

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

University of Nebraska - Lincoln

Year 2005

Online Dictionary of Invertebrate
Zoology: G

Mary Ann Basinger Maggenti*

Armand R. Maggenti†

Scott Lyell Gardner‡

*University of California-Davis

†University of California, Davis

‡University of Nebraska - Lincoln, slg@unl.edu

This paper is posted at DigitalCommons@University of Nebraska - Lincoln.

<http://digitalcommons.unl.edu/onlinedictinvertzoology/22>

G

galea n. [L. *galea*, helmet] 1. (ARTHRO: Chelicerata) A moveable process on the digit of the chelicera of pseudoscorpions, used to spin silken cocoons for protection during molting, hibernation, or the brooding of eggs. 2. (ARTHRO: Crustacea) Outer distal hoodlike lobe of the second segment of the maxillula. 3. (ARTHRO: Insecta) *a.* The outer lobe of the maxilla borne by the stipes; may be present or absent. *b.* Basis for coiled tongue in Lepidoptera.

galea palpiformis (ARTHRO: Insecta) The galea composed of cylindrical joints as distinguished from the lacinia.

gallery n.; pl. **-leries** [ML. *galilaea*, gallery] A passage or corridor made by an animal.

gallicola n. [L. *galla*, gall; *colere*, to inhabit] (ARTHRO: Insecta) Form of phylloxeran fundatrix that forms leaf galls.

gallicolae migrantes (ARTHRO: Insecta) Winged gall-making form of Phylloxeridae or Adelgidae that migrate to an intermediate host.

gallicolae nonmigrantes (ARTHRO: Insecta) Apterous Adelgidae that remain on the primary host and produce fundatrices parthenogenetically.

gallicolous a. [L. *galla*, gall; *colere*, to inhabit] Producers or inquilines dwelling in plant galls.

galliphagous a. [L. *galla*, gall; Gr. *phagein*, to eat] Feeding upon galls or gall tissue.

galvanotaxis n. [Luigi Galvani, pert. electricity; Gr. *taxis*, arrangement] A taxis in which an electric current is the directive factor.

galvanotropism n. [Luigi Galvani, pert. electricity; Gr. *tropein*, to turn] Tropism in which an electric current is the orienting factor; electrotropism.

gametangiogamy n. [Gr. *gamete*, wife; dim. *angos*, vessel] The union of gametangia.

gametangium n.; pl. **-ia** [Gr. *gamete*, wife; *angos*, vessel] A structure producing gametes.

gamete n. [Gr. *gamete*, wife] A cell that unites with another cell in sexual reproduction.

gametocyte n. [Gr. *gamete*, wife; *kytos*, container] 1. A spermatocyte or oocyte. 2. Sexual stage of the malarial parasite in the blood which upon being taken into the mosquito host may produce gametes. see **microgametocyte**, **macrogametocyte**.

gametogamy n. [Gr. *gamete*, wife; *gamos*, marriage] Union of two single celled gametes to form the zygote.

gametogenesis n [Gr. *gamete*, wife; *genesis*, beginning] Gamete formation by which oogonia become ova and spermatogonia become sperm; gametogeny; gonogenesis. see **oogenesis**; **spermatogenesis**.

gametogenetic generation A sexual generation as opposed to a parthenogenetic generation.

gametogeny see **gametogenesis**

gametogonium see **gametocyte**

gametogony n. [Gr. *gamete*, wife; *gonos*, seed] A phase in the development cycle of the malarial parasite in the red blood cells of man in which the two sexes of gametocytes are formed.

gametotoky n. [Gr. *gamete*, wife; *tokos*, birth] Parthenogenesis in which unfertilized eggs develop into either sex; deuterotoky; amphitoky; arrhenotoky.

gamma taxonomy Taxonomy that uses all available biological information ranging from intraspecific population studies to the study of speciation, evolutionary rates and trends; systematics. see **alpha taxonomy**, **beta taxonomy**.

gamobium n. [Gr. *gamos*, marriage; *bios*, life] The sexual generation in alternation of generations. see **agamobium**.

gamodeme n. [Gr. *gamos*, marriage; *demos*, people] An isolated inbreeding community.

gamogenesis n. [Gr. *gamos*, marriage; *genesis*, beginning] Sexual reproduction. **gamogonic** a. see **agamogenesis**.

gamogony see **gamogenesis**

gamones n. [Gr. *gamos*, marriage; -one, mimics ending of hormone] A group of biological agents that cause initiation of fertilization.

gamophase see **haplophase**

ganglia allata see **corpora allata**

ganglion n.; pl. **-glia** [Gr. *ganglion*, swelling] A discrete group of nerve cell bodies acting as a center of nervous influence.
gangliate a.

ganglionic center Where two or more ganglia of adjoining segments coalesce.

ganglionic commissure A nerve cord connecting any two adjacent ganglia.

ganglionic layer see **lamina**

ganglionic plate see **lamina**

ganglion ventriculare (ARTHRO: Insecta) The ganglion in front of the proventriculus.

gap n. [ON. *gap*] 1. Discontinuity. 2. A narrow unstained region in a chromosome representing chromosome structural changes caused by mutagens.

gaper a. [ON. *gapa*, yawn, gape] 1. An invertebrate that gapes. 2. (MOLL: Bivalvia) In oysters, used to denote a dead or dying individual with gaping valves and some remaining meat. see **gaping**.

gaping a. [ON. *gapa*, yawn, gape] (MOLL: Bivalvia) Pertaining to an opening along the margin of a shell that does not naturally shut tightly together, i.e., soft shelled clams; gapers. see **gaper**.

gaseous exchange The exchange of gases between an organism and its environment.

gaseous plastron see **plastron**

gas gland (CNID: Hydrozoa) In Siphonophora, glandular epithelium that secretes an air-like gas into a float.

gaster n. [Gr. *gaster*, stomach] 1. Stomach. 2. (ARTHRO: Insecta) The major part of the abdomen behind the pedicel in threadwaisted Hymenoptera.

gasterostome n. [Gr. *gaster*, stomach; *stoma*, mouth] (PLATY: Trematoda) Cercaria in which the sucker is on the midventral surface.

gasterotheca n. [Gr. *gaster*, stomach; *theke*, case] (ARTHRO: Insecta) Part of the theca or pupa case surrounding the abdomen. see **somatotheca**.

gastraea n. [Gr. *gaster*, stomach] Hypothetical adult ancestor of higher animals that all have the gastrula as a common stage in their early ontogeny.

gastraeum n. [Gr. *gaster*, stomach] The ventral side of a body.

gastral cavity see **spongocoel**

gastral groove (ARTHRO: Insecta) A longitudinal furrow in the mid-line of the ventral plate of some eggs.

gastralia n. [Gr. *gaster*, stomach] (PORIF: Hexactinellida) Microscleres beneath the inner cell layer.

gastral layer or membrane (PORIF) Choanocytes lining the internal cavity.

gastral ray (PORIF) One of the quadri-radiates embedded in the wall and projecting into the central gastral cavity.

gastric filament (CNID) A filament lined with nematocysts that kill living prey entering the stomach of a jellyfish.

gastric grooves (ARTHRO: Crustacea) In Stomatopoda, the longitudinal pair of grooves, extending from the base of the rostrum to the posterior margin of the carapace.

gastric mill (ARTHRO: Crustacea) 1. Thickened and calcified parts in the cardiac stomach lining composed of moveable articulated ossicles used to break up food. 2. In Acrothoracica, chitinous triturating apparatus in the foregut; masticatory stomach.

gastric ossicles (ARTHRO: Crustacea) The teeth of the gastric mill.

gastric ostium (CNID) Gastric pouch opening of jellyfish.

gastric pouch (CNID) One of four enlargements of the stomach of a jellyfish.

gastric region (ARTHRO: Crustacea) In Decapoda, the median

part anterior to the cervical groove and posterior to the frontal region.

gastric shield (MOLL: Bivalvia) A sclerotized plate that lines a part of the stomach, that aids the crystalline style by abrasion, thus releasing carbohydrate digesting enzymes.

gastric tooth (ARTHRO: Crustacea) In Decapoda, a tooth on the midline of the carapace anterior to the cervical groove.

gastrilegous a. [Gr. *gaster*, stomach; L. *legere*, to collect] (ARTHRO: Insecta) Pertaining to bearing pollen baskets beneath the abdomen.

gastrocoele n. [Gr. *gaster*, stomach; *koilos*, hollow] The gastrulation cavity; archenteron.

gastrocoelus n.; pl. -li [Gr. *gaster*, stomach; *koilos*, hollow] (ARTHRO: Insecta) In Hymenoptera, transverse impressions at both sides of the base of the 2nd gastral tergite; includes thyridium.

gastrodermis n. [Gr. *gaster*, stomach; *derma*, skin] 1. A one cell thick lining of the digestive tract of coelenterates, ctenophors and platyhelminths. 2. Endoderm.

gastro-ileal fold (ARTHRO: Insecta) A circular valve-like fold separating the intestine and the chylic stomach or ventricle.

gastrolith n. [Gr. *gaster*, stomach; *lithos*, stone] (ARTHRO: Crustacea) In Decapoda, a discoidal calcareous nodule, commonly found in the stomodeum.

gastroorbital carina (ARTHRO: Crustacea) In Decapoda, a narrow carapace ridge extending posteriorly from the supraorbital spine; supraorbital.

gastroorbital groove (ARTHRO: Crustacea) In Decapoda, a short, longitudinal carapace groove branching from the cervical groove at the level of the orbit and directed toward it.

Gastropoda, gastropods n.; n.pl. [Gr. *gaster*, stomach; *pous*, foot] A class of asymmetrical univalve mollusks with stomach situated in the region of the foot, shell in one piece, often spirally coiled, that live in the sea, fresh water, and on land, and are either herbivorous or carnivorous.

gastropores n. [Gr. *gaster*, stomach; *poros*, hole] (CNID: Hydrozoa) In Milleporina and Stylasterina, the larger pores in the coenosteum through which gastrozooids protrude.

Gastrotricha, gastrotrichs n.; n.pl. [Gr. *gaster*, stomach; *thrix*, hair] A phylum of aquatic micrometazoans that are oblong, strap-shaped to ovoid tenpin-shaped and bear locomotor cilia on the flattened venter.

gastrovascular cavity A body cavity in which functions of both digestion and circulation occur.

gastrovascular system The digestive-excretory system with out-pouchings and canals.

gastrozooid n. [Gr. *gaster*, stomach; *zoon*, animal] (CNID: Hydrozoa) In some colonial cnidarians, a hydroid modified for feeding and digestion, also called siphons; in most species, they fulfill the defensive functions of the colony. see **dactylozooid**.

gastrula n. [Gr. dim. *gaster*, stomach] Embryonic stage resembling a sac with an outer layer of epiblastic cells (ectoderm) and an inner layer of hypoblastic cells (endoderm and mesoderm); the enclosed cavity is the archenteron or gastrocoel. **gastrular** a.

gathering hairs (ARTHRO: Insecta) The small hairs covering the glossa and the fringe of stouter bristles on the labellum of bees.

Gause's rule see **competitive exclusion**

gelatigenous a. [L. *gelatus*, congealed; *genos*, origin] Producing gelatin.

gelatin, gelatine n. [L. *gelatus*, congealed] A jelly-like substance (gel) obtained from animal tissue; also loosely applied to secretions of animals.

gelatinous matrix An external glandular substance secreted by some invertebrates, into which the eggs are embedded or deposited.

geminate a. [L. *geminus*, two-fold] To double; occurring in pairs; twins.

gemma n.; pl. -mae [L. *gemma*, bud] A bud or bud-like organic growth.

gemmation n. [L. *gemma*, bud] 1. The act of reproducing by budding. 2. Marked with bright colored spots. **gemmate** a.

gemma n., pl. **gemmae** [L. *gemma*, bud; *parere*, to beget] A form of asexual reproduction where animals reproduce by budding, as hydroids, bryozoans and sponges.

gemma n. [L. *gemma*, bud] 1. A bud-like outgrowth that becomes an independent individual. 2. (PORIF) Composed of a mass of archaeocytes charged with reserves and enclosed in a non-cellular protective envelope. 2. Historically a particle of heredity, hypothesized by Darwin, carried in the cells and able to move to the sex cells that allowed environment to influence inheritance directly.

gemma n. [L. *gemma*, bud; *stasis*, standing] (PORIF) An inhibitor of gemma germination.

gena n.; pl. **genae** [L. *gena*, cheek] (ARTHRO: Insecta) 1. That part of an insect head on each side below the eyes, bordered by the frontal suture, and behind the eyes, by the occipital suture. 2. In Diptera, the region lying between the face and the lower margin of the eye on either side; parafacials or genal groove. 3. In Hymenoptera, the lateral portions of the head between the eyes and the insertions of the mandibles of Formicidae. **genal** a.

genacere see **wax glands**

genal bristles (ARTHRO: Insecta) In Diptera, bristles on the genal groove at the lower corner of the eye.

genal carina (ARTHRO: Insecta) In ichneumonid Hymenoptera, the lower end of the occipital *carina*, ending at the oral carina or the lower mandibular socket.

genal comb (ARTHRO: Insecta) In Siphonaptera, a row of strong spines borne on the anteroventral border of the head; genal ctenidium. see **ctenidium**.

genal ctenidium see **ctenidium**

genal groove (ARTHRO: Insecta) In Diptera, a depressed and groove-like area near the ventral limits of the ptilinal suture and the juncture of the gena and parafacial; cheek groove; transverse impression.

genal orbit (ARTHRO: Insecta) That area of an orbit adjacent to

the ventral margin of a compound eye.

genaponta n. [L. *gena*, cheek; *pons*, bridge] (ARTHRO: Insecta) In specialized Hymenoptera, a bridge composed of the fused postgenae that closes the underside of the head behind the mouth.

genatatinus see **genital pouch**

gene n. [Gr. *genos*, birth, origin] A hereditary determiner; the unit of inheritance, carried in a chromosome that is transmitted from one generation to another in the gametes and that controls the development of characters in the new individual; the factor.

gene action Gene expression by control of specificity and rate of biosynthetic processes, particularly proteins.

gene activation Differential expression of genes caused by deactivation, etc., of specific genes by products of the cell.

gene flow The exchange of genetic factors between populations of the same species owing to dispersal of zygotes or gametes.

gene frequency The percentage of all alleles at a given locus in a population represented by a specific allele.

gene interaction Interaction between genes that produces a particular phenotype.

gene location The distance between genes on a chromosome map.

gene locus pl. **loci** The position of a gene in a chromosome.

gene map The graphical linear arrangement of mutational sites in the gene itself.

gene mutation Heritable change within a gene.

gene pool The totality of the genes of a given population of sexually reproducing organisms existing at a given time.

generalized a. [L. *genus*, kind] A comparative term used in biology in contrast to specialized or cenogenetic, indicating an ancient or long-standing character when compared with one or more newly evolved.

generation n. [L. *generare*, to beget] The length of time from any given stage in the life cycle of an organism to the same

stage in the offspring.

generative a. [L. *generare*, to beget] Pertains to somatic cell generation as distinct from germ cells or gametes.

generitype Obs. see **type species**

generotype Obs. see **type species**

genesiology n. [Gr. *genesis*, descent; *logos*, discourse] The science of generation or heredity.

Gene's organ (ARTHRO: Chelicerata) In female Ixodida, a cephalic glandular organ which functions only during egg laying.

gene splicing see **splicing**

genetic assimilation The fixation of a genetic character being influenced by artificial environmental changes, not evident in the original phenotype.

genetic balance Harmonious interaction of genes ensuring normal development of the organism; genic balance.

genetic code Genetic information that is encoded into DNA and transcribed to messenger RNA which forms peptides by genetic translation.

genetic drift Genetic changes in isolated populations caused by random phenomena rather than by natural selection. see **population, local**.

genetic engineering Manipulation of DNA from different species to form recombinant DNA including genes from both species.

genetic equilibrium Condition of gene frequencies and genotypes in large populations that remain stable from generation to generation.

genetic homeostasis The tendency of a population to balance its genetic composition and to resist sudden changes.

genetic isolation Having sterility barriers preventing interbreeding between two or more populations.

genetic map A chromosome map; relative distance between genes on a chromosome measured by crossing over and recombinations; may be recombination of genes (chromosome map) or within genes (gene map).

genetic polymorphism The long-term common occurrence of 2 or more genotypes in a population which cannot be accounted for by recurrent mutation.

genetics n. [Gr. *genesis*, beginning] The science of heredity and variation.

genetic variability Inheritable variation caused by genetic change not by environment.

genic balance see **genetic balance**

genicular a. [L. dim. *genu*, knee] Pertaining to the region of the knee.

geniculate n. [L. dim. *genu*, knee] 1. Bent; elbowed; bent in an obtuse angle. 2. (ARTHRO) The antenna of arthropods, i.e., insects and crustaceans. 3. (ARTHRO: Chelicerata) The base of the chelicerae in some spiders.

genital a. [L. *gignere*, to beget] Pertaining to the reproductive organs or the process of generation.

genital aperture 1. The genital opening. 2. (NEMATA) When a cloaca is present, the anus.

genital area (BRACHIO) That part of the shell underlain by saccate gonocoel or posterior part of the digitate or lemniscate gonocoel.

genital armature Those portions of the reproductive system directly involved in copulation.

genital atrium (PLATY) A small cavity in the body wall into which the male and female genital ducts open.

genital bursa 1. (ECHINOD: Ophiuroidea) A genitorespiratory sac into which the gonads open; also used in respiration and brooding of larvae in brooding forms. 2. See **bursa copulatrix**.

genital canal (ECHINOD: Crinoidea) A canal in the arms in which the genital tube and cord lie.

genital chaeta (ANN) A seta that functions in sexual reproduction; spermathecal chaeta; penial chaeta; penial seta.

genital chamber (ARTHRO: Insecta) A copulatory invagination. *a.* In females, sometimes forms a tubular vagina that is often developed to form a bursa copulatrix. *b.* In males, a

ventral invagination containing the phallic organs.

genital coelom (MOLL) The lamina of the gonads.

genital cone (ARTHRO: Crustacea) Single or paired testes openings on the eighth thoracic sternite of males.

genital cord see **genital rachis/cord**

genital disc (ARTHRO: Insecta) The imaginal disc from which the reproductive duct system and the external genitalia are formed in the vinegar fly, *Drosophila*.

genital duct see **gonoduct**

genital fossa see **fenestra**

genital groove 1. (ARTHRO: Chelicerata) In some female spiders, a cleft posterior to the epigynum into which the fertilization duct opens and through which the eggs pass. 2. (ECHI) A depression, with or without setae, extending from the nephridiopore(s) to the mouth on the ventral surface.

genital hamule/hook see **hamular hook, hamulus anterioris, hamulus posterioris**

genitalia n.pl. [L. *genitalis*, pert. to procreation] 1. The sexual organs and associated structures. 2. (ARTHRO: Chelicerata) In male and female spiders, the sclerotized genital structures. 3. (ARTHRO: Insecta) Usually applied to the external sexual organs; gonapophyses.

genital lobe (ARTHRO: Insecta) In Odonata genitalia, a lobe of the postero-lateral angles of the second abdominal segment.

genital opening 1. (ARTHRO: Chelicerata) *a.* In Acari, originally a transverse slit or trifid orifice associated with segment eight. *b.* In many actinotrochid Acari, it is found in the pro-genital chamber where it is named the eugenital opening. 2. (MOLL: Bivalvia) Opening for gonadal products leading into the cloacal passage.

genital organs The reproductive organs.

genital papilla/papillae 1. (ANN) A protuberance below the neuropodium where a reproductive duct opens. 2. (ARTHRO: Chelicerata) Endite of an opisthosomatic appendage; shaped like an erectile papilla or verruca in Acari. 3. (ARTHRO: Crustacea) In some males, long genital processes on

the 5th or 8th thoracomere that provides openings for the vasa deferentia and a pair of accessory glands. 4. (ARTHRO: Insecta) see papilla genitalis. 5. (NEMATA) Sensory nerve terminations, variable in size, form and arrangement on or near the male tail.

genital plates 1. (ARTHRO: Chelicerata) see epigynum. 2. (ECHINOD: Echinoidea) Plates surrounding the periproct.

genital pleurae see **genital ridge**

genital pore Genital opening.

genital pouch (ARTHRO: Insecta) In certain Diptera, a pouch below the hypandrium receiving the tips of the surstyli and cerci.

genital primordium In embryology, the originating cells leading to the development of the reproductive system.

genital rachis/cord (ECHINOD: Crinoidea) Strands of gonocytes in the genital canal that traverse the arms to the gonad.

genital ridge (ARTHRO: Insecta) In embryology, thickenings of the viseral (splanchnic) wall of the mesoderm in the abdominal region of the body in which the gonadal rudiments lie.

genital region see **urogastric lobe or area**

genital sac see **preputial sac**

genital segments 1. Body segments that bear copulatory organs. 2. (ANN) Usually segments X and XI. 3. (ARTHRO: Insecta) In males, abdominal segment IX; in females, abdominal segments VIII and IX.

genital setae see **genital papillae, genital chaeta**

genital spike (ARTHRO: Insecta) In Coccidae, the penis sheath.

genital stolon see **axial gland**

genital styles see **genostyles**

genital sucker (PLATY: Trematoda) A sucker around the genital pore.

genital supplements see **supplements**

genital tracheae (ARTHRO: Chelicerata) In Acari, tracheae

from the progenital chamber resembling gland ducts and often ending in caecae; the respiratory function is not proven.

genital tube (ECHINOD: Crinoidea) Suspended in the genital canal and carrying the rachis or genital cord.

genital tuft see **brushes**

genital tumescences (ANN: Oligochaeta) In Lumbricidae, modified epidermis through which follicles of genital setae open.

genital valve see **lateral gonapophyses**

genital wings see **genital ridges**

genitointestinal canal 1. (NEMATA) see demanian system. 2. (PLATY: Trematoda) A duct connecting the oviduct and intestine of certain Polyopisthocotylea monogeneans.

genito-urinary see urogenital

genocline n. [Gr. *genos*, race; *klinein*, to slope] Change within a continuous population in frequencies of genotypes in different geographical areas.

genocopy n. [Gr. *genos*, race; L. *copia*, abundance] Production of the same phenotype by different genes (mimetic genes).

genodeme n. [Gr. *genos*, race; *demos*, people] A deme.

genoholotype n. [Gr. *genos*, race; *holos*, whole; *typos*, type] A typical species specified by the author as the generic type.

genoelectotype n. [Gr. *genos*, race; *lektos*, chosen; *typos*, type] The type of a genus selected from a series of species placed in the genus subsequent to the description.

genome n. [Gr. *genos*, race; *soma*, body] The genes carried by a single gamete; the genetic contents of the chromosomes.

genostyles n.pl. [Gr. *genos*, race; *stylos*, pillar] (ARTHRO: Insecta) In male Ephemeroptera, genital projections (consisting of 1-7 segments) initiated from the posterior corners of the 9th segment, functioning during copulation.

genosynotype n. [Gr. *genos*, race; *syn-*, together; *typos*, type] Any one of a series of species that a genus is based upon when no one species was established as type. see **type**.

genotype n. [Gr. *genos*, race; *typos*, type] 1. The genetic constitution of an organism or taxon, regardless of the outward appearance (phenotype) of the same. 2. Incorrect synonym for type species.

genovertical plate (ARTHRO: Insecta) In Diptera, the area on the head above the antenna and next to the compound eye; the orbital plate; the parafrontals.

genu n.; pl. **genua** [L. *genu*, knee] 1. Any structure or organ with a knee-like bend. 2. (ARTHRO: Chelicerata) In Acari, the segment between the femur and tibia that is activated by its own muscles and tendons, corresponding with the patella in other groups of Chelicerata.

genus n.; pl. **genera** [L. *genus*, race] A taxon including one species or a group of species from a presumed common ancestor, separated from related similar genera by a decided gap; a taxonomic category above species and next below the family group.

genus novum A new genus, never before described; gen. nov.

geobionts n. [Gr. *ge*, earth; *bios*, life; *on*, a being] Organisms that permanently inhabit the soil and thereby affect its structure. see **geocoles**.

geobios n. [Gr. *ge*, earth; *bios*, life] Soil life; terrestrial life. see **edaphon**.

geochronology n. [Gr. *ge*, earth; *chronos*, time; *logos*, discourse] The measurement of time in relation to the evolution of the earth.

geocline see **cline**

geocoles a. [Gr. *ge*, earth; L. *cola*, inhabitant] Animals that spend only a part of their lives in the soil and affect its structure, aeration, etc. see **geobionts**.

Geoffroyism see **Lamarckism**

geographical distribution The range of a species.

geographical isolation/barriers A population or group of populations prevented by geographic barriers from free

gene exchange with other populations of the same species; a geographic isolate. see **climatic isolation**.

geographic race A geographically delimited race; usually a subspecies.

geographic variation The differences between spatially segregated populations of a species.

geology n.; pl. **-gies** [Gr. *ge*, earth; *logos*, discourse] The science which treats of the structure and history of the earth.

geometrid a. [Gr. *ge*, earth; *metron*, measure] (ARTHRO: Insecta) A larva whose movements resemble a looping motion moving tail to head, such as the geometrid moth larva (Geometridae) "measuring worms"; geometroid. see **recti-grade**.

geophagous a. [Gr. *ge*, earth; *phagein*, to eat] Feeding on earth.

geophilous a. [Gr. *ge*, earth; *philein*, to love] Living in or on the ground; ground loving, as land snails.

geotaxis n.; pl. **-taxes** [Gr. *ge*, earth; *taxis*, arrangement] A tactic response with the force of gravitation as the stimulus. *a.* Positive geotaxis : toward the force of gravitation. *b.* Negative geotaxis : away from the force of gravitation.

geotropism n. [Gr. *ge*, earth; *tropos*, turn] Movement determined by the direction of gravitational force. geotropic a. see **tropism**.

geoxenes n. [Gr. *ge*, earth; *xenos*, stranger] Organism occurring only occasionally in the soil showing little effect on the soil structure. see **geobionts**.

geratology n. [Gr. *geras*, old age; *logos*, discourse] Study of degeneration and decadence of species with age. see **gerontology**.

germarium n. [L. *germen*, bud] 1. The distal chamber of an ovarian or testicular tube containing the oogonia or spermatogonia. 2. An ovary. 3. An egg or sperm producing part of a gonad. see **insect ovary types**.

germ-balls 1. (ARTHRO: Insecta) Reproductive cells in some larvae from which other young larvae may be produced. 2. (PLATY: Trematoda) Embryos in the redial stage.

germ band (ARTHRO) In egg, the thickened area from which the embryo is produced; embryonic rudiment; germ disc; primitive streak.

germ cells A reproductive cell in a multicellular organism. see **somatic cells**.

germiduct n. [L. *germen*, bud; *ducere*, to lead] (PLATY: Trematoda) The oviduct.

germigen n. [L. *germen*, bud; Gr. *genos*, offspring] (PLATY: Trematoda) The ovary.

germinal a. [L. *germen*, bud] Pertaining to a germ cell or embryonic structure. see **soma**.

germinal cell Cells which produce gametes through *meiosis*, i.e., oocytes in females, spermatocytes in males; products of the germinal primordium.

germinal disc see **germ band**

germinal layers Primary cell of the embryo: ectoderm, mesoderm, and endoderm, from which tissues and organs of the adult are formed; germ layer.

germinal mutations Genetic alteration in cells destined to become germ cells.

germinal spot The nucleolus of an ovum.

germinal streak The primitive streak. see **germ band**.

germinal variations A variation caused by some modification in the germ cells.

germinal vesicle The diploid nucleus of a primary oocyte before formation of polar bodies.

germinal zone That part of an ovarian or testicular tube where the oogonia or spermatogonia divide.

germ layer see **germinal layers**

germogen n. [L. *germen*, bud; *genes*, born] (MESO: Rhombzoa) The central part of an infusorigen in the development of an axoblast.

germovitellarium n.; pl. **-vitellaria** [L. *germen*, bud; *vitellus*, yolk] (PLATY) Having the ovary differentiated into yolk- and egg-producing regions.

- germ plasm** Genetic material which forms the physical basis of inheritance and is passed from generation to generation.
- germ tract** The complete detailed history of the germ cells from one generation to the next.
- gerontic** a. [Gr. *gerontos*, old man] Pertaining to decadence; old age; deteriorating.
- gerontogeous** a. [Gr. *gerontos*, old man; *ge*, earth] Belonging to the Old World or Eastern Hemisphere. see **neogeic**.
- gerontology** n. [Gr. *gerontos*, old man; *logos*, discourse] The study of aging.
- gerontomorphosis** n. [Gr. *gerontos*, old man; *morphe*, form] Evolution involving specialization and diminishing capacity for further evolutionary change.
- gestation** n. [L. *gestare*, to bear] In viviparous animals, the period from conception to birth.
- geusid** n. [Gr. *geusis*, taste] (NEMATA) Gustatory organ.
- giant bud** (BRYO: Gymnolaemata) Unpartitioned distal end growth in which the side walls grow faster than the internal transverse walls.
- giant cell** A term applied to a host response in which a multinucleate mass of protoplasm or cytoplasm often acts as a preferred feeding site or "nurse cell". see **coenocyte**, **syncytium**, **lysigenoma**, **teratocyte**.
- giant chromosome** (ARTHRO: Insecta) In Diptera, a very large chromosome bundle that arises by repeated endoreplication of single chromatids.
- giant fiber** Enlarged nerve fibers that transmit rapid impulses in certain mollusks, crustaceans, annelids, pogonaphorans and insects; giant fibre.
- gibber** n. [L. *gibbus*, humped] A swelling or enlargement; a rounded protuberance.
- gibbous, gibbose** a. [L. *gibbus*, humped] Very convex; hump-backed; embossed; swollen; a protuberance.
- Gicklhorn's organ** (ARTHRO: Crustacea) In Copepods, paired photoreceptors having two cells that closely resemble retinula cells, found in proximity to the frontal eye.

- gigantism** n. [Gr. *gigas*, giant] Excessive growth of an organ or a complete organism to a large size.
- gigeriate** a. [L. *gigerium*, gizzard] (ANN) Having one or more gizzards in the digestive system.
- gill** n. [ME. *gile*, gill] 1. An external respiratory organ of various aquatic invertebrates. 2. (ARTHRO) Brachia or plastron. 3. (ECHINOD: Echinoidea) The plastron. 4. (MOLL) The ctenidium.
- gill bailer** see **scaphognathite**
- gill bar** (MOLL: Bivalvia) Dorsoventral rodlike thickenings of a gill lamellae.
- gill book** see **book gill**
- gill chamber** see **branchial chamber**
- gill filaments** 1. Finger-like subdivisions of gills of various invertebrates. 2. (ANN) Finger-like extensions of the body wall that function in respiration.
- gill lamellae** (MOLL: Bivalvia) Thin plates making up a gill.
- gill plume** (MOLL: Gastropoda) Gill or ctenidium.
- gill retractor** (MOLL: Bivalvia) When present, a muscle attaching one of the gills to the shell.
- gill separator** see **epipodite**
- gill tuft** A group of mainly lateral, filamentous gills.
- Gilson's glands** (ARTHRO: Insecta) In Trichoptera, thoracic glands homologized to coxal glands or nephridia.
- ginglymus** n. [Gr. *ginglymos*, hinge-joint] (ARTHRO: Insecta) In dicondylic jaws, a cavity or groove of the mandible that hinges on a convex process of the clypeus forming the anterior joint.
- gin-traps** (ARTHRO: Insecta) In certain coleopteran larvae, local sclerotization of opposable edges of adjacent abdominal segments, supposed organs of defense against arthropod predators.
- girdle** n. [A.S. *gyrdel*, a girdle] (MOLL: Polyplacophora) Flexible muscular integument, plain or leathery, or variously ornamented, holding the chiton valves in place; perinotum; girdle.

gizzard n. [OF. *gezier*, gizzard] 1. A grinding chamber of various invertebrates. 2. (ANN: Oligochaeta) A muscular area of the digestive system between intestine and crop. 3. (ARTHRO) For Insecta and Crustacea, see proventriculus. 4. (BRYO: Gymnolaemata) In Ctenostomata, an elongate or spherical inner part of the cardia with pointed or rounded plates or teeth. 5. (ECHI) The short, muscular region of the posterior foregut usually marked by ringed or annular striations. 6. (MOLL) A thickened muscular stomach, or lined with calcareous plates for crushing food.

glabella n. [L. dim. *glaber*, bald] (ARTHRO: Trilobita) A thickened, median elevated cephalic shield of trilobites.

glabrous a. [L. *glaber*, bald] Smooth, free of hair.

gladiolus n. [L. dim. *gladius*, sword] The mesosternum.

gladius n. [L. *gladius*, sword] (MOLL: Cephalopoda) In Sepiidae, Octopoda, and Teuthoidea, the horny endoskeleton or pen of endocochleates; the internal shell.

glairy a. [L. *clarus*, clear] Pertaining to glair, or white of an egg.

gland n. [L. dim. *glans*, acorn] An organ or cell specialized for secretion, either for use in the body or for excretion.

gland cell A single secreting cell.

glandiform a. [L. dim. *glans*, acorn; *forma*, shape] Acorn-shaped.

glandilemma n. [L. dim. *glans*, acorn; Gr. *lemma*, skin] The capsule of a gland.

gland of Leiblein (MOLL) A gland connected to the modified esophagus by a duct that secretes a strong proteolytic enzyme in some predaceous mollusks and carbohydrase in vegetarians.

gland orifice Any external opening for gland secretion.

gland shields (ANN: Polychaeta) In tube-builders, a pair of large mucous-secreting pads which lay down a coating on the inner surface of the tube.

glands of Batelli (ARTHRO: Insecta) In Hemiptera, large hypodermal glands in the Cercopidae; formerly believed to produce the spittle.

glands of Filippi see **Lyonnet's gland**

glands of Morren see **calciferous glands**

gland spines (ARTHRO: Insecta) In Diaspidinae, small to large spines that are conical, bifid, or somewhat fimbriate at the tip and have one or more ducts that extend to the tip of the spine; pectines; plates; squamae.

gland tubercules (ARTHRO: Insecta) In Diaspidinae, a gland spine that is short, basally swollen and sclerotized.

glanduba n.; pl. -ae [L. dim. *glans*, acorn] (ARTHRO: Insecta) In Hymenoptera, chitinized ring openings of the cutaneous wax glands found in most sawfly larvae.

glandulae accessoriae (ARTHRO: Insecta) The accessory glands of the reproductive organs.

glandular a. [L. dim. *glans*, acorn] Having or bearing a gland or gland cell, i.e., hair, spines, etc.

glandular bristles/hairs 1. Stout and rigid glandular setae. 2. (ARTHRO: Insecta) In Lepidoptera, the urticating hairs.

glandular organ (SIPUN) A prominent structure on the ventral, median part of the oral disc of pelagosphaera larvae; lip gland.

glans n. [L. dim. *glans*, acorn] (SIPUN) The acorn-shaped posterior extremity of the trunk of some species.

glassy a. [A.S. *glaes*, glass] Vitreous; transparent; pellucid; clear.

glaucothoe n. [Gr. *glaukos*, grey; *thos*, swift] (ARTHRO: Crustacea) In Decapoda, a postlarval stage in the development of Paguridae, equivalent to a megalopa.

glaucous a. [L. *glaucus*, bluish-green] Sea-green or pale bluish-green in color.

glenoid cavity 1. A depression for the fit of a condyle. 2. (ARTHRO: Chelicerata) In Acari, part of a condylar articulation.

glia, glial cells, gliocytes n. [Gr. *glia*, glue] Nonnerve cells in the brain or ganglion, that may support the life processes of the neurons; neuroglia.

globate, globated a. [L. *globus*, ball] Globose; spherical.

globoferous cell (PORIF) A cell having a prominent array of

paracrystalline components.

globose, globular a. [L. *globus*, ball] Spherical; globe shaped.

globuli cells (ARTHRO: Insecta) Specialized association cells of the brain, small in size with round nuclei rich in chromatin.

globulin n. [L. dim. of *globus*, ball] A class of proteins which are insoluble in water, but soluble in saline solutions, or water soluble proteins with globulin-like physical properties.

globulus n.; pl. -li [L. *globulus*, small ball] (ARTHRO: Pauro-poda) One jointed globular or two jointed pear-shaped sensory organs on the antennae.

glochidium n.; pl. -dia [Gr. *glochis*, arrow-point; idion, dim] (MOLL: Bivalvia) In Unionoida, the modified parasitic larva, with or without hooks, of certain fresh water clams.

glochis n.; pl. **glochines** [Gr. *glochis*, arrow-point] 1. A barbed hair, bristle, spine or point. 2. (MOLL: Gastropoda) The protrusible radula.

glomerate a. [L. *glomus*, ball] Massed or compacted into a cluster.

glomerule see **glomerulus**

glomerulus n.; pl. -li [L. dim. *glomus*, ball] A tuft or cluster of blood vessels or nerve fibers.

glossa n. [Gr. *glossa*, tongue] (ARTHRO: Insecta) One of a pair of terminal lingular lobes of the labium of certain insects, between the paraglossae; the median ligula. *a.* In adult Hymenoptera, the fused glossae that form the tongue. *b.* In Thysanoptera, the median ligula that forms the apical tip of the wall of the mouth cone.

glossarium see **labrum-epipharynx**

glossate a. [Gr. *glossa*, tongue] Furnished with a tongue-like structure.

glossotheca n. [Gr. *glossa*, tongue; *theke*, case] (ARTHRO: Insecta) The pupa integument covering the tongue; a tongue-case.

glottis n. [Gr. *glotta*, tongue] The opening from the pharynx into the trachea.

glottoid apparatus (NEMATA) A toothed projection at the base of the esophastome utilized in rhabditid species and generic identification.

glucoprotein n. [Gr. *gleukos*, sweet; *proteion*, primary] A substance in which hexosamine containing polysaccharide is chemically united with peptides. see **glycoprotein, mucoprotein**.

glue cell see **adhesive cells**

glumes n.pl. [L. *gluma*, husk] (ARTHRO: Insecta) In Hymenoptera, longitudinal ridges on the flagellar segments of many wasps.

glutinants n.pl. [L. *gluten*, glue] (CNID) A type of nematocyst; the holotrichous and atrichous isorhizas.

glutinous, glutinous a. [L. *glutinosus*, sticky] Having a slimy or sticky surface.

glycocalyx n. [Gr. *glykys*, sweet; *kalyx*, covering] 1. A filamentous layer containing carbohydrate, found on the outer surface of many cells. 2. (ACANTHO) Formerly known as epicuticle.

glycogen n. [Gr. *glykys*, sweet; *genes*, born] A branch-chained polysaccharide; a major stored food substance of most animals, fungi and bacteria.

glycogenesis n. [Gr. *glykys*, sweet; *gennaein*, to produce] Formation of glycogen from glucose.

glycogenolysis n. [Gr. *glykys*, sweet; *genes*, born; *lyein*, to break up] The breakdown of glycogen.

glycolysis n. [Gr. *glykys*, sweet; *lyein*, to break up] The enzymatic breakdown of glucose to lactic acid or pyruvic acid with the release of energy in the form of high energy phosphate bonds.

glycoprotein n. [Gr. *glykys*, sweet; *proteion*, primary] Glucoprotein whose hexosamine content is less than 4%.

glymma n.; pl. -ae (ARTHRO: Insecta) In ichneumonid Hymenoptera, one of a pair of lateral foveae between the base and spiracles of the petiolar segment; may be small and shallow or large and almost meeting in midline.

gnathal a. [Gr. *gnathos*, jaw] Pertaining to the jaws.

gnathal lobe 1. (ARTHRO: Crustacea) The masticatory endite of the mandible; the masticatory process. 2. (ARTHRO: Diplopoda) The third or most distal part of the mandible; bearing the teeth and grinding surfaces.

gnathal pouch (ARTHRO: Insecta) *a.* The concave surface below the oral plate; the oral chamber. *b.* In Hymenoptera, used as a receptacle for food particles and detritus in ants.

gnathal region/segments (ARTHRO: Insecta) The gnathocephalon.

gnathites n.pl. [Gr. *gnathos*, jaw] (ARTHRO: Insecta) The mouth parts; the buccal appendages.

gnathobase n. [Gr. *gnathos*, jaw; *basis*, base] 1. (ARTHRO) One of a pair of endites used to manipulate or move food in trilobites, and some crustaceans. 2. (ARTHRO: Chelicerata) In arachnids, the projection from the coxa of a leg or palp, used in crushing food. 3. (ARTHRO: Insecta) A lobe or projection of a basal segment of an appendage near the mouth, used in eating.

gnathocephalon n. [Gr. *gnathos*, jaw; *kephale*, head] (ARTHRO: Insecta) That part of the head formed by the gnathal segments and the procephalic lobes.

gnathochilarium n. [Gr. *gnathos*, jaw; dim. *cheilarion*, lip] (ARTHRO: Diplopoda) A plate-like mouth structure; thought to be the fused maxillae and labium.

gnathopod(ite) n. [Gr. *gnathos*, jaw; *pous*, foot] (ARTHRO: Crustacea) Prehensile appendages. *a.* The maxilliped. *b.* In Amphipoda, the first and second pereopods, chelate or subchelate; the gnathopodite; subchela.

gnathos see **subscaphium**

gnathosoma n. [Gr. *gnathos*, jaw; *soma*, body] (ARTHRO: Chelicerata) The anterior of two basic regions of the body of a mite or tick bearing the mouth parts; a capitulum pseudotagma.

gnathostegite n. [Gr. *gnathos*, jaw; *stegos*, roof] (ARTHRO: Crustacea) One of a pair of plates covering the mouth parts.

Gnathostomulida n. [Gr. *gnathos*, jaw; *stoma*, mouth] A

phylum of microscopic, free-living marine worms that are acoelomate bilateria with a mono-ciliated skin epithelium, jaws and a muscular pharyngeal apparatus; commonly called jaw-worms.

gnathothorax n. [Gr. *gnathos*, jaw; *thorax*, breast] (ARTHRO: Crustacea) Having the first, sometimes also the second, thoracic somites fused with the cephalon; the cephalon and pereon.

gnotobiote n. [Gr. *gnostos*, known; *bios*, life] A known microorganism living in or on a host.

gnotobiotic culture The breeding or culturing of organisms by themselves or in association with other known kinds of organisms. see **agnotobiotic culture**.

gnotobiotics n.pl. [Gr. *gnostos*, known; *bios*, life] A field of biology involving breeding or culturing of organisms by themselves or together with other known kinds of organisms. **gnotobiotic** a. see **agnotobiotic culture**.

goblet cell see **calyciform cell**

goblets n.pl. [OF. *goblete*] (ARTHRO: Chelicerata) Stigmatal plate markings of certain hard ticks.

Golgi bodies [=dictyosomes=golgiosomes or internal reticular apparatus] Organelle found in most eukaryote cells consisting of a stack (dictyosome) of flat sacs (cisternae), involved in secretion.

golgio-kinesis Distribution of Golgi bodies during mitosis.

gonad n. [Gr. *gone*, that which produces seed] A reproductive organ; a testis, ovary, ovotestis, or their generative tissue. **gonadial** a.

gonadotropin, gonadotrophin n. [Gr. *gone*, that which produces seed; *tropos*, direction] A substance that stimulates the gonads to develop.

gonaduct see **gonoduct**

gonangium n. [Gr. *gone*, that which produces seed; *angeion*, capsule] (CNID: Hydrozoa) In colonials, the gonotheca and enclosed blastostyle with gonophores.

gonangulum n. [Gr. *gone*, that which produces seed; L. *angulus*, angle] (ARTHRO: Insecta) A small sclerite attached

to the base of the first gonapophysis articulating with the second gonocoxa and the tergum of segment 9 in *Lepisma*; in others fused with the first gonocoxa or with tergum 9.

gonapophysis n.; pl. **-yses** [Gr. *gone*, that which produces seed; *apo*, from; *phyein*, to grow] 1. (ARTHRO: Crustacea) In male Syncarida, a median process from the base of the first or second pleopod. 2. (ARTHRO: Insecta) *a*. The slender curving processes that form the shaft of the ovipositor; may be leaf- or flap-like or modified to form the sting. *b*. Also applied to certain paired genital appendages in the male.

gonarcus n. [Gr. *gone*, that which produces seed; L. *arcus*, bow] (ARTHRO: Insecta) In male Neuroptera, an arch-shaped structure below the anal segment and above the aedeagus.

gonatoceros condition (ARTHRO: Insecta) In some adult Coleoptera, bearing a geniculate antenna with a long scape and compact club. see **orthoceros condition**.

gone n. [Gr. *gone*, that which produces seed] Any germ cell arising by meiosis.

gongylidia n.pl.; sing. **-ium** [Gr. *gongylos*, ball] Spherical or ellipsoidal swellings at the tips of the hyphae that are cultivated by the Attine ants; a group of gongylidia is sometimes referred to as a staphyla.

goniatite n. [Gr. *gonia*, angle] (MOLL: Cephalopoda) Extinct Paleozoic ammonoid cephalopod existing in the Middle Devonian Period.

gonoblast n. [Gr. *gone*, that which produces seed; *blastos*, bud] A reproductive cell or bud.

gonocalyx n. [Gr. *gone*, that which produces seed; *kalyx*, cover] (CNID) The bell of a medusa-like gonophore.

gonochorism n. [Gr. *gone*, that which produces seed; *chorismos*, separation] The possession of functional gonads of one sex only (male or female); dioecious. **gonochoristic** a.

gonochoristic a. [Gr. *gone*, that which produces seed; *chorismos*, separation] Unisexual; producing distinct males and females. see **hermaphrodite**.

gonocoel n. [Gr. *gone*, that which produces seed; *koilos*, hollow] The cavity containing the gonads.

gonocoxa, gonocoxite n.; pl. **-ae** [Gr. *gone*, that which produces seed; L. *coxa*, hip] (ARTHRO: Insecta) The coxite of the gonopod. see **second valvifers**.

gonocoxopodites n.pl. [Gr. *gone*, that which produces seed; L. *coxa*, hip; *pous*, foot] (ARTHRO: Insecta) In Siphonaptera, a pair of 2-segmented claspers associated with the 9th tergum and median intromittant organ.

gonodendron n. [Gr. *gone*, that which produces seed; *dendron*, tree] (CNID: Hydrozoa) In Siphonophora, a branching structure bearing grapelike clusters of gonophores that are not set free.

gonoducts n.pl. [Gr. *gone*, that which produces seed; L. *ductus*, led] 1. The ducts through which the gametes reach the exterior, oviduct in females, vas deferens in males. 2. (ECHI) see nephridium.

gonogenesis see **gametogenesis**

gonomery n. [Gr. *gone*, that which produces seed; *meros*, part] (ARTHRO: Insecta) The separate grouping of maternal and paternal chromosomes during cleavage in some embryos.

gonopalpon n. [Gr. *gone*, that which produces seed; L. *palpare*, to touch] (CNID: Hydrozoa) In Siphonophora, tentacle-like dactylozooids associated with gonophores.

gonopericardial canal (MOLL: Solengastres) A canal from gonads to the pericardium.

gonophore n. [Gr. *gone*, that which produces seed; *phoreus*, bearer] (CNID: Hydrozoa) In Hydroida, a structure that produces gametes and is a sporosac, medusa or any intermediate stage.

gonoplac n. [Gr. *gone*; that which produces seed; *plax*, plate] (ARTHRO: Insecta) A process of the second gonocoxa; may be a separate sclerite and may form a sheath around the gonapophyses; 3rd valvula.

gonopod n. [Gr. *gone*, that which produces seed; *pous*, foot] (ARTHRO) The appendages serving as genital segments, or

associated segments modified for reproductive purposes, *i.e.*, chelicera, palp, leg, pleopod.

gonopody n. [Gr. *gone*, that which produces seed; *pous*, foot] A type of internal fertilization whereby the male sperm is transferred by an appendage to the female genital organs; sperm transfer which is nearly direct. see **podospermia**, **tocospermia**.

gonopore n. [Gr. *gone*, that which produces seed; *poros*, channel] 1. The external opening of the reproductive organs. 2. (ARTHRO: Crustacea) The sexual pore. 3. (NEMATA) The vulva in females; the anus or cloacal opening in males.

gonosome n. [Gr. *gone*, that which produces seed; *soma*, body] (CNID: Hydrozoa) All gonophores of a colony collectively. see **trophosome**.

gonosomite see **genital segment**

gonostyle n. [Gr. *gone*, that which produces seed; *stylos*, pillar] (CNID: Hydrozoa) The blastostyle; gonodendron.

gonostylus n.; pl. **gonostylii** [Gr. *gone*, that which produces seed; *stylos*, pillar] (ARTHRO: Insecta) The stylus of a genital segment; harpago; style; stylus; paramere.

gonotheca n. [Gr. *gone*, that which produces seed; *theke*, case] (CNID: Hydrozoa) In Leptomedusae, a vase-like covering of the stalklike blastostyles.

gonotreme n. [Gr. *gone*, that which produces seed; *trema*, hole] (ARTHRO: Insecta) The female gonopore, oviporus (secondary gonopore), or vulva; in males, the gonopore.

gonotrophic concordancy (ARTHRO: Insecta) In certain mosquitoes, discontinuation, or only occasional ingesting of blood meals after ovulation has stopped. see **gonotrophic dissociation**.

gonotrophic dissociation (ARTHRO: Insecta) In certain mosquitoes, the continuation of ingesting blood meals after ovulation has stopped. see **gonotrophic concordancy**.

gonotyl n. [Gr. *gone*, that which produces seed; *tylos*, knob] (PLATY: Trematoda) In digenetic forms, a sucker or other perigenital specialization associated with the genital atrium.

gonozoecium n. [Gr. *gone*, that which produces seed; *zoon*,

animals; *oikos*, house] (BRYO: Stenolaemata) An enlarged polymorph that serves as a brood chamber for eggs.

gonozooid, gynozooid n. [Gr. *gone*, that which produces seed; *zoon*, animal; *eidos*, form] 1. (BRYO) A zooid modified as a brood chamber. 2. (CNID: Hydrozoa) A gonophore or individual specialized for reproduction in a colony.

gorgeret n. [Gr. *Gorgos*, terrible] 1. A barblike structure. 2. (ARTHRO: Insecta) The sting of a honey bee. 3. (NEMATA) The barb on the spicule.

gorgonin n. [Gr. *Gorgos*, terrible] (CNID: Anthozoa) A proteinaceous horny material forming the axial skeleton of sea fans and sea whips.

Gotte's larva (PLATY: Turbellaria) In *Stylochus*, a "Muller's"-type larva with the exception of four instead of eight lobes.

Graber's organ (ARTHRO: Insecta) In tabanid larvae, a pyriform sac containing a series of capsules that opens at the surface between the last two segments, thought to be sensory in function; may be seen through the integument of living larvae.

gracile a. [L. *gracilis*, slender] Gracefully slender or thin.

gradate a. [L. *gradus*, step] Regularly increasing in size; arranged in a series; blending of colors.

grade n. [L. *gradus*, step] A group of organisms similar in level of organization.

graft n. [OF. *greffe*, graft] Act of grafting, or joining a part of an organism with another.

grained a. [L. *granum*, grain] Dotted with small tubercles.

graminaceous a. [L. *gramen*, grass] Grass-colored.

graminicolous a. [L. *gramen*, grass; *colere*, to dwell] Living on grasses.

graminivorous a. [L. *gramen*, grass; *vorare*, to devour] Grass-eating.

granose a. [L. *granum*, grain] Like a string of grains; moniliform.

granulated a. [L. dim. *granum*, grain] Covered with grains or small tubercles.

granular eosinophilic cell see **granular hemocyte**

granular hemocyte Hemocytes that vary in size and shape, phagocytic in function, characterized by possession of acidophilic granules in the cytoplasm. see **granulocyte**.

granular leucocyte see **granular hemocyte**

granular spheres see **granulocyte**

granule n. [L. dim. *granum*, grain] 1. A very small or minute elevation. 2. (ARTHRO: Insecta) Grain-like, short, thick, dark seta of beetles.

granulocyte n. [L. dim. *granum*, grain; Gr. *kytos*, container] A hemocyte variable in size and shape, granular contents of sulfated, periodate-reactive sialomucin and other glycoproteins or neutral mucopolysaccharides, and sometimes lipid droplets may be present.

granulose a. [L. dim. *granum*, grain] Roughened with granules, or grain-like elevations.

granum tinctorium see **kermes**

graphiohexaster n. [Gr. *graphe*, writing; *hex*, six; *aster*, star] (PORIF) A six-rayed spicule with long filamentous processes from four of the rays.

graptolite n. [Gr. *graptos*, painted; *lithos*, stone] A fossil group of pelagic, colonial animals with chitinous exoskeletons, consisting of simple or branched stems (rhabdosomes) toothed along one or both edges.

grasping spines (CHAETO) Chitinous spines on the posterior part of the head used for food catching; prehensile spines; seizing jaws.

gravid n. [L. *gravidus*, pregnant] Containing an egg or eggs, as a gravid pinworm, or gravid proglottid of a tapeworm.

gray cell (PORIF) A cell with spherical basiphilic granules and many glycogen rosettes.

greater ocellars see **ocellar bristles**

green gland (ARTHRO: Crustacea) Excretory glands on the antennae of crayfish and other Malacostraca; antennal gland.

green pigments (ARTHRO: Insecta) A synthesized pigment that gives a green color to the blood and epidermal cells,

even without chlorophyll. see **insectoverdin**.

gregaria n. [L. *grex*, flock] (ARTHRO: Insecta) The high density phase of locusts and some caterpillars during which they are gregarious and/or migratory. see **solitaria**.

gregarious a. [L. *grex*, flock] Habitually associating in groups or colonies.

grege, greige see **silk**

gres see **sericin**

gressorial a. [L. *gressus*, step] Adapted for walking.

gribble n. (ARTHRO: Chelicerata) A small wood-boring isopod of the Limnoriidae.

griseous a. [ML. *griseus*, gray] A white color mottled with black or brown; light gray; bluish gray.

grooming n. [OF. *gromet*, servant] To make neat; the cleaning of an animal by itself or others.

group n. [F. *groupe*] A number of related taxa; a series of closely related species within a genus. see **complex**.

group effect Alteration in behavior within a species or group by nondirected signals.

group predation Hunting and securing prey by groups of co-operating animals, *i.e.*, army ants.

growing-molt A molt that results in a larger size, but no changes in characters or form.

growing tip or point (BRYO) Proliferating distal extremities of the colony.

growth n. [A.S. *growan*] 1. The development of an organism by assimilation. 2. A morbid formation, as a tumor.

growth hormone Any of various growth promoting hormones.

growth lines (MOLL: Gastropoda) Surface marking of the shell, denoting a former position of the outer lip.

growth period In germ cell development, the period in which they increase greatly in size and during which synapsis occurs and the tetrads are formed.

growth ring see **annotate**

growth rugae (MOLL) Irregular ridges or undulations on the

shell surface determined by former positions of the outer lip which show slowed or stopped growth. see **growth lines**.

growth squamae (MOLL: Bivalvia) Scaly extensions of the shell surface parallel to the growth lines.

growth stage The intermitotic growth stage of a cell; resting stage; resting cell.

growth thread (MOLL: Bivalvia) A threadlike growth line.

growth welt (MOLL: Bivalvia) An elongate shell elevation parallel to the growth lines.

grub n. [ME. *grubben*, dig] (ARTHRO: Insecta) A legless larva; certain U- or C-shaped larvae generally found among the Coleoptera and Hymenoptera.

gryphaeate a. (MOLL: Bivalvia) Shell with left valve strongly convex with its dorsal part incurved and the right valve flat, as in the genus *Gryphea*; gryphaeiform; gryph-shaped.

guanine n. [Ab.Am. *huanu*, dung] A purine base present in DNA and RNA, found in fish scales, animals, plants and excreta.

gubernaculum n.; pl. **-la** [L. dim. *gubernare*, to guide] 1. (CNID: Hydrozoa) Hydroida, protoplasmic strands connecting the blastostyle and internal marsupium to the gonothecal wall; possibly functioning in nutrition or as a device for keeping the internal marsupium in position. 2. (NEMATA) A sclerotized trough-shaped structure of the dorsal wall of the spicular pouch, near the distal portion of the spicules; functions for reinforcement of the dorsal wall. *a.* Retractor gubernaculi muscles extend from the gubernaculum to the dorsal or lateral body wall. *b.* Seductor gubernaculi muscles extend from the lateral walls of the body to the gubernaculum.

guest n. [A.S. *gaest*] Animal living within the nest or den of others; a social symbiont.

gula n. [L. *gula*, gullet] 1. (ARTHRO: Diplopoda) The reduced sternite of the first trunk segment forming the posterior part of the gnathochilarium; the hypostoma. 2. (ARTHRO: Insecta) A median ventral plate of the head, extending from the submentum to the posterior tentorial pits; gular

plate.

gulacava see **gular pit**

gumental plate (ARTHRO: Insecta) The basal labial plate formed by fusion of the gula and submental regions.

gulamentum n. [L. *gula*, gullet; *mentum*, chin] (ARTHRO: Insecta) The plate formed by the fusion of the gula and submentum.

gular a. [L. *gula*, gullet] 1. Pertaining to the throat or gula. 2. (MOLL) Pertaining to the innermost part of the shell aperture.

gular pit (ARTHRO: Insecta) The infolding of a posterior arm of the tentorium.

gular suture (ARTHRO: Insecta) 1. Longitudinal sutures on each side of the gula or middle piece of the throat. 2. In Coleoptera, marking the inflection of the posterior arms of the tentorium.

gullet n. [L. *gula*, gullet] The esophagus.

gustatory a. [L. *gustus*, taste] Pertaining to the sense of taste. see **chemoreceptor**.

gut n. [A.S. *gut*] The intestinal tract; the alimentary canal, or part of.

gut sinus (ANN: Polychaeta) In some species, a thin-walled chamber around the gut filled with blood.

gutta n. [L. *gutta*, a drop or spot] A roundish spot or marking of color. **guttate** a.

gutter n. [OF. *gutiere*, a gutter] (MOLL: Gastropoda) An elongate projection beyond the mouth.

guttiform a. [L. *gutta*, a drop or spot; *forma*, shape] Drop-shaped.

gymnoblasic a. [Gr. *gymnos*, bare; *blastos*, bud] (CNID: Hydrozoa) Lacking hydrothecae and gonothecae, as some colonial forms.

gymnocephalous cercaria (PLATY: Trematoda) Cercaria without ornamentation, lacking spines or stylets on the anterior end or in the oral sucker; with equal sized oral and ventral suckers; no tail fin (Fasciolidae).

gymnocoel n. [Gr. *gymnos*, bare; *koilos*, hollow] A body cavity possessing no special lining cells other than tissue bordering cavities such as epidermis or gastrodermis.

gymnocyst n. [Gr. *gymnos*, bare; *kystis*, bladder] 1. (BRYO) A simple type of wall morphology that adds exterior walls to the ends of interior walls, thereby separating adjacent zooids that remain in communication through interzooidal pores. **gymnocystal** a. see **cryptocyst**. 2. (BRYO: Gymnolaemata) In cheilostomates, continuous or partial frontal shield formed by calcification of the zooidal frontal wall or by cuticle covered spots on the frontal wall.

gymnocystidean n. [Gr. *gymnos*, bare; *kystis*, bladder] (BRYO: Gymnolaemata) An Ascophora cheilostomate with autozooids having gymnocysts as frontal shields.

gymnocyte n. [Gr. *gymnos*, bare; *kytos*, container] A cell with no cell wall. see **lepocyte**.

gymnodomous a. [Gr. *gymnos*, bare; L. *domus*, house] (ARTHRO: Insecta) Pertaining to nests, especially of social wasps lacking an envelope. see **calyptodomous**.

gymnogastra n. [Gr. *gymnos*, bare; *gaster*, stomach] Having the venter or belly visible. see **cryptogastra**.

Gymnolaemata, gymnolaemates n.; n.pl. [Gr. *gymnos*, bare; *laimos*, throat] Largest class of mainly marine Bryozoa primitively cylindrical, but most commonly flattened and lozenge-shaped, with a circular lophophore and lacking an epistome.

gymnoparia n.; pl. **-ariae** [Gr. *gymnos*, bare; *pareion*, cheek] (ARTHRO: Insecta) In scarabaeoid larvae, that part of the paria without bristles posterior to the acroparia and between the acanthoparia and chaetoparia.

gymnopterous a. [Gr. *gymnos*, bare; *pteron*, wing] (ARTHRO: Insecta) Lacking scales on wings.

gynaecoid see **gynecoid**

gynaecomorphic male see **gynecaner**

gynaecophoral canal (PLATY: Trematoda) A longitudinal in-folded groove in the ventral surface of male schistosome flukes where the female usually resides.

gynaecotelic type (ARTHRO: Insecta) One of the two groups of social insects in which the queen manifests the prototype female, with all the primary instincts, including those of the worker caste until after the colony is established when she then becomes an egg-laying machine. see **ergatotelic type**.

gynander see **gynandromorph**

gynandrarchy n. [Gr. *gyne*, woman; *aner*, male; *archon*, leader] (ARTHRO: Insecta) Social organization among insects differing from gynarchy in that the male takes part in establishing the colony.

gynandromorph n. [Gr. *gyne*, woman; *aner*, male; *morphe*, form] An individual in which male and female somatic characters exist; bilateral gynandromorphs, with the left and right halves of different sex; sex mosaics. see **intersex, chimera**.

gynandromorphism n. [Gr. *gyne*, woman; *aner*, male; *morphe*, form] The condition of being a gynandromorph. **gynandromorphic** a.

gynandry n. [Gr. *gyne*, woman; *aner*, male] Hermaphroditism; also, the condition of a female approximating to the male type of physique.

gynarchy n. [Gr. *gyne*, woman; *archon*, leader] (ARTHRO: Insecta) In social insects, a colony organization in which a female initiates and dominates.

gynecaner, gynaecaner n. [Gr. *gynaiko*, womanly; *aner*, male] (ARTHRO: Insecta) In Hymenoptera, a male ant of certain parasitic and workerless genera that resembles a female rather than a worker, but having the same number of antennal joints and according to the genus may be wingless; a gynaecomorphic male.

gynecoid n. [Gr. *gynaiko*, womanly; *eidōs*, like] (ARTHRO: Insecta) In Hymenoptera, a large egg laying worker ant.

gynecophore see **gynaecophoral canal**

gynergate n. [Gr. *gyne*, woman; *ergate*, worker] (ARTHRO: Insecta) A female containing patches of tissue of both the queen and worker castes.

gynes n.pl. [Gr. *gyne*, woman] (ARTHRO: Insecta) 1. In bees, a potential or actual queen. 2. Especially potential queens of honeybees. 3. Certain halictid bees that are first gynes, later to become workers or queens.

gynetype n. [Gr. *gyne*, woman; *typos*, type] A designated female type specimen.

gynocophoral canal see **gynaecophoral canal**

gynogenesis n. [Gr. *gyne*, woman; *genesis*, descent] Female parthenogenesis; pseudogamy; development of a haploid individual possessing only the maternal chromosome set. see **androgenesis**.

gynomerogony n. [Gr. *gyne*, woman; *meros*, part; *gonos*, seed] Development of an egg fragment containing only the female nucleus (maternal chromosomes).

gynosynthesmia n. [Gr. *gyne*, woman; *syn*, together; *hesmos*, swarm] A group of females gathering together during mating season. see **androsynthesmia**, **synthesmia**.

gynozoid n. [Gr. *gyne*, woman; *zoon*, animal] A female gonozoid.

gyrate, gyral a. [L. *gyrare*, to turn about] Circular or spiral movement; curved.

gyration n. [L. *gyrare*, to turn about] 1. Rotating or whirling movement. 2. (MOLL) One of the whorls on a spiral shell.

gyratory a. [L. *gyrare*, to turn about] Moving in a circle; circular or rotary motion.

gyre n. [L. *gyrare*, to turn about] Coiling; chromosome coiling.

gyri-cerebrales (ARTHRO: Insecta) Esophageal ganglion lobes in embryos.