heterotypic** a. [Gr. *heteros*, different; *typos*, shape] Pertaining to the first meiotic division (meiosis) in which the bivalent chromosomes separate and are reduced in number. see **homeotypic**.

- heteroxenous** a. [Gr. *heteros*, different; *xenos*, host] Having more than one host during a parasite's life cycle.
- heterozoid** n. [Gr. *heteros*, different; *zoon*, animal] (BRYO: Gymnolaemata) A specialized zooid that forms stolons, attachment discs, rootlike structures and other such vegetative parts of the colony; a bryozoan, such as an avicularium or a rhizoid.
- heterozygosity** n. [Gr. *heteros*, different; *zygon*, yolk] Condition of bearing differing genetic alleles at the same loci of the two parental chromosomes. see **homozygosity**.
- heterozygous** a. [Gr. *heteros*, different; *zygon*, yolk] Pertaining to an individual with different genetic alleles at the corresponding loci of the two parental chromosomes. **heterozygote** n. see **homozygous**.
- hexacanth** a. [Gr. *hex*, six; *akantha*, thorn] (PLATY: Cestoda) A six-hooked mature embryo, or *larva*, hatching from the egg; an onchosphere.
- hexachaetous** a. [Gr. *hex*, six; *chaite*, hair] (ARTHRO: Insecta) In Diptera, describing the bundle of 6 needlelike mouthparts (stylets).
- hexactinal** a. [Gr. *hex*, six; *aktis*, ray] (PORIF) Referring to a 6 rayed spicule occurring in only the class Hexactinellida. **hexactine** n.
- hexagonal** a. [Gr. *hex*, six; *gonia*, corner, angle] Having 6 sides and 6 angles.
- hexamerous** a. [Gr. *hex*, six; *meros*, part] Having 6 radially arranged parts or multiples of 6.
- hexanephric** a. [Gr. *hex*, six; *nephros*, kidney] Having 6 kidneys, or structures utilized as kidneys.
- hexapod** a. [Gr. *hex*, six; *pous*, foot] 1. Having 3 pairs of legs. 2. (ARTHRO: Chelicerata) In larval mites, having or using 3 pairs of legs. hexapody n. see **octopod**.
- Hexapoda** see **Insecta**
- hexaradiate** a. [Gr. *hex*, six; L. *radius*, rod] Projecting outward in 6 directions.
- hexaster** n. [Gr. *hex*, six; *aster*, star] (PORIF) A type of hexactine with branching rays producing star-shaped fig-

ures.

**hexicology** see **ecology**

**hexose** n. [Gr. *hex*, six; -ose, indicates carbohydrate] Monosaccharides having 6 carbon atoms, including glucose and fructose.

**hexuronic acid** Vitamin C.

**hiatus** n.; pl. **hiatuses**, **hiatus** [L. *hiare*, to gape] 1. An opening, gap or foramen. 2. An opening in an egg shell. 3. (NEMATA) see **opercular plug**.

**hibernaculum** n.; pl. -**la** [L. *hibernaculum*, winter residence] 1. A case or covering. 2. (BRYO) Winter bud in a few freshwater forms that survive the winter and form a new colony in the spring. 3. (ARTHRO: Insecta) A case or covering in which larvae hide or hibernate; a winter cocoon.

**hibernal** a. [L. *hibernus*, winter] Occurring in winter.

**hibernation** n. [L. *hibernus*, winter] A form of suspended animation or inactivity in organisms during unfavorable winter conditions. see **aestivation**.

**hibernestivation** n. [L. *hibernus*, winter; *aestivus*, of summer] A period of rest or inactivity during unfavorable conditions extending through both hot and cool seasons, especially in the monsoon tropics, i.e., certain annelids.

**Hicks' bottles** (ARTHRO: Insecta) Campaniform sensillae of bees and ants located in the antennae in the shape of depressions or pits, and thought to be auditory in function; sensilla campaniformia.

**Hicks' papillae** (ARTHRO: Insecta) In Diptera, campaniform sensilla on the haltere base sensitive to vertical forces during flight.

**hierarchy** n. [Gr. *hieros*, holy; *archon*, leader] 1. In classification, the system of ranks that indicates the categorical level of various taxa. 2. A social ranking system in a colony.

**hill** see **formicary**

**hind angle** see **anal angle**

**hind-gut** n. [A.S. *hindan*; gut] The posterior ectodermal portion of the alimentary tract (canal) between the mid-gut

and the anus. see **proctodeum**.

**hind head** (ARTHRO: Insecta) In Mallophaga, behind the mandibles and antennae.

**hindunguis** n. [A.S. *hindan*; L. *unguis*, claw] (ARTHRO: Insecta) In mosquitoes, the posterior unguis of one of the hindlegs.

**hinge** n. [ME. *heng*, hinge] 1. The point of articulation of a moveable joint. 2. (ARTHRO: Insecta) The *maxilla*, cardo; in mosquitoes, between the upper and lower vaginal lips. 3. (MOLL: Bivalvia) An interlocking toothed device upon which the shells articulate.

**hinge ligament** Elastic substance interlocking the valves of a bivalve shell.

**hinge line** 1. (ARTHRO: Crustacea) The middorsal line of junction between two valves of the carapace permitting movement between them. 2. (BRACHIO/MOLL: Bivalvia) The external line of meeting of the brachial and pedicle valves; movement of the shells occurs here; hinge axis.

**hingement** n. [ME. *heng*, hinge; L. *mentum*, tool] (ARTHRO: Crustacea) A collective term for the structures comprising articulations of ostracods.

**hinge nodes** (ARTHRO: Crustacea) Localized thickening of the right valve hinge.

**hinge plate** see **cardinal platform**

**hinge selvage** (ARTHRO: Crustacea) In Ostracoda, a single ridge extending along the free margin of the carapace, when valves are closed, fitting into the selvage groove of the opposite valve; keeps valves from slipping sideways across each other.

**hinge teeth** 1. (BRACHIO) The tooth part of the articulating device on the ventral valve in the form of small projections along the free edge of the palintrope. 2. (MOLL: Bivalvia) A series of shelly structures near the dorsal margin and fitting into a socket in the opposite valve; functioning in holding valves in position when closed.

**hirsute** a. [L. *hirsutus*, rough, shaggy] Bearing coarse hairs or hair-like processes; shaggy.

**hirudinin** n. [L. *hirudo*, leech] (ANN: Hirudinoidea) An anticoagulant secretion of leeches.

**hispid** a. [L. *hispidus*, hairy, prickly] Covered with rough hairs or minute spines.

**hispidulous** a. [L. dim. *hispidus*, hairy, prickly] Minutely hispid.

**histoblast** n. [Gr. *histos*, tissue; *blastos*, bud] The imaginal disc.

**histochemistry** n. [Gr. *histos*, tissue; *chemeia*, transmutation] The microscopic study of the chemical characteristics of tissues.

**histogenesis** n. [Gr. *histos*, tissue; *genesis*, beginning] 1. The formation and development of tissues from the undifferentiated cells of the germ layers of the embryo. 2. (ARTHRO: Insecta) In holometabolic forms, histogenesis follows after histolysis of larval organs during the quiescent late larval or pupal stadia. see **histolysis**. **histogenesis** a.

**histohematin, histohaematin** see **cytochrome**

**histology** n. [Gr. *histos*, tissue; *logos*, discourse] The microscopic study of the detailed structure of the organs and tissues of organisms.

**histolysis** n. [Gr. *histos*, tissue; *lyein*, to loosen] 1. Breakdown of cells and tissues. 2. (ARTHRO: Insecta) The breakdown of larval tissues during the quiescent late larval or pupal stages in holometabolic forms.

**histones** n. [Gr. *histos*, tissue; -one, ketone] The basic proteins associated with DNA; the major general structural proteins of chromatin, however, they can also act as depressors of template activity.

**histopathology** n. [Gr. *histos*, tissue; *pathos*, suffering; *logos*, discourse] The study of abnormal microscopic changes in the tissue structure of an organism.

**histozoic** a. [Gr. *histos*, tissue; *zoon*, animal] Dwelling within the tissues of a host.

**histrichoglossate** a. [Gr. *hystrix*, porcupine; *glossa*, tongue] (MOLL: Gastropoda) Referring to the radula, consisting of numerous types or categories of teeth: a median central

tooth plus several kinds of lateral and marginal teeth, in retrograde oblique position, often in bristlelike fascicles.

**hive aura/odor** see **nest odor**

**hive** n. [A.S. *hyf*,] (ARTHRO: Insecta) A man-made nest for honeybees.

**holandric** a. [Gr. *holos*, whole; *aner*, male] 1. Describing sex-determinate genes that are manifest only in the male sex. 2. (ANN: Oligochaeta) Classical term that originally meant the placement of testes in segments x-xi.

**holandry** n. [Gr. *holos*, whole; *aner*, male] 1. The condition of bearing the normal number of testes. 2. (ANN: Oligochaeta) Earthworms with two pair of testes, one pair in segment x and another pair in segment xi. see **proandry**, **metandry**.

**holarctic region** A zoogeographical region encompassing the palaeartic and nearctic regions.

**holaspis larva** (ARTHRO: Trilobita) Final larval stage in which the general adult structures are present and with succeeding molts minor changes and increase of size. see **protaspis** and **meraspis larva**.

**holidic** a. [Gr. *holos*, whole; *-idios*, distinct] Said of a medium that has exactly known chemical constituents other than purified inert materials before compounding; a defined medium.

**holism** n. [Gr. *holos*, whole; *-ismos*, denoting condition] 1. The philosophic principle that the determining factors in nature, especially evolution, are wholes, such as organisms and not the sum of their parts. 2. Accentuating the organic functional relation between parts and wholes. **holistic** a.

**holobenthic** a. [Gr. *holos*, whole; *benthos*, sea-bottom] Refers to animals living their whole life on or near sea-bottom.

**holoblastic division** The type of cleavage in which the entire egg cell is divided.

**holochroal** a. [Gr. *holos*, whole; *chroa*, body surface] (ARTHRO) Refers to a compound eye with narrow facets and polygonal lenses, as in most crustacean and insect eyes. see **schizochroal**.

**holocoen** n. [Gr. *holos*, whole; *koinos*, common] The whole

environment, the biocoen and abiocoen; the ecosystem.

**holocrine** a. [Gr. *holos*, whole; *krinein*, to separate] The disintegration of a gland in order to release secretions. see **merocrine**.

**holocyclic** a. [Gr. *holos*, whole; *kyklos*, circle] Pertaining to alternation of generations. see **anholocyclic**.

**holoenzyme** n. [Gr. *holos*, whole; *en*, in; *zyme*, yeast] A complete functional enzyme consisting of an apoenzyme and a coenzyme taken together. see **apoenzyme**.

**hologamy** n. [Gr. *holos*, whole; *gamos*, marriage] Condition where gametes and somatic cells are similar; macrogamy.

**holognathous** a. [Gr. *holos*, whole; *gnathos*, jaw] (MOLL: Gastropoda) Possessing a jaw of one piece construction, as certain terrestrial forms.

**hologynic** a. [Gr. *holos*, whole; *gyne*, woman] A term describing sex-limited characters which are manifest only in the female sex. see **holandric**.

**hologynous** a. [Gr. *holos*, whole; *gyne*, woman] (ANN) A classical term pertaining to ovaries restricted to segments xii and xiii or a homeotic equivalent.

**hologyny** n. [Gr. *holos*, whole; *gyne*, woman] The state or condition of being hologynous.

**holoic** see **meganephridia**

**Holometabola** n. [Gr. *holos*, whole; *metabole*, change] Dominant superorder of insects, distributed worldwide, that includes the vast majority of insect families, genera and species with complete metamorphosis and wing pads formed by invagination; in some classifications Endopterygota.

**holometabolous metamorphosis** (ARTHRO: Insecta) Metamorphosis with a *larva*, pupa and adult; complete metamorphosis. see **paurometabolous**.

**holomyarian** a. [Gr. *holos*, whole; *mys*, muscle] (NEMATA) Describing the longitudinal muscle cells indistinguishable as individual cells so as to appear like a single band as viewed in transverse section. This term was discarded in nematology when Butschli in 1873 showed that, by definition, no examples exist. see **meromyarian**, **polymyarian**.

**holonephridia** see **meganephridia**

**holoparalectotype** n. [Gr. *holos*, whole; *para*, near; *lektos*, choose; *typos*, type] Any specimen from the original material that is later established as a paratype, it must be of the same sex described by the author.

**holoparasite** n. [Gr. *holos*, whole; *parasitos*, parasite] An obligate parasite.

**holophyletic** a. [Gr. *holos*, whole; *phyle*, tribe] Denoting a monophyletic group that contains all of the descendants of the most recent common ancestor of that group. see **monophyletic**.

**holophyly** see **holophyletic**

**holopneustic** a. [Gr. *holos*, whole; *pneustikos*, of breathing] Having 10 functional spiracles. see **polypneustic**.

**holoptic** a. [Gr. *holos*, whole; *optikos*, eye] (ARTHRO: Insecta) Having eyes dorsally contiguous along the midline. see **dichoptic**.

**holosericeous** a. [Gr. *holos*, whole; *serikos*, silken] Covered with minute silky or shiny hair-like structures.

**holostomatous** a. [Gr. *holos*, whole; *stoma*, mouth] (MOLL: Gastropoda) Having the mouth of the shell rounded or entire, uninterrupted by siphonal canal, notch, or by other extension. **holostomate** n.

**holotaxy** n. [Gr. *holos*, whole; *taxis*, arrangement] The presence of all the organs or structures typically present in a particular organism.

**Holothuroidea, holothuriids** n., n.pl. [Gr. *holothurion*, sea-cucumber] Soft bodied, bottom-dwelling echinoderms, living mostly in sand and mud where they lie buried, with their tentacles sticking up into clearer water.

**holotrichous isorhiza** (CNID: Hydrozoa) A nematocyst with tubes spiney throughout. see **atrichous isorhiza, basitrichous isorhiza**.

**holotrichy** n. [Gr. *holos*, whole; *trichos*, hair] Pertaining to invertebrates possessing all of the setae normally present in their natural group. see **hypertrichy**.

**holotype** n. [Gr. *holos*, whole; *typos*, type] The single speci-

men designated or indicated as the type specimen by the original author at the time of original publication of a species.

**holozoic** a. [Gr. *holos*, whole; *zoon*, animal] Obtaining organic food materials by active ingestion of organisms or particles.

**holozygote** n. [Gr. *holos*, whole; *zygos*, yolked] Zygote.

**homelytra** n. [Gr. *homos*, same; *elytron*, cover] Elytra similar or equal to each other.

**homeoacanthous armature** (PLATY: Cestoda) Homeomorphous hooks in spirals or in quincunxes on the tentacles.

**homeochilidium, homoeochilidium** n. [Gr. *homoios*, like; dim. *cheilos*, lip] (BRACHIO) An external triangular plate that closes most or only the apical part of the notothyrium.

**homeochronous, homoeochronous** a. [Gr. *homoios*, like; *chronos*, time] Variation occurring at the same age in offspring as in the parent.

**homeodeltidium, homoeodeltidium** n. [Gr. *homoios*, like; 4th letter, delta; dim. *thyron*, door] (BRACHIO) A convex triangular plate closing most or only the apical part of the delthyrium.

**homeomerous** see **homoeomerous**

**homeomorph** n. [Gr. *homoios*, like; *morphe*, form] Two unrelated taxa that are superficially alike.

**homeomorphous armature** (PLATY: Cestoda) Hooks of same shape and size in a row.

**homeosis** see **homoeosis**

**homeostasis** n. [Gr. *homoios*, like; *stasis*, a placing] Tendency of a system to maintain a dynamic equilibrium; when disturbed the animal's own regulatory mechanisms will restore equilibrium.

**homeostrophic** a. [Gr. *homoios*, like; *strophe*, turn] (MOLL: Gastropoda) Having whorls of the telococonch and the protoconch coiled in the same direction.

**homeotely** n. [Gr. *homoios*, like; *telos*, end, finish] Evolution from homologous parts which have no resemblance to the original structure; homeotic mutant.

- homeotype** n. [Gr. *homoios*, like; *typos*, type] Taxonomic type for a specimen that has been compared with the holotype by another author and determined to be conspecific with it.
- homeotypic** a. [Gr. *homoios*, like; *typos*, type] Referring to the second meiotic division.
- homing ability** The ability permitting return to the original point of departure.
- homo-** for those not found here, see **homeo-**.
- homoallelic** a. [Gr. *homos*, same; *allelon*, reciprocal] Genes having mutations at the same site; homoallelic pairs do not yield recombinants. see **heteroallelic**.
- homoblastic** a. [Gr. *homos*, same; *blastos*, bud] Similar organs arising from similar germ layers in different species; having direct embryonic development. see **heteroblastic**.
- homochrome** a. [Gr. *homos*, same; *chroma*, color] Having one color or hue. see **heterochrome**.
- homochromy** n. [Gr. *homos*, same; *chroma*, color] 1. Of the same or uniform color. 2. (ARTHRO: Insecta) A phenomenon in which certain insects tend to have a general resemblance to the prevailing color of the environment. see **anticryptic color**.
- homodactyl** a. [Gr. *homos*, same; *daktylos*, finger] (ARTHRO) Pertaining to a claw similar in shape to the lateral claws (ungues). see **heterodactyl**.
- homodont** see **isodont**
- homodynamic** a. [Gr. *homos*, same; *dynamis*, power] Pertaining to different genes simultaneously influencing the same developmental process; opposed to heterodynamic.
- homodynamic life cycle** 1. A life cycle in which there is continuous development; not interrupted by a diapause. 2. A life cycle in which dormancy can only be caused by adverse environmental conditions. see **heterodynamic life cycle**.
- homodynamous** a. [Gr. *homos*, same; *dynamis*, power] Direct development without a resting stage.
- homoecious** a. [Gr. *homos*, same; *oikos*, home] Denoting the utilization of the same host during the entire life cycle.

- homoeochilidium** see **homeochilidium**
- homoeodeltidium** see **homeodeltidium**
- homoeomerous, homeomerous** a. [Gr. *homoios*, like; *meros*, part] (ARTHRO) Pertaining to having the same number of tarsal segments on all legs; isomerous. see **heteromerous**.
- homoeosis** n. [Gr. *homoios*, like; -osis, formation] The replacement of an appendage with another part, by modification or regeneration; metamorphosis. **homoeotic** a.
- homoeotype** n. [Gr. *homoios*, like; *typos*, type] Specimen accepted to be identical with the holotype, lectotype, paratypes, or syntypes of its species.
- homoesis** n. [Gr. *homoios*, like] Presence of an organ, or pairs of organs, or a series of organs, in a segment or series of segments, other than those in which normally found.
- homogametic** a. [Gr. *homos*, same; *gamete*, wife] Pertaining to sexual form that gives rise to the same type of sexual gamete in meiosis; in xx-xy and xx-xo systems usually found in the female. see **heterogametic**.
- homogamy** n. [Gr. *homos*, same; *gamos*, marriage] The preference of a mating individual for another with similar phenotype or genotype. see **heterogamy**.
- homogeneous** a. [Gr. *homos*, same; *genos*, race] Of the same kind or nature. see **heterogeneous**.
- homogenetic** a. [Gr. *homos*, same; *genesis*, beginning] Pertaining to meiotic chromosome pairing in hybrids when pairs are derived from the same ancestor. see **heterogenetic**.
- homogenic** a. [Gr. *homos*, same; *genos*, race] Having only one allele of a gene or gene pair.
- homogenous** a. [Gr. *homos*, same; *genos*, race] Having a resemblance in structure due to a common progenitor.
- homogeny** n. [Gr. *homos*, same; *genos*, race] With analogous parts or organs due to descent from the same ancestral type; homology. see **homoplasy**.
- homogomph** n. [Gr. *homos*, same; *gomphos*, peg] (ANN) A compound seta having a symmetrical joint between shaft

and blade. see **heterogomph**.

**homogonic life cycle** Life cycle in which all generations are free-living or all are parasitic; there is no (or little) alternation of the two. see **heterogonic life cycle**.

**homoideus** a. [Gr. *homoios*, like; *idios*, personal] (ARTHRO: Insecta) In larvae, denoting a mesoseries of crochets bearing well developed hooks throughout the entire series; homogeneous. see **heteroideus**.

**homoiosmotic** a. [Gr. *homoios*, like; *osmose*, impulse] Said of organisms maintaining constant internal osmotic pressure.

**homoiothermal** a. [Gr. *homoios*, like; *thermos*, warm] Pertaining to warm-blooded animals having a relatively constant body temperature due to their surrounding environment. see **poikilothermal**.

**homolecithal egg** An egg-cell with a relatively small amount of yolk evenly distributed through the cytoplasm.

**homologue, homology** n. [Gr. *homologos*, agreeing] 1. Features or organs in two or more taxa that can be traced back to the same (or an equivalent) feature in the common ancestor of these taxa. see **analogy, heterology**. 2. Basic similarity of organs or other structures that have had similar embryonic origin, but have developed in different ways for different purposes.

**homomorpha, homorpha** n. [Gr. *homos*, same; *morphe*, form] Larvae resembling the adults.

**homomorphic** a. [Gr. *homos*, same; *morphe*, form] Being similar in appearance or form.

**homomorphosis** n. [Gr. *homos*, same; *morphosis*, forming] In regeneration, when the reformed part or structure is similar to the part removed. see **heteromorphosis**.

**homomyarian** see **isomyarian**

**homonomous** a. [Gr. *homos*, same; *nomos*, usage] Being similar in form, function or development. see **heteronomous**.

**homonomous segmentation** Relative similarity in body segments arranged on a transverse axis. see **heteronomous segmentation**.

**homonym** n. [Gr. *homos*, same; *onyma*, name] The same independently proposed generic or specific name for the same or different taxa. see **senior homonym, junior homonym**.

**homoplast** n. [Gr. *homos*, same; *plastos*, formed] An idorgan composed of similar plastids. see **alloplast**.

**homoplasia, homoplassy** n. [Gr. *homos*, same; *plastos*, formed] Resemblance between parts or organs between different organisms due to evolutionary convergence or of parallel evolution. **homoplastic** a. see **homogeny**.

**homopterous** a. [Gr. *homos*, same; *pteron*, wing] (ARTHRO: Insecta) Having the anterior and posterior pairs of wings alike.

**homorhabdic** a. [Gr. *homos*, same; *rhabdos*, rod] (MOLL: Bivalvia) Pertaining to lamellibranch gill filaments that are arranged in a flat, uniform series. see **heterorhabdic**.

**homorpha** see **homomorpha**

**homosequential** a. [Gr. *homos*, same; L. *sequor*, follow] Pertaining to species with identical karyotypes.

**homostase** n. [Gr. *homos*, same; *stasis*, a standing] Stase which differs only slightly from its neighboring stases.

**homotaxis** n. [Gr. *homos*, same; *taxis*, arrangement] An assemblage or succession of species in different strata or regions, may or may not be contemporaneous.

**homotene** a. [Gr. *homos*, same; L. *tenere*, to hold] Retaining the primitive form. **homotenous** a.

**homothermis** see **homoiothermal**

**homotrichous anisorhiza** (CNID) A nematocyst open at the tip with a slightly swollen base, and with spines of equal length along the thread.

**homotype** n. [Gr. *homos*, same; *typos*, type] A structure corresponding to a structure on the opposite side of the body; reverse symmetry; homeotype. see **enantiomorphic**.

**homotypic** a. [Gr. *homos*, same; *typos*, type] 1. Pertaining to the second meiotic division (meiosis). 2. Exhibiting homotypy.



**homotypy** n. [Gr. *homos*, same; *typos*, type] The similarity or equality of body structures along the main axis. see **enantiomorphic**.

**homozygosity** n. [Gr. *homos*, same; *zygon*, yoke] Quality or condition of bearing two identical alleles at one or more loci in homologous chromosome segments. see **heterozygosity**.

**homozygote** n. [Gr. *homos*, same; *zygon*, yoke] One who exhibits homozygosity. see **heterozygote**.

**homozygous** a. [Gr. *homos*, same; *zygon*, yoke] Pertains to having identical alleles in the corresponding loci of homologous chromosomes; therefore breeding true. see **heterozygous**.

**honey** n. [ME. *honey*] Thickened partially digested secretion from nectar of flowers produced by honeybees by enzymatic action and used as food for larvae.

**honeycomb** n. [A.S. *hunigcamb*] 1. A waxen structure built by bees in their nests consisting of an aggregation of hexagonal cells used as breeding cells for larvae and the storage of honey. 2. Any structure resembling a honeycomb.

**honey dew** A sweetish liquid excreted by aphids or other homopterous insects.

**honeypot** (ARTHRO: Insecta) A wax container deposited inside the entrance of the nest cavity filled with nectar by a solitary queen bumblebee when establishing a colony.

**honey stomach** (ARTHRO: Insecta) A thin-walled enlargement of the esophagus (crop) in which the honeybee transports nectar.

**honey tube** see **cornicle**

**hood** n. [A.S. *hod*] 1. A color marking or expansion suggesting a hood. 2. (ARTHRO: Chelicerata) In beetle mites, the dorsal wall of the camerostome that extends over the capitulum. 3. (ARTHRO: Insecta) *a*. In notodontoid and noctuid Lepidoptera, a counter-tympanal cavity that expands laterally to form a covering for the tympanal cavity posteriorly. *b*. In tingid Hemiptera, the dorsal elevated longitudinal carinae. 4. (CHAETO) A body-wall fold with a coelomic sac which can be drawn over the head. 5. (MOLL: Cephalopoda) In Nauti-

loidea, thickened membrane of fused sheaths of the dorsal tentacles, which serve for protection when the animal is retracted into the shell.

**hooded seta** (ANN: Polychaeta) A stout, blunt or apically toothed seta with the apex protected by a delicate chitinous guard; a hook.

**hood protractor** (CHAETO) An unpaired muscle that is found in the free edge of the hood that acts as a sphincter muscle to pull the hood over the head; protractor preputii.

**hood retractor** (CHAETO) One of a pair of curved muscles originating on connective tissue beneath the brain and attaching to the neck plates (collarette) which retract the hood from the head; retractor preputii.

**hook glands** (ARTHRO: Pentastomida) The paired longitudinal glands that unite anteriorly to form the head gland.

**hook, hooklets** see **hamulus, uncus**

**hoplochaetellin** a. [Gr. *hoplon*, implement; *chaite*, hair] (ANN: Oligochaeta) Denoting earthworm male terminalia in which one pair of sperm ducts open together with the prostatic ducts of segment xvii or close to the prostatic pores, the other pair of sperm ducts similarly associated with the prostates of segment xix.

**horiodimorphism** n. [Gr. *horios*, in season; *dis*, twice; *morphe*, form] Seasonal dimorphism.

**horismology** n. [Gr. *horos*, boundry; *logos*, discourse] (ARTHRO: Insecta) Scientific description of the neurination of insects wings. see **orismology**.

**horizontal** a. [Gr. *horizon*, bounding] Laying in a plane at right angles to a primary axis; parallel with the horizon.

**horizontal classification** Classification focusing on grouping species in a similar stage of evolution, rather than location on the same phyletic line. see **vertical classification**.

**horme** n. [Gr. *horme*, impulse, impetus] 1. Behavioral activity directed toward a goal. 2. In living cells or organisms a purposive behavior, urge or drive.

**hormone** n. [Gr. *hormao*, instigate] A chemical regulator or coordinator secretion having some specific effect on me-

tabolism, development, or response of the organism or some particular part of it.

**horn** n. [A.S. *horn*] 1. A stiff, pointed, unbranched cuticular process. 2. (ARTHRO: Insecta) *a.* A long handlelike process of the first gastric tergite of *Innostemman* wasps, that curves up and over the mesoscutum and houses the retracted ovipositor. *b.* In the plural sometimes refers to antennae.

**horny** a. [A.S. *horn*] Thickened or hardened.

**horny corals** (CNID: Anthozoa) In the order Gorgonacea, commonly called sea fans or sea whips, with extensive skeleton composed of a horny protein material, gorgonin.

**horotelic** a. [Gr. *horos*, boundry; *telos*, completion] Pertaining to evolution proceeding at the standard rate. see **tachytelic**, **bradytelic**.

**host** n. [L. *hospes*, guest or host] Any living organism in or on which a parasite lives, and/or feeds.

**host selection principle** A theoretical hypothesis that female organisms that breed on two or more hosts will return to the host on which she was reared to reproduce.

**host specificity** The degree to which a parasite is able to mature in one or more host species.

**Hoyle's organ** (MOLL: Cephalopoda) In embryonic *Sepia*, a distinct set of cells in an anchor-shaped complex at the site of the shell sac closure; a hatching gland that produces a proteolytic enzyme that dissolves the chorion and surrounding envelope.

**humeral** a. [L. *humerus*, shoulder] 1. Pertaining to or situated on the shoulder. 2. (ARTHRO: Insecta) The anterior basal portion of an insect wing.

**humeral angle** (ARTHRO: Insecta) 1. The basal anterior angle or portion of a wing. 2. The outer anterior angle of the elytrum of beetles.

**humeral bristles** (ARTHRO: Insecta) In Diptera, the bristles on the humeral callus.

**humeral callus** (ARTHRO: Insecta) In Diptera, a more or less rounded tuberculate anterior lateral angle of the thoracic

notum.

**humeral carina** (ARTHRO: Insecta) In Coleoptera, an elevated keel-like ridge on the outer anterior angle of an elytron.

**humeral cross vein** A cross vein between the base of a wing and the apex of the subcosta.

**humeral lobe** (ARTHRO: Insecta) The base of the costal margin of the hind wing that overlaps the fore wing in some primitive forms that serves to prevent the wings from moving out of phase.

**humeral nerve** (ARTHRO: Insecta) A transverse nerve in the wing between the costal and subcostal veins.

**humeral plate** (ARTHRO: Insecta) 1. In Odonata, a large plate hinged to the tergum and supported by an arm from the pleural wing process. 2. In Hymenoptera (wasps and honey bees), a small plate separated from the metanotum anteriorly and laterally which bears the anterior notal wing process of the hind wing. 3. In mosquitoes, an anterior preaxillary sclerite of the wing base supporting the costa.

**humeral suture** see **mesopleural suture**, **basal suture**

**humeral vein** (ARTHRO: Insecta) A branch of the subcosta that serves to strengthen the humeral angle of the hind wing.

**humerus** n.; pl. **humeri** [L. *humerus*, shoulder] (ARTHRO: Insecta) The shoulder.

**humor** n. [L. *humor*, fluid] Any body fluid, natural or morbid.

**hyaline** a. [Gr. *hyalos*, glass] Clear, transparent or glassy.

**hyaline cells** see **granulocyte**

**hyalogen** n. [Gr. *hyalos*, glass; *genes*, producing] Insoluble substances found in animal tissues and related to mucoids.

**hyaloplasm, hyaloplasma** n. [Gr. *hyalos*, glass; *plasma*, formed or molded] 1. The base substance of cytoplasm in which organelles are found. 2. (ARTHRO: Insecta) The clear non-contractile matter (sarcooplasm) of a muscle in which the organelles are found.

**hyalopterous** a. [Gr. *hyalos*, glass; *pteron*, wing] (ARTHRO: Insecta) Having transparent wings as the clear winged aegerid moths.

- hybrid** n. [L. *hybrida*, a crossbred animal] The offspring of two forms or species that are genetically dissimilar; a heterozygote. see **cross**.
- hybridization** n. [L. *hybrida*, a crossbred animal] The crossing of individuals belonging to two unlike natural populations, or to different species.
- hybrid vigour** see **heterosis**
- hydatid cyst** (PLATY: Cestoda) Metacestode of *Echinococcus*, with many protoscolices, some budding inside secondary brood cysts.
- hydatid sand** (PLATY: Cestoda) Free protoscolices forming the sediment in a hydatid cyst.
- hydranth** n. [Gr. *hydor*, water; *anthos*, flower] (CNID: Hydrozoa) A nutritive zooid in a colony; the hydroid polyp, bearing a mouth, digestive cavity and tentacles.
- hydrarch** a. [Gr. *hydor*, water; *arche*, beginning] A series of changes in time from newly formed pond or lake to land with climax vegetation; an ecological succession.
- hydra-tuba** n. [Gr. *hydor*, water; *tuba*, horn] (CNID: Scyphozoa) A simple polyp-like stage that may produce a few more polyps, but all bud off larvae known as ephyrae, which bud like a hydra. see **scyphistoma**.
- hydrelatic** a. [Gr. *hydor*, water; *elaunein*, to set in motion] Of or pertaining to the effects stimulation of glands have on active transport of inorganic solutes and water.
- hydric** a. [Gr. *hydor*, water] 1. Having an abundant supply of moisture. 2. Pertaining to or containing hydrogen.
- hydrobiology** n. [Gr. *hydor*, water; *bios*, life; *logos*, discourse] Study of aquatic plants and animals.
- hydrobiont** n. [Gr. *hydor*, water; *bion*, living] An organism that lives mainly in water.
- hydrocarbon** n. [Gr. *hydor*, water; L. *carbo*, coal] A chemical compound of hydrogen and carbon, usually in the proportion of C-H<sub>20</sub>.
- hydrocaulus** n.; pl. **-cauli** [Gr. *hydor*, water; *kaulos*, stem] (CNID: Hydrozoa) The simple or branched upright portion of a hydroid colony; stem.

- hydrochoric** a. [Gr. *hydor*, water; *chorein*, to spread] Pertains to dispersal by water; being dependent on water for dissemination.
- hydrocircus** n. [Gr. *hydor*, water; *kirkos*, circle] (ECHINOD) The hydrocoelic ring surrounding the mouth.
- hydrocladium** n.; pl. **-ia** [Gr. *hydor*, water; *klados*, branch] (CNID: Hydrozoa) The lateral growing branch of the hydrocaulus; the secondary branches.
- hydrocoel** n. [Gr. *hydor*, water; *koiilos*, hollow] (ECHINOD) Part of the embryonic coelom which develops into the water vascular system.
- hydrocoles** n.pl. [Gr. *hydor*, water; L. *colere*, to dwell] Organisms living in water or a wet environment.
- hydrocyst** see **dactylozoid**
- hydroecium** n. [Gr. *hydor*, water; *oikos*, house] (CNID: Hydrozoa) A sheath-like extension that protects the zone of the siphonophoran bell from adjacent bells.
- hydrofuge** n. [Gr. *hydor*, water; L. *fugere*, to flee] (ARTHRO: Insecta) 1. Water repelling hairs. 2. The outer surface of the chorion of eggs, as well as the cuticles, respiratory siphons and hairs.
- hydroid** n. [Gr. *hydor*, water; *eidōs*, like] (CNID) Polyp of coelenterates; any member of the Hydrozoa.
- hydrolysis** n.; pl. **-es** [Gr. *hydor*, water; *lyein*, to dissolve] Reaction of water with substances to produce simpler compounds as starch reduction to sugars or with inorganic compounds to produce acid, basic or neutral reactions in solution.
- hydrophanous** a. [Gr. *hydor*, water; *phaneros*, visible] Becoming transparent when immersed in water.
- hydrophile hair** (ARTHRO: Insecta) A water-attracting hair as opposed to a hydrophobe hair.
- hydrophilous** a. [Gr. *hydor*, water; *philein*, to love] Moisture-loving; hygrophilous.
- hydrophobe hair** (ARTHRO: Insecta) A hair with resistance to wetting, thus making a 90° angle of contact with the water surface. see **hydrophile hair**.

- hydrophyllum** n.; pl. **-lia** [Gr. *hydor*, water; *phyllon*, leaf] (CNID: Hydrozoa) A thick, gelatinous, helmet-shaped or leaf-like medusoid containing a simple or branched gas-trovascular canal, protective in function; a phyllozoid; a bract.
- hydrophyton** n. [Gr. *hydor*, water; *phyton*, plant] (CNID: Hydrozoa) A hydroid colony complete with root-like organ, stem and branches.
- hydroplanula** n. [Gr. *hydor*, water; L. dim. *planus*, flat] (CNID) Larval stage between the planula and actinula larval stages.
- hydropolyp** n. [Gr. *hydor*, water; F. *polype*, polyp] (CNID: Hydrozoa) A single polyp of a hydroid colony. see **hydrula**.
- hydropore** n. [Gr. *hydor*, water; *poros*, hole] (ECHINOD) In some modern larvae and some extinct forms, the opening into the left axocoel anterior to the hydrocoel, i.e., the canal extending from the axocoel to the surface.
- hydropyle** n. [Gr. *hydor*, water; *pyle*, orifice] (ARTHRO: Insecta) A specialized structure of an egg for the uptake of water; the thickened region of the serosal epicuticle over a layer of endocuticle, thinner than elsewhere.
- hydrorhiza** n. [Gr. *hydor*, water; *rhiza*, root] (CNID: Hydrozoa) A tubular or ribbon-like basal attachment of a colony anchoring the colony to the substrate; the stalk of the colony.
- hydrosere** n. [Gr. *hydor*, water; *serere*, to join] A sere originating in water. see **lithosere**, **xerosere**.
- hydrosome** (=hydrosoma) a. [Gr. *hydor*, water; *soma*, body] (CNID) A hydra-like stage.
- hydrosphere** n. [Gr. *hydor*, water; *sphaira*, ball] Aqueous envelope of the earth.
- hydrospire** n. [Gr. *hydor*, water; L. *spira*, coil] (ECHINOD) In extinct Blastoidea, respiratory structures in the form of pouches at the side of the ambulacral grooves.
- hydrostatic** a. [Gr. *hydor*, water; *statikos*, cause to stand] 1. Of or pertaining to the pressure of water. 2. (ARTHRO: Insecta) Pertains to floats, as air sacs in larval aquatic insects.

- hydrostatic organs** (ARTHRO: Insecta) In some larval Culicidae, pigmented, crescent-shaped organs found laterally on the thorax and near the tail.
- hydrostatic system** (BRYO: Gymnolaemata) A method of protrusion of the lophophore in some autozooids; made up of flexible frontal wall or infolded frontal wall sac and attached parietal muscles which contract and raise the lophophore by hydrostatic pressure in the autozooid.
- hydrostome** n. [Gr. *hydor*, water; *stoma*, mouth] (CNID: Hydrozoa) The mouth of a polyp.
- hydrotaxis** n. [Gr. *hydor*, water; *taxis*, arrangement] A taxis in response to a moisture gradient initiating stimulus.
- hydrotheca** n. [Gr. *hydor*, water; *theke*, case] (CNID: Hydrozoa) Peridermal cups into which most or all of the hydranth can retract, may be provided with an operculum; in some Thecata, the cup may be reduced to a mere platform supporting the hydranth.
- hydrotropism** n. [Gr. *hydor*, water; *tropos*, turn] The response of an organism to water stimulus.
- Hydrozoa, hydrozoans** n.; n.pl. [Gr. *hydor*, water; *zoon*, animal] Class of the phylum Cnidaria having both polyp and medusal stages.
- hydrula** n. [Gr. *hydor*, water] A simple hypothetical polyp. see **hydropolyp**.
- hygric** a. [Gr. *hygros*, wet] Tolerating or being adapted to humid conditions.
- hygrokinesis** n. [Gr. *hygros*, wet; *kinesis*, movement] Orientation due to differences in humidity.
- hygrometabolism** n. [Gr. *hygros*, wet; *metabole*, change] The influence on metabolism by humidity.
- hygropetric** a. [Gr. *hygros*, wet; *petros*, stone] Pertaining to the fauna of submerged rocks.
- hygrophilous** see **hydrophilous**
- hygroreceptor** a. [Gr. *hygros*, wet; L. *recipere*, to receive] A sensory cell or structure that is sensitive to moisture.
- hygroscopic** a. [Gr. *hygros*, wet; *skopein*, to view] Moisture

sensitive; retaining moisture; accumulating moisture.

**hygrotaxis** see **hydrotaxis**

**hygrotropism** see **hydrotropism**

**hylogamy** n. [Gr. *hyle*, material; *gamos*, marriage] The fusion of gametes; syngamy.

**hylophagous** a. [Gr. *hyle*, wood; *phagein*, to eat] Wood eating, as some insects.

**hylotomous** a. [Gr. *hyle*, wood; *temnein*, to cut] Cutting wood, as some insects.

**hymen** n. [Gr. *hymen*] Membrane.

**hyoid sclerite** (ARTHRO: Insecta) A small sclerite near the base of the labrum in many cyclorrhaphous flies.

**hyote spines** (MOLL: Bivalvia) Variably shaped (founded, ear-shaped), hollow, tubular spines open at their tips and on their flanks, arising from the thin edges of the shell margin of oysters; typical of *Hytissa Hyotis* (Linne, 1758).

**hyandrium** n.; pl. **-dria** [Gr. *hypo*, under; *aner*, male] (ARTHRO: Insecta) The plate below the genitalia of males, usually in abdominal sternum 8 or 9. see **subgenital plate**.

**hyperandric** a. [Gr. *hyper*, above; *andros*, male] (ANN: Oligochaeta) In earthworms, having additional testes other than those of segments x-xi. **hyperandry** n.

**hyperapolysis** n. [Gr. *hyper*, above; *apo*, separation; *lyein*, to dissolve] (PLATY: Cestoda) Detachment of a juvenile tapeworm proglottid before eggs are formed.

**hyperdiploid** see **hyperploid**

**hypergamesis** n. [Gr. *hyper*, above; *gamos*, marriage] Sperm digested by blood cells or phagocytes, thought to be of nutritional value.

**hypergynous** a. [Gr. *hyper*, above; *gyne*, woman] (ANN: Oligochaeta) In earthworms, having additional ovaries other than those of segments xii-xiii. **hypergyny** n.

**hyperhaline** a. [Gr. *hyper*, above; *hals*, sea] Pertaining to waters above the salinity of normal sea water; above 40 parts per thousand. see **hypohaline**.

**hyperhaploid** see **hyperploid**

**hypermeric** a. [Gr. *hyper*, above; *meros*, part] (ANN: Oligochaeta) Said of regenerate earthworms, which reproduce more segments than originally removed. **hypermetry** n. see **hypomeric**.

**hypermetamorphosis** n. [Gr. *hyper*, above; *meta*, after; *morphosis*, forming] 1. In the broad sense, refers to change of form throughout the life history. 2. (ARTHRO: Insecta) A type of metamorphosis development in which different larval insect instars have markedly dissimilar body forms. see **heteromorphous**.

**hyperparasite** n. [Gr. *hyper*, above; *parasitos*, one who eats at the table of another] An organism parasitic upon another parasite.

**hyperplasia** n. [Gr. *hyper*, above; *plasis*, a molding] An increase in the number of functional units of an organ (organelle, cell, tissue). **hyperplastic** a. see **hypertrophy**.

**hyperploid** a. [Gr. *hyper*, above; *aploos*, onefold] Cells or individuals having more chromosomes (or segments) than the characteristic euploid number. see **hypoploid**, **aneuploid**, **monoploid**, **polyploid**.

**hyperpneustic** a. [Gr. *hyper*, above; *pneustikos*, of breathing] (ARTHRO: Insecta) In some Diplura, pertaining to the greater number of thoracic spiracles.

**hyperstomial oecium** (BRYO) An oecium that rests on or is partly embedded in the distal zooid with opening above the operculum of the mother zooid.

**hyperstrophic** a. [Gr. *hyper*, above; *strophe*, twist] (MOLL: Gastropoda) In dextrally organized gastropods, characterized by genitalia on right, but shell falsely sinistral, being actually ultradextral, or vice versa.

**hypertely** n. [Gr. *hyper*, above; *telos*, completion] Ornamentation or coloration without apparent purpose.

**hypertrichy** n. [Gr. *hyper*, above; *trichos*, hair] Presence of setae in greater numbers than those present in its natural group of invertebrates. see **holotrachy**.

**hypertrophy** n. [Gr. *hyper*, above; *trophe*, nourishment] The enlargement of an organ due to the increase in the size of its constituent cells. see **atrophy**.

**hypistoma** see **hypopharynx**

**hypnody** n. [Gr. *hypnodes*, drowsy] A resting stage of some organisms.

**hypnosis** n. [Gr. *hypnos*, sleep] A state of fatigue or inhibition due to excessive mechanical stimuli affecting the nervous system; reflex immobilization. see **stereokinesis**.

**hypnote** n. [Gr. *hypnos*, sleep] An organism in a dormant condition.

**hypnotheca** see **prepupa**

**hypnotoxin** n. [Gr. *hypnos*, sleep; *toxikon*, poison] (CNID) A proteinaceous toxin released from a penetrant nematocyst.

**hypobenthos** n. [Gr. *hypo*, under; *benthos*, sea bottom] Sea bottom fauna below 1000 m, corresponds roughly to bathyal and abyssal benthic dwellers. see **epibenthos**.

**hypobiotic** a. [Gr. *hypo*, under; *bios*, life] Pertaining to organisms that live under objects or projections. see **epibiotic**.

**hypoblast** n. [Gr. *hypo*, under; *blastos*, bud] Endoderm in early embryos, entoderm. see **endoderm**.

**hypobranchial gland** (MOLL) Single or paired glandular epidermal areas of the roof of the mantle cavity.

**hypobranchial space** (ARTHRO: Crustacea) The area of the lower gill chamber, (below gills).

**hypocerebral ganglion** (ARTHRO: Insecta) An expansion of the recurrent nerve in the anterior division of the autonomic nervous system. see **occipital ganglion**.

**hypodactyl** n. [Gr. *hypo*, under; *daktylos*, finger] (ARTHRO: Insecta) The modified labium of Hemiptera.

**hypoderm** see **hypodermis**

**hypodermal** a. [Gr. *hypo*, under; L. *dermis*, skin] Of or relating to the hypodermis.

**hypodermal chord** (NEMATA) Dorsal, ventral or lateral longitudinal thickenings of the hypodermis, generally internal.

**hypodermal glands** (NEMATA) Glands of hypodermal origin that may serve as excretory glands.

**hypodermic envelope** see **peripodial sac**

**hypodermis** n. [Gr. *hypo*, under; L. *dermis*, skin] The cellular, subcuticular layer that secretes the cuticle of annelids, nematodes, arthropods (see epidermis), and various other invertebrates; hypoblast.

**hypodigm** n. [Gr. *hypo*, under; *deigma*, specimen] The entire material of a species available to the taxonomist.

**hypodiploid** see **hypoploid**

**hypogean, hypogaen** a. [Gr. *hypo*, under; *gaia*, the earth] 1. Living in the soil; endogean. 2. (ARTHRO: Insecta) Soil dwellers except for nuptial flight.

**hypoglossa** n. [Gr. *hypo*, under; *glossa*, tongue] (ARTHRO: Insecta) In brachycerous and cyclorrhaphous Diptera, the dorsal wall of the premental plate, formed by the sclerotized ventral side of the prementum.

**hypoglossis** n. [Gr. *hypo*, under; *glossa*, tongue] (ARTHRO: Insecta) The under portion of the tongue.

**hypoglottis** n. [Gr. *hypo*, under; *glottis*, mouth of windpipe] (ARTHRO: Insecta) In Coleoptera, the sclerite between the mentum and labium.

**hypognathous** a. [Gr. *hypo*, under; *gnathos*, jaw] (ARTHRO: Insecta) When the head is joined to the thorax so the mouth parts are directed ventrally. see **prognathous, opisthognathous**.

**hypogynium** n. [Gr. *hypo*, under; *gyne*, female] (ARTHRO: Insecta) The eighth abdominal sternite of a female; formerly, the genital plate.

**hypohaline** a. [Gr. *hypo*, under; *hals*, sea] Pertaining to waters under the salinity of normal sea water; below 30 parts per thousand; brackish. see **hyperhaline, euhaline**.

**hypohaploid** see **hypoploid**

**hypolimnion** n. [Gr. *hypo*, under; *limne*, lake] The bottom stratum in deep lakes containing low oxygen and near absence of living organisms. see **epilimnion, thermocline**.

**hypolithic** a. [Gr. *hypo*, under; *lithos*, stone] Living beneath stones.

**hypomegetic** a. [Gr. *hypo*, under; *megas*, great] Pertaining to the smallest in a series of polymorphic organisms.

**hypomere** n. [Gr. *hypo*, under; *meros*, part] 1. (ARTHRO: Insecta) *a*. The ventral process of the phallobase. *b*. Inflexed edge of the pronotum and raised margin of the epipleura of beetles. 2. (PORIF) The basal portion of certain sponges in which no flagellated chambers develop.

**hypomeric** a. [Gr. *hypo*, under; *meros*, part] (ANN: Oligochaeta) A condition of regenerates with fewer segments than had been removed. see **hypermeric**.

**hypomeron** see **hypomere**

**hypomorph** n. [Gr. *hypo*, under; *morphe*, form] An allele that functions more weakly when compared with wild-type alleles; a leaky gene.

**hyponeural** a. [Gr. *hypo*, under; *neuron*, nerve] (ECHINOD) Part of the nervous system deeper and more weakly developed than the ectoneural system.

**hyponeuston** n. [Gr. *hypo*, under; *neustos*, swimming] Any organism that swims or floats near the surface of the water.

**hyponome** n. [Gr. *hyponome*, tunnel] (MOLL: Cephalopoda) A ventral funnel consisting of two unfused lappetlike folds; in Nautiloidea, functions in bringing oxygen to the gills in the mantle cavity, and secondarily as a powerful locomotor organ. see **funnel**.

**hyponomic sinus** (MOLL: Cephalopoda) In Nautiloidea, a large concave sinus ventrally in the head-foot shell opening, marking the location of the hyponome.

**hyponym** n. [Gr. *hypo*, under; *onym*, name] A generic name not based on a type species; a provisional or temporary name.

**hypoparatype** n. [Gr. *hypo*, under; *para*, beside; *typos*, type] Any specimen originally used to indicate a new species but not chosen as the type specimen. see **holotype**, **paratype**.

**hypophare** see **hypomere**

**hypopharyngeal glands** (ARTHRO: Insecta) In bees, paired glands in the facial part of the head that open through the lateral areas of the hypopharynx; pharyngeal glands; food

glands.

**hypopharynx** n. [Gr. *hypo*, under; *pharyngx*, pharynx] 1. (ARTHRO: Chelicerata) The chitinous plate situated on the labium in certain Acari. 2. (ARTHRO: Crustacea) The metastoma. 3. (ARTHRO: Insecta) *a*. A median mouth-part structure anterior to the *labium*, usually associated with the salivary glands by ducts. *b*. A tongue-like lobe that arises from the mouth-cavity floor and serves as a sensory apparatus for taste, variously modified for feeding in many groups; *ligua*; *glossa*. **hypopharyngeal a**.

**hypophragm** see **operculum**

**hypopi** pl. **hypopus**

**hypoplasia** n. [Gr. *hypo*, under; *plasis*, a molding] Developmental deficiency of an organ system, organ, or tissue. **hypoplastic a**.

**hypoplax** n. [Gr. *hypo*, under; *plax*, plate] (MOLL) A long, narrow, calcareous ventral plate covering the gape between the two valves on the ventral margin, joined to the valves by a chitinous fold.

**hopopleural bristles** (ARTHRO: Insecta) In Diptera, a row of bristles, usually vertical, on the hypopleuron, above the hind coxae.

**hypopleurite** n. [Gr. *hypo*, under; *pleura*, side] (ARTHRO: Insecta) The lower plate of a divided pleuron.

**hypopleuron** n. [Gr. *hypo*, under; *pleura*, side] (ARTHRO: Insecta) 1. The region below the metapleuron. 2. In Diptera, the lower part of the mesepimeron.

**hypoploid** a. [Gr. *hypo*, under; *aploos*, onefold; *eides*, form] Cells or individuals with one or more chromosomes or segments deleted. see **hyperploid**.

**hypopneustic** see **hemipneustic**

**hypopolyplod** see **hypoploid**

**hypoptera**, **hypoptere** see **tegula**

**hypoptygma** n. [Gr. *hypo*, under; *ptygma*, anything folded] (NEMATA) Anterior and posterior cuticular flaps of the cloacal opening in some males. see **epiptygma**.

**hypopus** n.; pl. **hypopi** [Gr. *hypo*, under; *pous*, foot] (ARTHRO: Chelicerata) 1. In Acari, the second nymphal stage. 2. The non-feeding deutonymph of Acaridida; either active, phoretic nymphs or rather inactive resistant nymphs. **hypop(i)al** a.

**hypopygial spine** (ARTHRO: Insecta) The caudal spine ending of the hypopygium of some female cynipid wasps.

**hypopygium** n. [Gr. *hypo*, under; *pyge*, rump] (ARTHRO: Insecta) The last ventral plate; sometimes including attached segments of the postabdomen; terminalia; genital segments (commonly used for Diptera). see **pygofer**.

**hyposcleritic** a. [Gr. *hypo*, under; *skleros*, hard] (ARTHRO: Chelicerata) A region only partially sclerotized in mites.

**hypostasis** n. [Gr. *hypo*, under; *stasis*, a standing] A non-allelic recessive gene, interfered with by an epistatic gene.

**hypostegal coelom** (BRYO: Gymnolaemata) In Cheilostomata, part of the body cavity separated from the principle body cavity of the zooid; it may communicate with the principle body cavity by pores or remain confluent with it at some point.

**hypostegal epithelium** (BRYO: Stenolaemata) In free-walled forms, epithelium that lays down extrazoooidal skeleton.

**hypostegia** see **hypostegal coelom**

**hypostigmatic cell** (ARTHRO: Insecta) In three neuropteran Permian families, a greatly elongated cell behind the fusion of the subcosta and radius 1.

**hypostoma** see **hypostome**

**hypostomal bridge** (ARTHRO: Insecta) 1. Union of the hypostomata of the two sides meeting in the midline below the occipital foramen which is continuous with the postociput. 2. In Diptera, the parts of the genae joined ventrally between the compound eyes.

**hypostomal carinae** (ARTHRO: Insecta) The margin of the proboscival fossa of bees, which turn laterally toward the bases of the mandibles at their anterior end.

**hypostomal sclerite** see **intermediate sclerite**

**hypostomal suture** (ARTHRO: Insecta) Part of the subgenal

sulcus behind the mandible.

**hypostome, hypostoma** n. [Gr. *hypo*, under; *stoma*, mouth] 1. (ARTHRO: Chelicerata) In Acari, forming the ventral-median wall of the gnathosoma; fused with the pedipalps in most groups, but in ticks a toothed structure between the pedipalps. 2. (ARTHRO: Crustacea) The metastoma. 3. (ARTHRO: Diplopoda) The gula. 4. (ARTHRO: Insecta) The anteroventral part of the head including between the antennae, eyes and mouth of Diptera; the ventral part of the head of Hemiptera. 5. (ARTHRO: Trilobita) The median preoral plate or labrum.

**hypostracum** n. [Gr. *hypo*, under; *ostrakon*, shell] 1. (ARTHRO: Chelicerata) In Acari, the inner cuticular layer, usually pigmented with basic dyes. 2. (MOLL: Bivalvia) *a*. Inner layer of shell wall laid down by the mantle. *b*. That part of the shell secreted at muscle attachments. see **myostracum**. 3. (MOLL: Polyplacophora) In chitons, the lowest ventral calcareous layer of a valve.

**hyposulculus** n. [Gr. *hypo*, under; L. dim. *sulcus*, furrow] (CNID: Anthozoa) The groove in the siphonoglyph.

**hypothesis** n.; pl. **-ses** [Gr. *hypothesis*, theory] A tentative proposition explaining the occurrence of a phenomenon either asserted as provisional conjecture to guide an investigation or accepted as highly probable in view of established facts.

**hypotome** n. [Gr. *hypo*, under; *tome*, a cutting] (ARTHRO: Insecta) In Hymenoptera, sternum ix.

**hypotype** n. [Gr. *hypo*, under; *typos*, type] A specimen, other than the type, upon which a subsequent or supplementary description or figure is based; an apotype; a plesiotype.

**hypovalvae** n.pl. [Gr. *hypo*, under; L. *valva*, leaf of a folding door] (ARTHRO: Insecta) In Mecoptera, a bi- or trilobed subgenital plate formed from the larval ix sternum.

**hypozygal** n. [Gr. *hypo*, under; *zygon*, pair] (ECHINOD: Crinoidea) The proximal member of a syzygial pair of brachials. see **epizygal**.

**hysteresis** n. [Gr. *hysteros*, after] (CNID) A lag in adjustment at one level in response to stress at another level such as



chromosome coiling or storm damage response of corals.

**hysterodehiscence** n. [Gr. *hysteros*, after; L. *dehiscere*, to split open] (ARTHRO: Chelicerata) In Acari, dehiscence or splitting of the cuticle in the posterior part of the body; in hatching the animal moves backward.

**hysterosoma** n. [Gr. *hysteros*, after; *soma*, body] (ARTHRO: Chelicerata) Combination of the metapodosomal and the opisthosomal segments of the body of a tick or mite; pseudotagma.

**hysterotely** n. [Gr. *hysteros*, after; *telos*, end] (ARTHRO: Insecta) Retention of larval characteristics in pupa or adult. see **neotony**.

**hystrichoglossate** a. [Gr. *hysterix*, porcupine; *glossa*, tongue] (MOLL: Gastropoda) Referring to a radula of the rhipidoglossate type with tufts of bristles.

**hyther** n. [Gr. *hydor*, water; *therme*, heat] The combined effect on an organism of moisture and temperature.

**H-zone** see **H-band**