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Online Dictionary of Invertebrate Zoology: E

Mary Ann Basinger Maggenti
University of California-Davis

Armand R. Maggenti
University of California, Davis

Scott Lyell Gardner
University of Nebraska - Lincoln, slg@unl.edu

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E

ear see **auricle**

eaves n.pl. [A.S. *efes*, lower border of a roof] (MOLL: Polyplacophora) Portions of the tegmentum just over the line where the insertion plates and the sutural laminae project.

eave tissue (MOLL: Polyplacophora) Composition of the shell that forms the eaves; either porcelaneous or riddled with microscopic tubules (spongy).

eburnean a. [L. *eburneus*, ivory] Made of, or like ivory; ivory white.

ecalcarate a. [Gr. *ek*, out of; L. *calcar*, spur] Lacking spurs or calcaria.

ecarinate a. [Gr. *ek*, out of; L. *carina*, keel] Without a keel or carina.

ecaudate a. [Gr. *ek*, out of; L. *cauda*, tail] Lacking a cauda or tail-like process or structure; excaudate.

ecaudate wing (ARTHRO: Insecta) A wing lacking a tail-like process.

ebolic see **hydrelactic**

eccentric a. [Gr. *ek*, out of; *kentron*, center] 1. Deviation from the regular. 2. (MOLL) Having an operculum with growth on one side of the nucleus only, and to one side of the center.

ecdemic a. [Gr. *ekdemos*, away from home] Disease brought into a region from outside; neither endemic nor epidemic.

ecdysial cleavage line see **epicranial suture**

ecdysial fluid see **molting fluid**

ecdysial glands see **prothoracic glands**

ecdysial membrane (ARTHRO: Insecta) A thin membrane formed from the lateral lamellae of the old procuticle that is tanned by the polyphenols and phenoloxidase associated with the new outer epicuticle during molting.

ecdysial tube (ARTHRO: Insecta) In some Diptera and Coleop-

tera, a simple cuticular tube formed around the old spiracle and through which the old spiracle and trachea are pulled during molting.

ecdysis n., pl. **-ses** [Gr. *ekdysis*, getting out of] Molting, the process of shedding cuticle or exoskeleton. see **molt**, **apolysis**, **endysis**.

ecdysone n. [Gr. *ekdysis*, getting out of] (ARTHRO) A hormone that initiates changes in cells associated with molting, produced by a secretion of the prothoracotrophic hormone from the median neurosecretory cells of insects, and the Y-gland of crustaceans.

ecdysotrophic cycle (ARTHRO) Alternation of blood feeding and molting in mites, ticks, and hemimetabolous insects.

ecesis n. [Gr. *ek*, out of; *-esis*, denotes action] The migration of organisms into a new habitat.

echinate a. [Gr. *echinos*, spiny] Set with prickles; spinous; having some or all of the surface of the body covered with spines.

echinating spicule (PORIF) A megasclere that protrudes from a fiber or spicule tract.

Echinodermata, echinoderms n.; n.pl. [Gr. *echinos*, spiny; *derma*, skin] Phylum of marine coelomate animals with basic pentaradial symmetry in the adult, with a calcareous endoskeleton and a water vascular system.

echinopaedium see **dipleurula**

echinostome cercaria (PLATY: Trematoda) A cercaria having a collar with spines around the margin of the head and a long slender tail.

echiopluteus larva Sea-urchin larva.

Echiura, echiurans n.; n.pl. [Gr. *echis*, serpent; *oura*, tail] A phylum of soft-bodied, unsegmented, sac-like almost exclusively marine invertebrates with a large fluid-filled body cavity; related to Sipuncula and somewhat resembling them.

ecitophile a. [NL. *Eciton*, a genus of ants; L. *philos*, loving] (ARTHRO: Insecta) An obligatory guest of the tribe Ecitonini.

ecium see **zoecium**

- eclectic** a. [Gr. *eklektos*, selected] Selecting from various systems, doctrines, or sources.
- eclipsed antigen** An antigen borne by a parasite that is common to both the host and the parasite, genetically of parasitic origin.
- eclosion** n. [F. *eclosion*, emerge] The act or process of emerging from the egg or pupal case; to eclose.
- ecoclimate** a. [Gr. *oikos*, house; *klima*, region] Total of meteorological factors within a habitat.
- ecocline** n. [Gr. *oikos*, house; *klinein*, to slope] Continuous gradient of characters in response to variation in ecological conditions.
- ecogeographical rules** The formulation of regularities in geographic variation of characters correlated with environmental conditions.
- ecological isolation** Interbreeding between two or more sympatric populations is prevented by mating in different ecological niches. see **geographic isolation/barriers isolate**.
- ecology** n. [Gr. *oikos*, house; *logos*, discourse] The study of interrelationships among organisms themselves and their environment; bionomics; hexicology; mesology; poikology.
- ecomorph** n. [Gr. *oikos*, house; *morphe*, form] A growth form caused by a special environment; infraspecific variation.
- ecomorphic** a.
- economic density** The number of individuals per unit of habitat space; also called specific density.
- ecoparasite** see **ecosite**
- ecophene** n. [Gr. *oikos*, house; *phainein*, to appear] The range of phenotypes produced by one genotype within the limits of the habitat under which it is found in nature.
- ecophenotype** n. [Gr. *oikos*, house; *phainein*, to appear; *typos*, type] A nongenetic modification of the phenotype by specific ecological conditions, esp. habitat variation. **ecophenotypic** a.
- ecosite** n. [Gr. *oikos*, house; *sitos*, food] A microparasite to which its host is immune under normal conditions; eco-

parasite.

ecospecies n. [Gr. *oikos*, house; L. *species*, kind] A group of populations in an ecological niche that are among themselves, and with other ecospecies, capable of interbreeding without loss of fertility or vigor in the offspring; an ecotype.

ecosystem n. [Gr. *oikos*, house; *systema*, an ordered arrangement of things] Any entity or natural unit that includes living and non-living parts interacting to produce a stable system in which the exchange of materials between the living and non-living parts follows circular paths; the biotic community and its habitat.

ecotone n. [Gr. *oikos*, house; *tonos*, stretch, brace] A transition area between two adjacent ecological communities or biomes; usually containing many organisms from both, as well as some characteristic of (sometimes restricted to) the ecotone.

ecotype n. [Gr. *oikos*, house; *typos*, type] A local race arising as a result of genotypical response to a particular habitat; an ecospecies.

ecsoma n. [Gr. *ek*, out of; *soma*, body] (PLATY: Trematoda) The telescoping posterior part of the body.

ectad adv. [Gr. *ektos*, outside; L. *ad*, toward] From within toward the exterior. see **entad**.

ectadenia n.pl. [Gr. *ektos*, outside; *aden*, gland] (ARTHRO: Insecta) A male accessory gland, ectodermal in origin; ectodene glands. see **mesadenia**.

ectal a. [Gr. *ektos*, outside] Exterior; outer surface of the body or body parts.

ectally adv. [Gr. *ektos*, outside] Near to or towards the body wall. see **ental**.

ectoblast n. [Gr. *ektos*, outside; *blastos*, bud] The outer wall of a cell; ectoderm; epiblast.

ectochone n. [Gr. *ektos*, outside; *chone*, funnel-shaped hollow] (PORIF) A funnel-shaped chamber into which the ostia empty.

ectocochleate a. [Gr. *ektos*, outside; L. *cochlea*, spiral] (MOLL) An externally coiled shell, as in Nautiloidea.

- ectocommensal** n. [Gr. *ektos*, outside; L. *cum*, together; *mensa*, table] A commensal symbiont that lives on the outer surface of its host.
- ectocrine** a. [Gr. *ektos*, outside; *krinein*, to separate] Any chemical released into the environment that includes allelochemicals, pheromones, foods, and respiratory gases.
- ectocyst** n. [Gr. *ektos*, outside; *kystis*, bladder] (BRYO) The outer layer of the zoecium.
- ectoderm** n. [Gr. *ektos*, outside; *derma*, skin] The outer embryonic layer from which the epidermis of the body wall and nerve tissue are derived. **ectodermal** a. see **choanoderm**.
- ectognathous condition** Mouthparts external to the head, not enclosed; ectotrophous. see **entognathous condition**.
- ectohormones** see **pheromone**
- ectolecithal** a. [Gr. *ektos*, outside; *lekithos*, yolk of an egg] (PLATY: Turbellaria) Having cleavage modified by a special condition whereby yolk is stored in separate cells surrounding the oocytes as opposed to entolecithal as seen in other animal phyla whose eggs contain yolk.
- ectomere** n. [Gr. *ektos*, outside; *meros*, part] A blastomere forming the ectoderm.
- ectomesenchyme** n. [Gr. *ektos*, outside; *mesos*, middle; *chyma*, anything poured] 1. A structure with organized cells that functions in epithelial interfaces, muscular sheets, and neuroid networks. 2. (PORIF) All components except for the flagellated cells.
- ectomesoderm** n. [Gr. *ektos*, outside; *mesos*, middle; *derma*, skin] Mesoderm derived chiefly from the ectoderm during early embryology of animals; forming mesenchyme predominantly in Porifera, Ctenophora and in certain mollusks and annelids.
- ectoneural** a. [Gr. *ektos*, outside; *neuron*, nerve] (ECHINOD) Pertaining to the oral part of the nervous system (sensory and motor).
- ectooecium** n. [Gr. *ektos*, outside; *oikos*, house] (BRYO) The outer layer of the oecial wall; usually calcified.

- ectoparasite** n. [Gr. *ektos*, outside; *para*, beside; *sitos*, food] A parasite feeding on a host from the exterior. **ectoparasitic** a.
- ectophagous** a. [Gr. *ektos*, outside; *phagein*, to eat] Feeding externally.
- ectophallus** n. [Gr. *ektos*, outside; *phallos*, penis] (ARTHRO: Insecta) The outer phallic wall. see **endophallus**.
- ectopic** a. [Gr. *ek*, out of; *topos*, place] 1. Occurring in an abnormal place. 2. A parasite in an organ in which it does not normally live. see **entopic**.
- ectoplasm** n. [Gr. *ektos*, outside; *plasma*, to form or mold] An external or cortical layer of protoplasm in a cell. see **endoplasm**.
- ectoproct** n. [Gr. *ektos*, outside; *proktos*, anus] (ARTHRO: Insecta) In certain Neuroptera, a plate of the anal segment, including the fused anoproct, cerci and catoproct.
- Ectoprocta, ectoprocts** see **Bryozoa**
- ectoptygma** see **serosa**
- ectosomal spicule** (PORIF) A spicule occurring in the ectosomal region.
- ectosome** n. [Gr. *ektos*, outside; *soma*, body] (PORIF) The outer region that consists of dermal membrane and subdermal spaces, but is not supported by any special skeleton; pinacoderm.
- ectospermalege** n. [Gr. *ektos*, outside; *sperma*, seed; *legein*, to gather] (ARTHRO: Insecta) In females, one to two cuticular pouches, variable in position, functioning for the reception of the male clasper and penis. see **Ribaga's organ**.
- ectostracum** n. [Gr. *ektos*, outside; *ostrakon*, shell] (ARTHRO: Chelicerata) 1. In acarology, the outermost layer of the chitonostracum layer that when sclerotized is normally colored; stains with acid dyes. see **chitonostracum**. 2. The middle layer of integument of arachnids.
- ectosymbiont(t)** n. [Gr. *ektos*, outside; *symbiosis*, life together; *on*, being] A symbiont that lives on or among its hosts. see **endosymbiont**.

ectothermal n. [Gr. *ektos*, outside; *therme*, heat] The body temperature is determined by that of the environment; poikilothermal.

ectotrophous see **ectognathous condition**

ectozoon n. [Gr. *ektos*, outside; *zoon*, animal] An ectoparasite.

ecumenical a. [Gr. *oikoumenikos*, world-wide] World-wide in extent; cosmopolitan. see **pandemic**.

edaphic a. [Gr. *edaphos*, soil] Relating to, or belonging to the soil or substratum.

edaphic factors The influence of soil properties on organisms.

edaphon n. [Gr. *edaphos*, soil] Soil flora and fauna. see **geobios**.

edeagus see **aedeagus**

edentate a. [L. *ex*, without; *dens*, tooth] Being devoid of teeth or folds. **edentulous** a.

edge effect The tendency to have greater variety and density of organisms in the boundary zone between communities.

editum n. [L. *editus*, high, lofty] (ARTHRO: Insecta) In male Lepidoptera, a small, rounded, hairy prominence arising from the harpe.

edoeagus see **aedeagus**

effector a. [L. *efficere*, to execute] A structure specialized for the activation of a particular form of response, i.e., movement or secretion.

effferent a. [L. *ex*, out of; *ferre*, to carry] Conducting or carried outward; discharging. see **afferent**.

effferent channels (ARTHRO: Crustacea) Passageways through which water moves away from gills and out of the branchial region.

effferent nerve A nerve that conducts from a nerve center toward the periphery; the axon of a motor neuron that conducts impulses to the effectors.

effete a. [L. *effetus*, exhausted] No longer capable of fertility; barren.

- effluvium** n.; pl. **-via** [L. *ex*, out of; *fluere*, to flow] A noxious smell or invisible emanation.
- effuse** a. [L. *ex*, out of; *fluere*, to flow] (MOLL: Gastropoda) Pertaining to the condition of the shell aperture when the margin is interrupted by a short spout for a siphonal outlet.
- eflected** a. [L. *ex*, out of; *flectere*, to bend] Bent outward somewhat angularly.
- egest** v.t. [L. *egestus*, discharged] To eliminate solid material from a cell or from the enteron.
- egesta** n.pl. [L. *egestus*, discharged] The total amount of substances and fluids discharged from the body.
- egg-burster** (ARTHRO: Insecta) Various cuticular structures that aid in hatching by rupturing the egg membranes; egg tooth; hatching spine; ruptor ovi; hatching tooth.
- egg-calyx** (ARTHRO: Insecta) The dilation of the oviduct at the opening of the ovarian tubes.
- egg-cap** A cap, or operculum joined to the body of an egg along a line of weakness that facilitates hatching.
- egg-case** The case or covering of an egg or egg-mass.
- egg funnel** see **female funnels**
- egg guide** (ARTHRO: Insecta) A median caudal process of the subgenital plate.
- egg-membrane** Internal egg envelope or lining, thin, tough, flexible and colorless.
- egg-pod** (ARTHRO: Insecta) Frothy secretions that form the egg-mass of grasshoppers and the gelatinous sheath of dipteran eggs.
- egg-pouch** see **ootheca**
- egg-tooth** see **egg-burster**
- egg-tube** see **ovarian tube**
- egg-valve** see **egg guide**
- ejaculate** n. [L. *ex*, out of; *jacere*, to throw] Emitted seminal fluid; ejected fluid from the body.
- ejaculatory bulb** (ARTHRO: Insecta) 1. In Lepidoptera, the distal part of the ejaculatory duct, cephalad of the scler-

rotized aedeagus. 2. In Diptera, a syringe-like, strongly-muscled structure, of the ejaculatory duct.

ejaculatory duct The terminal portion of the male sperm duct.

elabrate a. [L. *ex*, out of; *labrum*, lip] Without a labrum.

elaphocaris larva (ARTHRO: Crustacea) A third protozoal stage or postnaupliar stage, leading to the acathosoma (mysis) stage.

elastes n.pl. [Gr. *elastikos*, rebounding] (ARTHRO: Insecta) The abdominal flexion organs of the bristletail apterygote insects.

elastic a. [Gr. *elastikos*, rebounding] Capable of resuming the original shape; flexible.

elastic membrane (MOLL) A membrane between the radular membrane and the pharyngeal epithelium, secreted by the latter and found in the part of the radula which is in use.

elate a. [L. *elatus*, high] Elevated; lifted up.

elater n. [Gr. *elater*, driver] (ARTHRO: Insecta) In Collembola, the furcula or springing organ.

elateriform larva (ARTHRO: Insecta) A slender, heavily sclerotized larva with short thoracic legs, and with few body hairs; resembles a wireworm.

Elatobranchiata see **Bivalvia**

Elatocephala see **Bivalvia**

elattostase n. [Gr. *elotton*, smaller; *stasis*, position] (ARTHRO: Chelicerata) A rare stage of prelarva or larva in which the mouthparts are subject to regression in that though the mouthparts are intact, they are unable to function, or the lack of chelicerae and palps, closure of the mouth, and regression of the pharynx. **elattostasic** a. see **hypopus**.

elbowed antenna (ARTHRO: Insecta) An antenna with the first segment elongated and the remaining segments coming off the first segment in an obtuse angle; a geniculate antenna.

electrotropism, electropism n. [Gr. *elektron*, amber; *trope*, turn] Movement of an organism as determined by the direction of an external electric current; galvanotropism.

leocyte, elaeocyte n. [Gr. *elaion*, any oil; *kytos*, container]

(ANN) Free fatty globules, yellow or transparent, inodorous or evil-smelling, in the coelom; emitted by the dorsal pores when the worm is irritated.

leutherorhabdic a. [Gr. *eleutheros*, free; *rhabdos*, rod] (MOLL: Bivalvia) Pertaining to ctenidia with each filament having approximately two ciliated disks that interlock holding the filaments in position; junctions by ciliated disks. see **synaptorhabdic**.

leutherotogony n. [Gr. *eleutheros*, free; *gonos*, offspring] (ARTHRO: Insecta) In embryology, having the back formed without participation of the membranes.

elevated a. [L. *elevatus*, raised] High in proportion to diameter; higher than surrounding areas.

leutherozoic a. [Gr. *eleutheros*, free; *zoe*, life] Free-living.

elevator see **levation**

elimination n. [L. *eliminare*, to turn out of doors] The casting out or discharging of excretory waste or foreign substances from the body.

elinguata n. [L. *ex*, out of; *lingua*, tongue] (ARTHRO: Insecta) Having maxillae and labium united at the base. see **synista**.

elite n. [MF. *elit*, to choose] (ARTHRO: Insecta) A member of a colony showing greater than average initiative and activity.

ellipsoidal see **elliptical**

elliptical a. [Gr. *elleipsis*, lack, defect] Oblong with rounded ends, oval in shape.

elongate v. [L. *elongatus*, prolonged] To lengthen or stretch out.

elongate antenna (ARTHRO: Insecta) An antenna equaling the body length.

elute a. [L. *ex*, out; *lutus*, washed] With barely distinguishable marking.

elytra pl. of **elytron**

elytral ligula (ARTHRO: Insecta) In beetles, a tongue and groove joint at the midline of the elytra which meet and hold them together.

- elytriform** a. [Gr. *elytron*, sheath; L. *forma*, shape] Shaped like or resembling an elytron.
- elytrin** n. [Gr. *elytron*, sheath; L. *-ine*, compound] (ARTHRO: Insecta) In Coleoptera, the chitinized composition of the body surface covering.
- elytron** n.; pl. **-tra** [Gr. *elytron*, sheath] 1. (ANN: Polychaeta) The numerous modified setae in the form of scales or plates. 2. (ARTHRO: Insecta) A thickened, leathery, or horny fore wing or wing cover of certain insects. see **hemelytron**. 3. Tegmen.
- elytrophore** n. [Gr. *elytron*, sheath; *phoreus*, bearer] (ANN) A process on the prostomium that bears an elytron.
- emandibulate** a. [L. *ex*, out of; *mandibula*, jaw] Lacking well developed mandibles.
- emarginate** a. [L. *emarginatus*, notched at the apex] 1. Having a margin or apex notched or indented. 2. (MOLL) Having the margin of the outer lip notched or variously excavated.
- embolium** n.; pl. **-lia** [Gr. *embolos*, wedge] (ARTHRO: Insecta) 1. In the hemipteran hemeletron, the narrow costal part of a wing, separated from the rest of the corium by a suture. 2. A basal enlargement in the fore wing. **embolar** a.
- embolus** n. [Gr. *embolos*, wedge] (ARTHRO: Chelicerata) 1. The distal division of the palpus of some spiders. 2. The intromittent portion of the male copulatory organ, containing a portion of the ejaculatory duct of spiders.
- emboly** n. [Gr. *embole*, anything inserted] The formation of a gastrula by the process of invagination.
- embossed** a. [ME. *embossen*, to hide] Ornamented with a raised pattern.
- embryo** n.; pl. **embryos** [Gr. *embryon*, fetus] A young organism before emerging from the egg, or the body of the mother.
- embryogenesis** n. [Gr. *embryon*, fetus; *genesis*, beginning] Formation and development of an embryo from an egg; embryogeny.
- embryology** n. [Gr. *embryon*, fetus; *logos*, discourse] The

study of the formation, early growth and development of living organisms.

embryonic a. [Gr. *embryon*, fetus] 1. Pertaining to an embryo. 2. (MOLL: Bivalvia) Pertaining to a larval stage, as the free-swimming embryo of an oyster.

embryonic fission (BRYO) Division of the first embryo into secondary and tertiary embryos. see **polyembryony**.

embryonic shell (GASTRO) That part of the shell formed before hatching.

embryophore n. [Gr. *embryon*, fetus; *phoreus*, bearer] 1. (ENTO) The vestibular wall anterior to the anal cone to which the stalks of the eggs and embryos are attached. 2. (PLATY: Cestoda) The protective shell covering the developing onchosphere of some tapeworms.

emendation n. [L. *emendatus*, corrected] In nomenclature, an intentional change of the spelling of a previously published zoological name.

emergence n. [L. *emergere*, to come up] (ARTHRO: Insecta) The act of the adult winged insect leaving the pupal case, cocoon, or the last nymphal skin.

Emery's rule (ARTHRO: Insecta) The dulotic ants and the parasitic ants, both temporary and permanent, that generally originate from closely related forms that serve them as hosts.

emigration n. [L. *emigrare*, to move out] Moving from one permanent nesting area to another.

eminence n. [L. *eminens*, projecting] A ridge or projection on a surface.

emmet n. [ME. *emete*, ant] (ARTHRO: Insecta) An ant.

empodial hair (ARTHRO: Insecta) A bristle or hair on the tarsus or tibia of scale insects. see **empodium**.

empodium n.; pl. **-dia** [Gr. *en*, in; *pous*, foot] (ARTHRO: Insecta) A median bristle-, spine- or lobe-like process arising ventrally at the apex of the last tarsal segment, usually from the unguitactor plate. see **arolium**, **digitules**.

enamel n. [OF. *esmaillier*, to coat with enamel] (MOLL: Gastro-poda) The glossy substance which forms the inductura of

the shell.

enantiomorphic a. [Gr. *enantios*, opposite; *morphe*, form] Alike but contraposed as a mirror image.

enarthrosis n. [Gr. *en*, in; *arthron*, joint] An articulation; a ball and socket joint.

encapsulation n. [Gr. *en*, in; L. dim. *capsa*, box] 1. Enclosed in a capsule or membrane. 2. An animal host surrounding and walling off internal parasites; capsules often involve blood cells, or melanin formation.

encephala a. [Gr. *encephalos*, brain] (MOLL) Pertaining to bearing a head and usually protected by a spiral shell.

encephalon n. [Gr. *encephalos*, brain] The brain.

encrusting colony (BRYO) A colony in which most individuals are attached to the substrate.

encyst v.t. [Gr. *en*, in; *kystis*, bladder] To form a cyst, or become enclosed within. see **excyst**.

endemic a. [Gr. *endemos*, native] 1. Confined to a given region; indigenous, native. 2. Any disease occurring at the normal or expected level. see **epidemic**, **pandemic**.

end-hook (ARTHRO: Insecta) In Odonata, a small hook at the inner border of the lateral lobes of the labium.

endite n. [Gr. *endon*, within] 1. The inner lobe of any limb segment. 2. (ARTHRO: Chelicerata) The plate borne by the coxa of the pedipalps of most spiders, that functions as a crushing jaw. 3. (ARTHRO: Crustacea) The inwardly (medially) directed lobe of the precoxa, *coxa*, *basis*, or ischium.

endite lobes (ARTHRO: Insecta) The lacinia and galea on the inner apical angle of the stipes.

endobiotic a. [Gr. *endon*, within; *bios*, life] Living in the cells or tissues of another living organism. see **exobiotic**.

endoblast see **endoderm**

endocardium n. [Gr. *endon*, within; *kardia*, heart] The membrane lining the inner surface of the heart.

endochorion n. [Gr. *endon*, within; *chorion*, membrane] The inner layer of the chorion of an egg shell. see **exochorion**.

endocoele, **endocoel** n. [Gr. *endon*, within; *koilos*, hollow]

(CNID: Anthozoa) 1. Situated on the inner-wall (visceral side) of the coelom. 2. Part of a gastrovascular cavity between paired mesenteries. **endocoelar** a. see **exocoelae**.

endocommensal n. [Gr. *endon*, within; L. *cum*, with; *mensa*, table] A commensal symbiont that lives inside its host.

endocranium n. [Gr. *endon*, within; *kranion*, skull] The inner surface of the cranium.

endocrine glands Ductless glands which produce internal hormonal secretions that are released directly into the blood or hemolymph. see **exocrine glands**.

endocrinology n. [Gr. *endon*, within; *krinein*, to separate; *logos*, discourse] Study of endocrine glands and secretions and their various effects, e.g., molting, metamorphosis and oocyte production.

endocuticle, endocuticula n. [Gr. *endon*, within; L. dim. *cutis*, skin] The innermost softer, elastic layer of the cuticle.

endocyclic a. [Gr. *endon*, within; *kyklos*, circle] (ECHINOD: Echinoidea) Pertaining to a test with rounded profile, peristome and periproct central at the oral and aboral poles respectively; periproct encircled by apical system of plates.

endocyst n. [Gr. *endon*, within; *kystis*, bladder] (BRYO) A soft layer lining a zooid; used to include both epidermis and peritoneum or peritoneum alone.

endocytosis n. [Gr. *endon*, within; *kytos*, container] Ingestion of particulate matter or fluid by phagocytosis or pinocytosis.

endoderm n. [Gr. *endon*, within; *derma*, skin] 1. The innermost cell layer of the embryo forming the epithelium of the archenteron, endoblast, entoderm, and hypoblast. 2. (CNID) Layer of cells lining the gastrovascular cavity. 3. (PORIF) see **pinacoderm**.

endodyogeny n. [Gr. *endon*, within; *dyas*, two; *genos*, offspring] The formation of only two daughter cells surrounded by their own membrane, while still in the mother cell. see **endopolyogeny**.

endoenzymes n.pl. [Gr. *endon*, within; *en*, in; *zyme*, yeast] Intracellular enzymes.

- endogamy** n. [Gr. *endon*, within; *gamos*, marriage] Inbreeding; sexual reproduction in which mating partners are closely related. see **exogamy**, **autogamy**.
- endogastric** a. [Gr. *endon*, within; *gaster*, stomach] (MOLL: Gastropoda) Pertaining to the normal adult coiled so as to extend backward from the aperture over the extruded head-foot mass.
- endogean** a. [Gr. *endon*, within; *gaia*, the earth] 1. Interstitial soil dwellers. 2. (ANN: Oligochaeta) Earthworms dwelling within the soil. see **epigean**, **hypogean**.
- endogenous** a. [Gr. *endon*, within; *genes*, producing] Pertaining to development from within; internal origin. **endogeny** n. see **exogenous**.
- endognath, endognathite** n. [Gr. *endon*, within; *gnathos*, jaw] (ARTHRO: Crustacea) The endopod (inner and principal branch) of the maxilliped.
- endolabium** n. [Gr. *endon*, within; L. *labium*, lip] (ARTHRO) The inner surface of the labium; the well developed hypopharynx.
- endolecithal** see **entolecithal**
- endolymph** n. [Gr. *endon*, within; L. *lymphā*, water] (MOLL: Cephalopoda) The fluid in the inner sac of the statocyst of Octopods and Vampyroteuthis ; in squid and cuttlefish, the only fluid filling the single walled statocyst sac.
- endolysis** n. [Gr. *endon*, within; *lyein*, to dissolve] Dissolution of the cytoplasm of a cell.
- endomembrane** n. [Gr. *endon*, within; L. *membrana*, skin] Membrane inside a cell; endoplasmic reticulum, golgi bodies, vesicles and other structures.
- endomesoderm** n. [Gr. *endon*, within; *mesos*, middle; *derma*, skin] Mesoderm derived from the endoderm during embryology of animals.
- endomitosis** n.; pl. **-ses** [Gr. *endon*, within; *mitos*, thread] Mitosis within the nuclear envelope without nuclear or cytoplasmic division.
- endoneurium** n. [Gr. *endon*, within; *neuron*, nerve] Supporting fibers within a nerve.

- endoecium** n. [Gr. *endon*, within; *oikos*, house] (BRYO) The inner layer of the oecial wall, usually membranous.
- endoparamere** n. [Gr. *endon*, within; *para*, beside; *meros*, part] (ARTHRO: Insecta) The lamina phalli of Caelifera.
- endoparasite** n. [Gr. *endon*, within; *para*, beside; *sitos*, food] A parasite that lives inside its host. **endoparasitic** a.
- endophagy** n. [Gr. *endon*, within; *phagein*, to eat] The internal feeding of endoparasites.
- endophallic cavity** (ARTHRO: Insecta) In male Ensifera, the cavity into which the gonopore opens; for Caelifera, see **spermatophore sac**.
- endophallus** n. [Gr. *endon*, within; *phallos*, penis] (ARTHRO: Insecta) The inner wall, sac or tube of the aedeagus, which is a continuation of the ejaculatory duct.
- endophragm** n. [Gr. *endon*, within; *phragma*, partition] (ARTHRO: Crustacea) In some Decapoda, a wall formed by union of opposed apodemes (cephalic and thoracic) forming part of the endoskeleton; an arthrophragm.
- endophragmal skeleton** (ARTHRO: Crustacea) A complex internal structure composed of fused apodemes, providing the framework for muscle attachment.
- endophytic** a. [Gr. *endon*, within; *phyton*, plant] Living within the tissues of plants.
- endophytic oviposition** (ARTHRO: Insecta) In certain Odonata a form of oviposition in which they insert their eggs by making slits in plants or mud.
- endopinacocyte** n. [Gr. *endon*, within; *pinax*, tablet; *kytos*, container] (PORIF) Cells that form the internal epithelium lining the canals.
- endoplasm** n. [Gr. *endon*, within; *plasma*, to form or mold] The inner or central part of the cytoplasm of a cell. see **ectoplasm**.
- endoplasmic reticulum** A network of double membranes continuous with the cell membrane and nuclear membrane; if lined with ribosomes called rough, if unlined called smooth.
- endopleural ridge** see **pleural ridge**

endopleurite n. [Gr. *endon*, within; *pleuron*, side] 1. (ARTHRO) A sclerotized infolding between pleurites. 2. (ARTHRO: Crustacea) In Decapoda, a lateral apodeme of the endoskeleton.

endoplica see **implex**

endopod(ite) n. [Gr. *endon*, within; *pous*, foot] (ARTHRO: Crustacea) The inner ramus of a biramous appendage; the main shaft of that appendage. see **exopodite**.

endopolygeny n. [Gr. *endon*, within; *polys*, many; *genos*, offspring] Formation of many daughter cells, each surrounded by its own membrane, while still in the mother cell. see **endodyogeny**.

endopolyloid n. [Gr. *endon*, within; *polys*, many; *aploos*, onefold] Cells whose chromosome number has been increased by endomitosis.

Endoprocta, endoprocts see **Entoprocta**

Endopterygota n. [Gr. *endon*, within; *pteron*, wing] (ARTHRO: Insecta) In some classifications a division of insects with complete metamorphosis. see **Holometabola**; **Exopterygota**.

endopterygote n. [Gr. *endon*, within; *pteron*, wing] (ARTHRO: Insecta) A condition of internal wing bud development, or any insect secondarily wingless but derived from such an ancestor; associated with holometabolous insects.

endopuncta n.; pl. **-ae** [Gr. *endon*, within; L. *punctus*, point] (BRACHIO) An internal cavity in the shell which does not penetrate all the way through; caeca extend into these depressions. see **pseudopunta**.

endosiphuncle n. [Gr. *endon*, within; *siphon*, pipe] (MOLL: Cephalopoda) A tube leading from the protoconch to the siphuncle.

endoskeleton n. [Gr. *endon*, within; *skeleton*, dried body] A skeleton or internal supporting structure of the body or an apodeme for muscle attachment. **endoskeletal** a. see **exoskeleton**.

endosmosis n. [Gr. *endon*, within; *osmos*, a pushing] Osmotic diffusion toward the inside.

endosome n. [Gr. *endon*, within; *soma*, body] (PORIF) All areas of a sponge except for the ectosomal structures.

endospine see **papilla**

endosternal ridge (ARTHRO: Insecta) A Y-shaped furca of higher insects, formed by the two apophyses of the eusterium arising together in the midline and only separating internally.

endosternite n. [Gr. *endon*, within; *sternon*, chest] 1. (ARTHRO) In various arthropods, an internal sclerotized ridge, plate or other process of the cephalic exoskeleton that functions for muscle and connective tissue attachment; sometimes called entosternite. 2. (ARTHRO: Crustacea) *a.* In Notostraca, the mesodermal plate beneath the anterior portion of the alimentary canal. *b.* In certain Decapoda, a firm calcareous plate of the anterior thorax between the nerve cord and alimentary canal. 3. (ARTHRO: Insecta) see **apophyses**.

endostome n. [Gr. *endon*, within; *stoma*, mouth] (ARTHRO: Crustacea) In some brachyuran Decapoda, a platelike part of the buccal frame; a palate.

endostracum n. [Gr. *endon*, within; *ostrakon*, shell] 1. (ARTHRO: Chelicerata) For arachnids, see **epiostracum**. 2. (ARTHRO: Insecta) The endocuticle. 3. (MOLL) The inner layer of a shell.

endostyle n. [Gr. *endon*, within; *stylos*, pillar] (MOLL) A special gland on the ctenidial axis, that produces mucus used for transport of particles to the mouth.

endosymbiont(t) n. [Gr. *endon*, within; symbiosis, life together; *on*, being] An internal symbiont. see **ectosymbiont**.

endotergite see **phragma**

endotheca n.; pl. **-thecae** [Gr. *endon*, within; *theke*, case] The inner wall of a theca.

endothermal see **homoiothermal**

endothorax n. [Gr. *endon*, within; *thorax*, chest] Internal structure or processes of a thorax.

endotoichal oecium (BRYO) An oecium which appears to be

inside the distal zoid, but opens separately to the exterior.

endotokia matricida see **matricidal hatching**

endotoky n. [Gr. *endon*, within; *tokos*, birth] A form of reproduction in which the eggs develop within the body of the mother. see **exotoky**.

endotoxin n. [Gr. *endon*, within; *toxikon*, poison] A substance produced by microorganisms which is confined within the microbial cell. see **exotoxin**.

endotrachea n. [Gr. *endon*, within; *trachia*, windpipe] (ARTHRO: Insecta) The inner surface or lining of the tracheal tubes. see **intima**.

endozoic a. [Gr. *endon*, within; *zoon*, animal] Living within or passing through an animal. see **entozoic**, **epizoic**.

endozone n. [Gr. *endon*, within; *zone*, belt] (BRYO: Stenolaeamata) The inner parts of zooids in a colony with weak walls and skeletons.

endozooidal oecium (BRYO) An oecium opening below the operculum of the parent zoid.

endysis n. [Gr. *endysis*, putting on] The development of a new cuticle. see **molt**.

energid n. [Gr. *energos*, active] Nucleated cytoplasmic aggregations containing all the apparatus necessary for life.

enervose a. [L. *ex*, out of; *nervus*, sinew] 1. Without veins. 2. (ARTHRO: Insecta) Lacking wing veins.

engraved a. [OF. *engraver*, cut] Having superficial irregular impressed lines; exsculptate.

ennomoclones n.pl. [Gr. *ennea*, nine; *klon*, twig] (PORIF) Megasclere spicules of the dicranoclone or sphaeroclone type.

ensate a. [L. *ensis*, sword] Ensiform; sword-shaped.

ensheathed a. [Gr. *en*, in; A.S. *sceath*, case] 1. Enclosed by or inserted as in a sheath. 2. During development, cuticle preceding the molt is retained into the next stage.

ensiform a. [L. *ensis*, sword; *forma*, shape] Sword-shaped; two-edged and tapering toward a point.

entad adv. [Gr. *entos*, within; L. *ad*, toward] Extending in-

wardly from the exterior; internally. see **ectad**.

ental a. [Gr. *entos*, within] Away from the body wall, toward the center of the body. see **ectal**.

entelechy n.; pl. **-chies** [Gr. *en*, in; *telos*, end; *echein*, to hold] 1. An actuality or realization as opposed to potentiality. 2. A vital force or agent directing growth and life.

enteric a. [Gr. *enteron*, intestine] Pertaining to the enteron or alimentary canal.

enterocoel, **enterocoele** n. [Gr. *enteron*, intestine; *koilos*, hollow] Coelom that arises as an outpocketing of the archenteron. **enterocoelic** a.

enterocoely n. [Gr. *enteron*, intestine; *koilos*, hollow] The process of forming the perivisceral cavity.

enteroic a. [Gr. *enteron*, intestine] (ANN) Pertaining to the excretory system when it opens into the gut lumen. see **exoic**.

enteron n. [Gr. *enteron*, intestine] The digestive cavity of multicellular animals.

enteronephric a. [Gr. *enteron*, intestine; *nephros*, kidney] (ANN: Oligochaeta) Having nephridia opening into the gut lumen. see **exonephric**.

enterosegmental organs (ANN: Oligochaeta) In Moniligastrida, paired structures containing a bundle of glandular tubes bound together by a delicate connective tissue investment on the dorsal face of the post-gizzard gut.

enterostome n. [Gr. *enteron*, intestine; *stoma*, mouth] (CNID) Aboral opening of the actinopharynx leading to the gastrovascular cavity.

enterozoa see **entozoa**

entire a. [L. *integer*, complete] 1. Without emargination; having a smooth margin. 2. (ARTHRO: Insecta) Pertaining to a wing with an unbroken margin. 3. (MOLL: Gastropoda) When the aperture margin is uninterrupted by a siphonal canal, sinus or crenulation.

entoblast see **endoderm**

entobranchiate a. [Gr. *entos*, within; *branchia*, gills] Having

internal gills.

entocodon n. [Gr. *entos*, within; *kodon*, bell] (CNID: Hydrozoa) The primordium of the subumbrella in the development of medusae from the gonophore.

entoderm see **endoderm**

entognathous condition (ARTHRO: Insecta) In Collembola, Diplura and Protura, the mouthparts which lie in a cavity within the head. see **ectognathous condition**.

entolecithal a. [Gr. *entos*, within; *lekithos*, yolk of an egg] (PLATY: Turbellaria) A type of egg where the yolk is stored within the oocytes as opposed to ectolecithal; sometimes referred to as endolecithal.

entoloma n. [Gr. *entos*, within; *loma*, fringe] (ARTHRO: Insecta) The inner margin of a wing.

entomiasis n. [Gr. *entomon*, insect; *-iasis*, a diseased condition] A lesion in the tissues of animals caused by insects.

entomochoric a. [Gr. *entomon*, insect; *chorein*, to spread] Dispersed by insects, such as fungal spores and nematodes. **entomochore**, **entomochory** n.

entomogenous a. [Gr. *entomon*, insect; *genee*, producing] Pertaining to micro-organisms growing in or on the bodies of insects.

entomography n. [Gr. *entomon*, insect; *graphein*, to write] The description and life history of an insect.

entomolin see **chitin**

entomology n. [Gr. *entomon*, insect; *logos*, discourse] That branch of zoology dealing with insects.

entomoparasitic a. [Gr. *entomon*, insect; *para*, beside; *sitos*, food] Refers to insect parasites. see **entomogenous**, **entomophilic**, **entomophagous**.

entomophagous a. [Gr. *entomon*, insect; *phagein*, to eat] Insectivorous; the eating of insects or their parts.

entomophilic, **entomophilous** a. [Gr. *entomon*, insect; *philos*, loving] 1. Pertaining to associations between insects and plant microorganisms, protozoa, and nematodes. 2. Being pollinated by the agency of insects.

- entomophobia** n. [Gr. *entomon*, insect; *phobos*, fear] Having an abnormal fear of insects.
- entomophyte, entophyte** n. [Gr. *entomon*, insect; *phyton*, plant] A fungus living on or in the body of an insect. entomophytic a.
- entomosis** n. [Gr. *entomon*, insect; -osis suff. denoting a condition usually morbid] An insect borne disease.
- Entomostraca, entomostracan** n. [Gr. *entomon*, insect; *ostrakon*, shell] Formerly considered a single natural group of Crustacea including Brachiopoda, Ostracoda, Copepoda, Branchiura and Cirripeda which is no longer acceptable to systematists.
- entomotaxy** n. [Gr. *entomon*, insect; *taxis*, arrangement] The art of preserving and mounting insects.
- entomotomist** n. [Gr. *entomon*, insect; *temnein*, to cut] A student of entomotomy.
- entomotomy** n. [Gr. *entomon*, insect; *temnein*, to cut] The art of insect dissection; dealing with internal structures of insects.
- entomurochrome** n. [Gr. *entomon*, insect; *ouron*, urine; *chroma*, color] (ARTHRO: Insecta) The color pigments of the urine of insects.
- entoneural** a. [Gr. *entos*, within; *neuron*, nerve] (ECHINOD) Pertaining to the aboral ring and nerves.
- entoparasite** see **endoparasite**
- entopic** a. [Gr. *en*, in; *topos*, place] Occurring in the normal place. see **ectopic**.
- entopleuron** see **pleural apophysis**
- entoprocessus** n. [Gr. *entos*, within; L. *procedere*, to go forward] (ARTHRO: Insecta) In Neuroptera, a pair of lateral processes of the gonarcus.
- Entoprocta, entoprocts** n.; n.pl. [Gr. *entos*, within; *proktos*, anus] A small phylum of solitary or colonial animals, having a flame cell protonephridial excretory system and a looped intestine with both the mouth and anus opening within the circle of tentacles; formerly a class of Bryozoa.

entosaccal cavity (BRYO) That part of the body cavity containing the digestive and reproductive systems.

entosternite see **endosternite**

entosternum n.; pl. **-sterna** [Gr. *entos*, within; *sternon*, chest] (ARTHRO) The internal processes or system of processes of the sternum.

entotergum n. [Gr. *entos*, within; L. *tergum*, back] (ARTHRO: Insecta) A large V-shaped ridge of the thorax on the undersurface of the notum.

entothorax n. [Gr. *entos*, within; *thorax*, chest] (ARTHRO: Insecta) The apodemes or processes that extend inwardly from the sternal sclerites; an apophysis. see **endothorax**.

entotrophous see **entognathous condition**

Entotropha see **aptera**

entozoa n.pl., sing. **entozoon** [Gr. *entos*, within; *zoon*, animal] The internal parasites collectively. **entozoal** a., **entozoan** a. & n.

entozoic a. [Gr. *entos*, within; *zoon*, animal] Living within another animal; an internal parasite. see **endozoic**, **epizoic**.

enucleate v. [L. *ex*, out of; *nucleus*, kernel] 1. To remove an entire organ, etc. 2. To destroy or remove the nucleus of a cell.

envelope n. [OF. *enveloper*, wrap up] (ARTHRO: Insecta) A sheath surrounding the nest of a social wasp.

environment n. [F. *environ*, about] The totality of physical, chemical and biotic conditions surrounding an entire organism.

enzootic disease A disease which is constantly present in a population of lower animals, although usually at a low maintenance level.

enzyme n. [Gr. *en*, in; *zyme*, yeast] An organic catalyst produced by a living organism.

Eogaea n. [Gr. *eos*, dawn; *gaia*, earth] Seldom used zoogeographic term; including Africa, South America and Australia. see **Caenogaea**.

eoplasmatocyte n. [Gr. *eos*, dawn; *plasma*, formed or

molded; *kytos*, container] (ARTHRO: Insecta) A form of plasmatocyte with conspicuous acidophilic nucleus and light basophilic cytoplasm.

eoplasmatocytoid a. [Gr. *eos*, dawn; *plasma*, formed or molded; *kytos*, container; *eidos*, like] (ARTHRO: Insecta) A form of plasmatocyte intermediate to the eoplasmatocyte and microplasmatocyte.

eosinophil a. [Gr. *eos*, dawn; *philos*, loving] A polymorphonuclear leukocyte or other granulocytes whose cytoplasm has an affinity for eosin dye.

eosinophilia n. [Gr. *eos*, dawn; *philos*, loving] With an elevated eosinophil count in the circulating blood, resulting from chronic parasite infection or other diseases.

epacme n. [Gr. *epi*, upon; *akme*, top] The evolutionary phylogeny of a group of organisms before reaching its highest point.

epalbate a. [L. *ex*, out of; *palpus*, feeler] Lacking palpi; expalbate.

epandrium, epiandrium n.; pl. **-dria** [Gr. *epi*, upon; *aner*, male] (ARTHRO: Insecta) In male Diptera, the tergite of the 9th segment, maybe reduced or enlarged, sometimes bearing surstyli.

epaulet, epaulett n.; pl. **epaulets, epaulettes** [F. dim. *ep-aule*, shoulder] 1. (ARTHRO: Insecta) *a.* In Diptera, sclerites at the base of the costa. *b.* In Hymenoptera, the tegula. *c.* In Lepidoptera, the sclerotized separation of the tympanum from the membranous dorsoposterior portion of the epimeron, variable in shape between species; the nodular sclerite. 2. (CNID: Scyphozoa) Branched or knobbed processes of the oral arms. 3. (ECHINOD: Echinoidea) Crescentic ridges of cilia of the sea urchin nymph. 4. (NEMATA) A specialized shield-shaped band of cephalic cuticle, not to be confused with cordons.

epedaphic a. [Gr. *epi*, upon; *edaphos*, soil] Pertaining to, or dependent upon climatic conditions.

epharmonic a. [Gr. *epi*, upon; *harmonia*, a fitting together] Pertaining to the adaptation of an organism or species to its environment. **epharmony** n.

- epharmosis** n. [Gr. *epi*, upon; *harmonia*, a fitting together] The method of adaptation of organisms to a new environment.
- ephebic** a. [Gr. *epi*, upon; *hebe*, puberty] 1. Mature. 2. (ARTHRO: Insecta) The adult; between the neanic and gerontic stage; the winged adult stage. 3. (BRYO) Zooids laid down during the phase of astogenic repetition.
- ephemeral** n. [Gr. *ephermos*, living only a day] A short-lived animal species, especially insects.
- ephippium** n.; pl. ephippia [L. *ephippium*, saddle] (ARTHRO: Crustacea) Exuvia of some female cladocerans with one to several eggs enclosed, capable of withstanding desiccation; a vehicle of dispersal. **ephippial** a.
- ephyra** n.; pl. **ephyre**, **ephyrae**, **ephyrula** [Gr. *Ephyra*, name of a sea nymph] (CNID: Scyphozoa) A small free-swimming medusa arising by asexual division (transverse fission) of a strobila; a monodisk.
- epiandrous glands** (ARTHRO: Chelicerata) A group of glands found in most male spiders that add to the sperm web a small white mat on which the drop of sperm is deposited.
- epibenthos** n. [Gr. *epi*, upon; *benthos*, depth of the sea] The fauna of the sea bottom between low tide line and 100 fathoms.
- epibiont** see **epicole**
- epibiotic** a. [Gr. *epibionai*, to survive] 1. Endemic species that are relicts of former fauna. 2. Growing on the surface of other animals. see **hypobiotic**.
- epiblast** n. [Gr. *epi*, upon; *blastos*, bud] Ectoderm, the outer germ layer in early embryos; ectoblast.
- epiboly**, **epibole** n. [Gr. *epibole*, placing upon] The growth of one structure around another during embryonic development. **epibolic** a.
- epibranchial lobe or area** (ARTHRO: Crustacea) In Decapoda, the anterior part of the branchial region of the carapace.
- epibranchial space** (ARTHRO: Crustacea) In Decapoda, that part of the gill chamber above or external to the gills.
- epicaridum**, **epicaridium** n. [Gr. *epi*, upon; *kardis*, shrimp]

(ARTHRO: Crustacea) The first larval stage of a parasitic epicaridean; a microniscus.

epicnemis n. [Gr. *epi*, upon; *kneme*, leg] (ARTHRO: Chelicerata) A tibial accessory joint of arachnids.

epicnemium see **prepectus**

epicole n. [Gr. *epi*, upon; L. *colere*, to inhabit] An animal that lives on the surface of another animal and neither harms nor helps that animal.

epicondyle n. [Gr. *epi*, upon; *kondylos*, knuckle] (ARTHRO: Insecta) The cephalic or dorsal swelling of the proximal end of the mandible, articulating with a socket in the gena or postgena.

epicranial plate (ARTHRO: Insecta) In larval forms, a plate-like structure forming the epicranium

epicranial stem (ARTHRO: Insecta) The coronal suture.

epicranial suture (ARTHRO: Insecta) In larval forms, the dorsal Y-shaped line of the cranium normally associated with molts, but may persist in adults and form a true sulcus; ecdysial cleavage line.

epicranium n. [Gr. *epi*, upon; *kranion*, skull] (ARTHRO: Insecta) The upper part of the head, from the face to the neck; the calva. **epicranial** a.

epicuticle, epicuticula n. [Gr. *epi*, upon; L. dim. *cutis*, skin] 1. (ACANTHO) See **glycocalyx**. 2. (ARTHRO) The thin, outermost nonchitinous exterior layer of arthropod cuticle. 3. (ARTHRO: Chelicerata) For mites see **epiostracum**.

epidemic n. [Gr. *epi*, upon; *demos*, the people] 1. A rapidly spreading attack of disease in a population. 2. A disease level higher than expected for a designated area. see **endemic**.

epidemiology n. [Gr. *epi*, upon; *demos*, the people; *logos*, discourse] A science that deals with all ecological aspects of disease including transmission, distribution, prevalence, and incidence.

epiderma n [Gr. *epi*, upon; *derma*, skin] An abnormal outgrowth of the skin.

epidermis n. [Gr. *epi*, upon; *derma*, skin] 1. The cellular layer

of the body wall that secretes the cuticle; the hypodermis. 2. (BRYO) Secretes cuticle and calcium carbonate of the skeleton. 3. (MOLL) The periostracum. **epidermal** a.

epididymis n. [Gr. *epi*, upon; *didymos*, testicle] (ARTHRO: Insecta) The coiled part of the vas deferens.

epifauna n. [Gr. *epi*, upon; L. *Faunas*, deity of herds and fields] Any animal living on the surface deposits of the ocean. see **infauna**.

epifrontal fold (BRYO: Gymnolaemata) In Umbonulidae, a fold of the exterior body wall and body cavity arching over the frontal wall.

epigaen see **epigean**

epigamic a. [Gr. *epi*, upon; *gamos*, marriage] Serving to attract individuals of the opposite sex during courtship; the colors displayed during courtship.

epigastric furrow (ARTHRO: Chelicerata) A transverse ventral suture near the anterior end of the abdomen of spiders, along which lie the opening of the book lungs and in the middle the reproductive organs.

epigastric lobe or area (ARTHRO: Crustacea) In Decapoda, the anterior extension of the gastric region of the carapace.

epigastrium n. [Gr. *epi*, upon; *gaster*, stomach] 1. (ARTHRO: Chelicerata) In spiders, the ventral portion of the opisthosoma. 2. (ARTHRO: Insecta) The ventral side of the meso- and metathorax.

epigean, epigaen a. [Gr. *epi*, upon; *gaia*, earth] Living at or above the soil surface; epigeic; epigenous. see **endogean, hypogean**.

epigenesis n. [Gr. *epi*, upon; *genesis*, beginning] The theory that morphological complexity develops gradually from an essentially formless egg during embryology; during the 18th and 19th century debates, epigenesis represented the theory that complexity must be directed by a vital force from outside the system for normal development.

epigenetics n. [Gr. *epi*, upon; *genesis*, beginning] That branch of biology that deals with the causal analysis of development.

epigenotype n. [Gr. *epi*, upon; *genesis*, beginning; L. *typus*, type] The chain of interactions among genes resulting in the phenotype; the developmental system.

epiglossa see **epipharynx**

epiglottis n. [Gr. *epi*, upon; *glottis*, mouth of the windpipe] 1. (ARTHRO: Insecta) The epipharynx. 2. (BRYO) The epistome.

epigynial plate see **epigynum**

epigynum, **epigynium** n.; pl. **-yna** [Gr. *epi*, upon; *gyne*, woman] (ARTHRO: Chelicerata) 1. A sclerotized structure of certain female spiders and mites, variable in form, covering the genital opening. 2. In mites also referred to as epigynial plate or genital plate.

epilabrum n.; pl. **-labra** [Gr. *epi*, upon; L. *labrum*, lip] (ARTHRO) In Myriapoda, a sclerite on each side of the labrum.

epilimnion n. [Gr. *epi*, upon; *limne*, lake] The upper layer of water found in deep lakes. see **thermocline and hypolimnion**.

epilobe n. [Gr. *epi*, upon; L. *lobus*, a rounded projection] (ARTHRO: Insecta) A lateral appendage of the mentum of ground beetles.

epilobous a. [Gr. *epi*, upon; L. *lobus*, a rounded projection] (ANN: Oligochaeta) A prostomium that is continued by a tongue into the peristomium but without reaching the division between segments 1 and 2.

epimegetic a. [Gr. *epi*, upon; *megas*, large] (ARTHRO: Insecta) Being the largest in a series of polymorphic forms.

epimera pl. **epimeron**

epimeral fold (ARTHRO: Crustacea) In Decapoda, the folded endopleurites connected to the branchiostegite that forms the branchial chamber.

epimeral parapterum (ARTHRO: Insecta) The posterior basalar sclerite between the pleural wing process and the epimeron of the wing bearing segment.

epimeral suture (ARTHRO: Insecta) The caudal portion of the sternopleural suture.

epimere n. [Gr. *epi*, upon; *meros*, part] 1. (ARTHRO: Crustacea) A dorsolateral, flat overhanging keel on the somites which may form a carapace, flattened shield or clam-shell valves. 2. (ARTHRO: Insecta) In Lepidoptera, a dorsal process of the phallobase.

epimeron n.; pl. **-ra** [Gr. *epi*, upon; *meros*, part] 1. (ARTHRO) In Arachnida and Diplopoda, a ventral plate to which the basal segment of the leg is attached; a coxal plate. 2. (ARTHRO: Crustacea) See **epimere**. 3. (ARTHRO: Insecta) That portion of a thoracic pleuron posterior to the pleural suture; for Diptera, see **mesepimeron**.

epimorphosis n. [Gr. *epi*, upon; *morphosis*, form] 1. With the same form in successive stages of growth. see **anamorphosis**, **metamorphosis**. 2. Larval forms which are suppressed or passed before hatching, emerging as the adult body form. 3. (ANN: Oligochaeta) A type of regeneration that results in the addition of new tissues and/or parts at the level of amputation. **epimorphic** a., **epimorpha** n.

epineural canal (ECHINOD) A canal or sinus between each radial nerve and the epidermis.

epineural sinus (ARTHRO: Insecta) In embryology, the development of primary body cavity between the upper surface of the embryo and the yolk.

epineurium n. [Gr. *epi*, upon; *neuron*, nerve] 1. Outermost connective tissue sheath on the nerve. 2. (ARTHRO: Insecta) The fibrous connecting tissue that invests a nerve ganglion.

epinotal spines (ARTHRO: Insecta) In Formicoidea, the spines on the first abdominal segment that protect the pedicel.

epinotum n. [Gr. *epi*, upon; *notos*, back] (ARTHRO: Insecta) In Formicoidea, the thoracic dorsum posterior to the mesonotum, consisting of the metanotum and propodeum. see **propodeum**.

epiopticon see **medulla**

epiostracum n. [Gr. *epi*, upon; *ostrakon*, shell] (ARTHRO: Chelicerata) 1. A thin elastic, colorless layer of the cuticle of arachnids which overlies the ectostracum layer; further divided into two layers: inner, dense and proteinaceous, and

outer, cuticulin. 2. The upper layer of cuticle of arachnids.

epipelagic a. [Gr. *epi*, upon; *pelagos*, sea] Pertaining to suspended organisms inhabiting an aquatic environment between the surface and a depth of 200 m. see **mesopelagic**, **bathypelagic**.

epiphallus n. [Gr. *epi*, upon; *phallos*, penis] 1. (ARTHRO: Insecta) *a.* In male Orthoptera, a plate on top of the genital complex. *b.* In male Dictyoptera, a pair of valves dorsad of the phallus. 2. (MOLL: Gastropoda) A very muscular part of the sperm duct proximal to the penis sheath which participates in the formation of spermatophores.

epipharyngeal wall (ARTHRO: Insecta) The inner surfaces of the labrum and clypeal regions of the head.

epipharynx n. [Gr. *epi*, upon; *pharynx*, throat] (ARTHRO: Insecta) A small median lobe on the interior surface of the labrum or clypeus. **epipharyngeal** a.

epiphragm n. [Gr. *epi*, upon; *phragma*, partition] (MOLL: Gastropoda) In land snails, a sheet of dried mucus across the aperture preventing loss of moisture during aestivation or hibernation.

epiphysis n.; pl. **-ses** [Gr. *epi*, upon; *phyein*, cause to grow] 1. (ARTHRO: Insecta) In Lepidoptera, a lamellate spur or process on the inner surface of the fore tibia bearing a dense brushlike array of setae. 2. (ECHINOD: Echinoidea) One of 5 small peripheral bars in Aristotle's lantern.

epipleura n.; pl. **-rae** [Gr. *epi*, upon; *pleura*, side] (ARTHRO: Insecta) In Coleoptera, the infolded lateral edge of the elytra.

epipleural sclerites (ARTHRO: Insecta) One or two small sclerites in the membranous area between the thoracic pleura and the wing bases that are important to wing movement due to muscle attachment.

epipleurum n. [Gr. *epi*, upon; *pleuron*, side] (ARTHRO: Insecta) 1. Among coleopterous larvae the lateral area above the ventrolateral suture and below the dorsolateral suture. 2. In ichneumonid Hymenoptera, the thin margin of the second and following abdominal segments.

epiploon see **caul**

epipodial plate (ARTHRO: Crustacea) In Ostracoda, a setaceous respiratory plate on the maxilla or the fifth limb.

epipod(ite) n. [Gr. *epi*, upon; *pous*, foot] (ARTHRO: Crustacea) A laterally directed exite of the protopod, usually branchial in function; a laterally directed ramus of the coxa; gill separator. see **exite**.

epipodium n.; pl. **-dia** [Gr. *epi*, upon; *pous*, foot] (MOLL: Gastropoda) Lateral grooves between foot and mantle, with tentacles and integumentary sensory organs, usually flat.

epiproct n. [Gr. *epi*, upon; *proktos*, anus] (ARTHRO: Insecta) A process or appendage situated above the anus; the dorsal part of the eleventh abdominal segment. see **suranal plate**.

epiprosoma n. [Gr. *epi*, upon; *pro*, before; *soma*, body] (ARTHRO: Chelicerata) In Acari, a body division consisting of gnathosoma and aspidosoma.

epiptygma n.; pl. **-mata** [Gr. *epiptygma*, overlap] (NEMATA) Anterior and posterior cuticular flaps associated with the vulval opening of some female nematodes. see **hypop-tygma**.

epipygium n. [Gr. *epi*, upon; *pyge*, rump] (ARTHRO: Insecta) A dorsal arch in the last abdominal segment.

epirrhyza n.pl., sing. **-sum** [Gr. *epirrheein*, to flow into] (PORIF) The inhalent canals. see **prosochete**, **aporrhysa**.

episematic a. [Gr. *epi*, upon; *sema*, sign] A term used to designate distinctive markings which serve as a recognition signal. see **pseudepisematic color**; **sematic**.

episite n. [Gr. *epi*, upon; *sitos*, food] A predator able to complete its life cycle by devouring a succession of victims.

epistasis n. [Gr. *epi*, upon; *stasis*, a standing] When one gene interferes with the phenotypic expression of another non-allelic gene (or genes), producing a phenotype determined by the former and not by the latter when both genes occur together in the genotype.

episternal lateral see **pre-episternum**

episternal paraptera (ARTHRO: Insecta) One or two anterior basalar sclerites in front of the pleural process in the mem-

brane at the base of the wings; indistinctly separated from the episternum.

episternal suture (ARTHRO: Insecta) The anterior part of the sternopleural suture.

episternum n.; pl. **episterna** [Gr. *epi*, upon; *sternon*, chest] 1. (ARTHRO: Crustacea) In Decapoda, the posterolateral projection of various sterna. 2. (ARTHRO: Insecta) The area of a thoracic pleuron anterior to the pleural suture. **episternal** a.

epistoma see **epistome**

epistomal ridge (ARTHRO: Insecta) The cranial inflection of the epistomal sulcus.

epistomal sulcus or suture (ARTHRO: Insecta) The groove situated between the frons and clypeus that unites with the anterior ends of the subgenal sulcus extending to the anterior tentorial pits.

epistome, epistoma, epistomis, epistomum n. [Gr. *epi*, upon; *stoma*, mouth] 1. (ARTHRO: Chelicerata) See *tectum*, *cervix*. 2. (ARTHRO: Crustacea) In brachyuran Decapoda, a plate of varying shape between the labrum and bases of the antennae; sternum of antennal somite. 3. (ARTHRO: Insecta) *a.* In Diptera, the oral margin; that part of the face above the mouth. *b.* In Odonata, the clypeus. *c.* In certain Coleoptera, the reduced frontoclypeal region. see **peristome**. 4. (BRYO: Phylactolaemata) A small, movable lip-like lobe of tissue and coelom overhanging the mouth.

epitheca n. [Gr. *epi*, upon; *theke*, case] (CNID) The external layer surrounding the theca in many corals.

epithelial layer 1. Any layer of cells, one surface of which is lining a tube or cavity. 2. (BRYO) A single layer of cells of two types: secretory cells and fat storage cells.

epithelial syncytium Multinucleated epithelial cells.

epithelial tissues Surface tissues in which the cells form regular layers, containing very little intercellular material.

epitheliomuscular a. [Gr. *epi*, upon; *thele*, nipple; L. *musculosus*, fleshy] (CNID) Pertaining to epithelium with a longitudinal contractile fiber at the base; myoepithelial.

- epithelium** n., pl. **-lums, -lia** [Gr. *epi*, upon; *thele*, nipple] An epithelial tissue, covering an external or internal surface.
- epithelial** a.
- epitoke** n. [Gr. *epi*, upon; *tokos*, birth] (ANN: Polychaeta) The posterior sexual portion of certain marine worms. see **atoke**.
- epitoky** n. [Gr. *epi*, upon; *tokos*, birth] (ANN: Polychaeta) Reproduction of certain dimorphic swarming worms in which structural modifications such as enlarged eyes, nonfunctional gut and modification of parapodia for swimming occur; also called hetero-forms: heteronereis, heterosyllid. see **heteronereid**.
- epitorma** n.; pl. **-mae** [Gr. *epi*, upon; *tormos*, socket] (ARTHRO: Insecta) In scarabaeoid larvae, a rod extending from the inner end of the laeotorma. *a.* Epitorma anterior, when directed toward the apex of the epipharynx. *b.* Epitorma posterior when directed in the opposite direction.
- epizoic** a. [Gr. *epi*, upon; *zoon*, animal] Pertaining to an organism living *on*, or attached to the body of another animal. see **endozoic**.
- epizoicide** n. [Gr. *epi*, upon; *zoon*, animal; L. *caedere*, to kill] An agent that destroys epizoa.
- epizoon** n.; pl. **epizoa** [Gr. *epi*, upon; *zoon*, animal] An animal parasite living upon the exterior of the body of the host; an external parasite.
- epizootic** a. [Gr. *epi*, upon; *zoon*, animal] An outbreak of disease in animals in which there is an unusually large number of cases; identical to an epidemic in humans.
- epizootiology** n. [Gr. *epi*, upon; *zoon*, animal; *logos*, discourse] The field concerned with the study of diseases of animals involved in an epizootic outbreak.
- epizygal** n. [Gr. *epi*, upon; *zygon*, yolk] (ECHINOD: Crinoidea) The distal member of a syzygial pair of brachials. see **hy-pozygal. epizygial** a.
- epizygum** n.; pl. **epizyga** [Gr. *epi*, upon; *zygon*, yolk] (ARTHRO: Insecta) In certain beetle larvae, an elongate plate or bar extending from the zygon toward the clithrum on the right of the epipharynx, or embodied in the tylus; may

be present when clithrum is absent.

epoch n. [Gr. *epoche*, stop] Subdivision of a period or division in geologic time.

epomia n.; pl. **-ae** [Gr. *epomidios*, on the shoulder] (ARTHRO: Insecta) 1. The margin of the propleural furrow in which the front femur is inserted. 2. In ichneumonid Hymenoptera, a carina on the side of the pronotum, obliquely crossing the trough in the side of the pronotum.

epupillate a. [L. *ex*, out of; *pupilla*, pupil of eye] Without a pupil or color spot; pertaining to ocellate spots.

equal weighting Treating all taxonomic characters as equally important.

equatorial plate Plane where chromosomes gather during metaphase of mitosis or meiosis.

equidistant a. [L. *aequus*, uniform; *distantia*, remoteness] Equally spaced from any two or more points.

equilateral shell (MOLL: Bivalvia) With the shell parts equal or almost equal anterior and posterior to the beak.

equilibrating a. [L. *aequus*, uniform; *libra*, balance] Balancing equally.

equimeric a. [L. *aequus*, uniform; Gr. *meros*, part] (ANN: Oligochaeta) Pertaining to regenerates having the same number of segments as had been amputated. equimery n.

equipedal a. [L. *aequus*, uniform; *pes*, foot] Possessing pairs of equal feet.

equipotent a. [L. *aequus*, uniform; *potens*, powerful] Differing cell parts or organs capable of performing like functions.

equivalve a. [L. *aequus*, uniform; *valva*, leaf of a folding door] (MOLL: Bivalvia) When two valves (shells) are the same shape and of equal size.

era n. [L. *aera*, epoch] A division of geologic time, such as Palaeozoic, etc.; divided into periods.

eradiate v. [L. *ex*, out of; *radiatus*, rayed] To shoot forth as rays of light; to radiate.

erectopotent a. [L. *erectus*, upright; *patens*, open] (ARTHRO: Insecta) Pertaining to having the fore wings erect and the

hind wings partially spread during resting.

ereisma n. [Gr. *ereisma*, prop] (ARTHRO: Insecta) The furcula in *Sminthurus* which has a fanlike structure.

eremobic a. [Gr. *eremos*, solitary; *bios*, life] Living a solitary existence.

eremochaetous a. [Gr. *eremos*, solitary; *chaite*, mane] Lacking the normal arrangement of bristles.

eremology n. [Gr. *eremia*, desert; *logos*, discourse] A science concerned with the desert and its phenomena.

eremophilous a. [Gr. *eremia*, desert; *philos*, loving] Desert loving; pertaining to animals that live in deserts or arid regions.

eremosymbiont n. [Gr. *eremos*, solitary; *syn*, together; *bios*, life] A species living in an ant nest for protection, not taking or contributing anything.

ergastic a. [Gr. *ergastikos*, fit for working] Pertaining to the integration or union of parts during evolution. see **metaplasm**.

ergastoplasm n. [Gr. *ergaesthai*, working; *plasma*, form or mold] 1. Granular endoplasmic reticulum. 2. A former conception of cytoplasm, the fibrillar or flocculent masses found in many gland cells and elsewhere.

ergatandromorph n. [Gr. *ergates*, worker; *aner*, man; *morphe*, form] (ARTHRO: Insecta) An abnormal ant possessing the worker characteristics, combined with qualities of the male. see **ergatogynandromorph**.

ergataner see **ergatomorphic male**

ergate n. [Gr. *ergates*, worker] (ARTHRO: Insecta) A type of worker ant.

ergatogynandromorph n. [Gr. *ergates*, worker; *gyne*, female; *andros*, male; *morphe*, form] (ARTHRO: Insecta) A mosaic form of ant possessing qualities of male and worker. see **ergatandromorph**.

ergatogyne n. [Gr. *ergates*, worker; *gyne*, female] (ARTHRO: Insecta) A form intermediate between the worker and queen.

ergatoid male see **ergatomorphic male**

ergatoid reproductive or ergatoid (ARTHRO: Insecta) Supplementary reproductive termite, usually larval in appearance with a distinctive rounded head; tertiary reproductive; apterous neote(i)nic.

ergatomorphic male (ARTHRO: Insecta) A social insect with normal male genitalia and a worker-like body; an ergatoid male; an ergataner.

ergatotelic type (ARTHRO: Insecta) A group of social insects, including the honey-bees in which the queen manifests only secondary instincts, while the workers retain the primary instincts. see **gynaecotelic type**.

ergonomics n. [Gr. *ergon*, work; *nomos*, law] (ARTHRO: Insecta) The quantitative study of the distribution of work performance and efficiency of social insects.

ericeticolous a. [Gr. *erike*, heath; L. *colere*, to inhabit] Inhabiting a heath or similar environment.

erichthus larva (ARTHRO: Crustacea) In Hoplocardia, a megalopa type larva of mantis shrimp in the families Lysiosquillidae and Gonodactylidae.

erosion n. [L. *erosus*; eaten away] 1. Wearing away of soil because of wind, water, or gravitational action. 2. (MOLL: Gastropoda) The disintergration of the apex of the shell.

errantia n. [L. *errere*, to wander] 1. Mobile organisms. 2. (ANN: Polychaeta) Sometimes used as a taxonomic group.

eruca n.; pl. erucae [L. *eruca*, caterpillar] (ARTHRO: Insecta) A caterpillar or other insect larva similar in appearance.

eruciform a. [L. *eruca*, caterpillar; *forma*, shape] (ARTHRO: Insecta) Having a body shaped like a caterpillar: cylindrical body, well developed head, thoracic legs, and abdominal prolegs. see **polypod larva**.

eruciform larva (ARTHRO: Insecta) The larval instar of certain Hymenoptera and Lepidoptera, caterpillar-like larva with a well-developed head capsule, true legs and often abdominal prolegs.

erucism n. [L. *eruca*, caterpillar; -ismus, denoting condition] (ARTHRO: Insecta) Poisoning or rash caused by caterpillars

or pupae. see **lepidopterism**, **paraerucism**, **metaerucism**, **cryptotoxic**, **phanerotoxic**.

erucivorous a. [L. *eruca*, caterpillar; *vorare*, to devour] (ARTHRO: Insecta) The eating of or on caterpillars.

eructation n. [L. *ex*, out of; *ructare*, to belch] The emitting of contents from the intestine via the mouth.

eruptive cell see **spherule cell**

eryoneicus larva (ARTHRO: Crustacea) In Eryonoidea, a larval stage with almost spherical carapace with many spines and abdomen shorter than carapace.

erythrocruorin n. [Gr. *erythros*, red; *cruor*, blood] In many annelids, mollusks, and a few species of crustaceans, an iron containing hemochrome that functions as a respiratory pigment.

erythropsin n. [Gr. *erythros*, red; *ops*, eye] (ARTHRO: Insecta) In night-flying species, a coloring substance found in the eyes that has the appearance of ruby globes. see **xanthopterin**.

erythropterin n. [Gr. *erythros*, red; *pteron*, wing] (ARTHRO: Insecta) In Lepidoptera, an important red pigment of coloration.

escape glands (PLATY: Trematoda) In digenetic larvae, glands which expel their contents during emergence of the cercaria from the snail; assumed to aid in escape from molluscan host.

escutcheon n. [OF. *escuchon*, shield fr. L. *scutum*, shield] 1. A variously shaped surface, usually in the form of a shield. 2. (ARTHRO: Insecta) The scutellum of Coleoptera. 3. (MOLL: Bivalvia) An elongated or heart-shaped depression behind the ligament.

escutcheon ridge (MOLL: Bivalvia) A ridge extending posteriorly from the valve beak in both valves, forming the border of the escutcheon in some forms.

escutellate a. [L. *ex*, out of; *scutum*, shield] Lacking a scutellum; exscutellate.

esoderma n. [L. *ex*, out of; *derma*, skin] The ectoderm; exoderm.

esophageal a. [Gr. *oisophagos*, gullet] 1. Pertaining to or near the esophagus. 2. (ANN:Oligochaeta) In the digestive system: that section of the gut between the pharynx and the intestine, ending posteriorly in an esophageal valve; in the circulatory system: a heart that opens dorsally into the supra-esophageal trunk and beneath the gut into the ventral trunk.

esophageal bulb 1. Any of the dilations of the esophageal wall. 2. (MOLL:Gastropoda) In Prosobranchia, the anterior expansion; also called crop, pyraform organ, jabot, pharynx of Leiblein. 3. (NEMATA) see **postcorpus**, **metacorpus**.

esophageal commissures (ARTHRO:Insecta) A pair of nerve cords connecting the sub-esophageal ganglion with the brain.

esophageal ganglion see **occipital ganglion**

esophageal glands Salivary glands located within the esophagus or as diverticula attached to the esophagus which may or may not be salivary in nature.

esophageal intestinal valve, esophago-intestinal valve see **cardia**

esophageal nervous system see **stomogastric nervous system**

esophageal sclerite (ARTHRO:Insecta) An exterior thickening of the chitinous lining of the anterior part of the esophagus, found in psocid bark lice and mallophagan chewing lice; sitophore sclerite.

esophageal valve see **cardiac valve**

esophagointestinal valve see **ventricular valve**

esophagus, oesophagus n. [Gr. *oisophagos*, gullet] That part of the alimentary tract (canal) between pharynx and intestine; the gullet.

esophastome n. [Gr. *oisophagos*, gullet; *stoma*, mouth] (NEMATA) The second part of the stoma; a modified section of the anterior esophagus formed at the time of the primary invagination during gastrulation; that part of the

esophagus surrounded by esophageal tissue (=pharynx).
see **pharynx**.

essential amino acids Amino acids necessary in the diet of an animal which the animal cannot synthesize.

esthescasc see **aesthescasc**

esthete see **aesthete, aesthescasc**

estivate, estival see **aestivate**

estrus, oestrus n. [Gr. *oistros*, rut, desire] A period of sexual activity; a breeding period.

etching cells (PORIF) Specialized archaeocytes whose secretions etch calcium carbonate.

ethocline n. [Gr. *ethos*, custom; *clinere*, to slope] A series of varying behaviors among related species; can represent stages in an evolutionary trend.

ethological a. [Gr. *ethos*, custom; *logos*, discourse] Pertaining to species-specific components of behavior the phenotypic expression of which is mainly determined genetically.

ethology n. [Gr. *ethos*, custom; *logos*, discourse] The science of the comparative study of animal behavior.

etiology n. [Gr. *aitia*, cause; *logos*, discourse] All of the causes of a disease or abnormal condition. **etiological** a.

euaster n. [Gr. *eu*, good; *aster*, star] (PORIF) A spiny rayed aster originating from a central point; contrasting term to streptasters.

eucardo n. [Gr. *eu*, true, original; L. *cardo*, hinge] (ARTHRO:Insecta) A division of the cardo of the maxilla.

eucaryote see **eukaryote**

eucephalous a. [Gr. *eu*, good; *kephale*, head] (ARTHRO:Insecta) Pertaining to larvae with a well sclerotized head capsule, applied in certain Diptera, Coleoptera and Hymenoptera; **eucephalic**. see **hemicephalous, acephalous**.

euchromatin n. [Gr. *eu*, good; *chroma*, color] Chromosomes or parts of chromosomes that show normal coiling, staining properties, and do not become heteropycnotic; opposed to heterochromatin.

euchromosome see **autosome**

Eucoelomata n. [Gr. *eu*, good; *koilos*, container] In former classifications, a group including all animals with a true coelom.

eucoiliform larva (ARTHRO:Insecta) The first larval instar of parasitic Eucoilinae wasps, the second may be polypodeiform or modified hymenopteriform.

eucone eye (ARTHRO:Insecta) Fully developed eyes with a crystalline cone of four cells. see *acone*; *exocone*; *pseudocone*.

eudesmatic a. [Gr. *eu*, good; *desmos*, ligament] (ARTHRO:Chelicerata) In Acari, pertaining to the articulation between segments of an appendage activated by its own muscles and tendons; also segments moved by muscles and tendons attached at its basal region. see **adesmatic**.

eudoxid see **eudoxome**

eudoxome n. [Gr. *eudoxos*, glorious] (CNID:Hydrozoa) a. In Siphonophora, a cormidium of Calycophorae that live independently. b. A monogastric free-swimming stage of a siphonophore without nectocalyx.

eugenics n.pl. [Gr. *eugenes*, well-born] The study of agencies under social control that may improve or damage the heredity of future generations.

euhaline a. [Gr. *eu*, good; *halinos*, saline] 1. Pertaining to waters containing between 30 and 40 parts per thousand of dissolved salts (normal sea water). 2. Organisms that inhabit saline inland waters.

eukaryon n. [Gr. *eu*, good; *karyon*, nut] Nucleus of eukaryotic organisms.

eukaryote n. [Gr. *eu*, good; *karyon*, nut] An organism with membrane-bound nuclei in its cells, includes all plants and animals except bacteria and blue-green algae. **eukaryotic** a.

eu labium n. [Gr. *eu*, good; L. *labium*, lip] (ARTHRO:Insecta) The portion of the labium distal to the mentum, formed by the union of a pair of maxilla-like appendages.

eulerhabd n. [Gr. *eule*, worm; *rhabdos*, rod] (PORIF) A megasclere with oxea sharply curved in several places. see **ophrhabd**.

eulittoral zone 1. In the ocean, part of the littoral zone from high tide level to about 50 meters. 2. In lake biology, bottom which begins at high water mark and is subjected to wave action, also bottom between high water mark and limit of rooted plants.

Eumalacostraca, eumalacostracan n. [Gr. *eu*, good; *malakos*, soft; *ostrakon*, shell] In some classifications, a series of Crustacea containing shrimp-like crustaceans.

eumegetic a. [Gr. *eu*, good; *megas*, large] Pertaining to an intermediate form in a polymorphic series.

eumeiosis see **meiosis**

Eumetazoa, eumetazoans n.; n.pl. [Gr. *eu*, good; *meta*, after; *zoon*, animal] Any of the multicellular animal phyla except the Porifera and Protozoa.

eumitosis see **mitosis**

eunotum see **scutum**

eupathid n. [Gr. *eu*, good; *pathos*, feeling] (ARTHRO:Chelicerata) In Acari, a simple, spiniform, modified seta of certain Acariformes in which the solid axis and the root are pierced by a canal; function unknown.
eupathidial a.

euphotic zone The upper part of the ocean, into which enough light can penetrate to be effective in photosynthesis; the average lower limit is about 100 meters, but may extend to twice that depth in clear tropical water.

euplantula n.; pl. **-lae** [Gr. *eu*, good; L. dim. *planta*, sole of foot] (ARTHRO:Insecta) Small padlike structures on the ventral part of the tarsal segments in certain Orthoptera; tarsal pulvilli.

euploid a. [Gr. *eu*, good; *aploos*, onefold; *eidos*, form] Said of cells, tissues and individuals with one complete chromosome set (monoploid) or with whole multiples (diploid, polyploid) of the basic, monoploid number of

chromosomes characteristic of a species. see **diploid**, **aneuploid**.

eupore n. [Gr. *eu*, good; *poros*, channel] (PORIF) An aperture through the dermis to a subdermal cavity.

eupyrene a. [Gr. *eu*, good; *pyren*, stone of a fruit] Pertaining to spermatozoa with ordinary flagellate tail. see **apyrene**, **oligopyrene**.

eurybathic a. [Gr. *eurys*, broad; *bathys*, depth] Having a large vertical range of movement. see **stenobathic**.

eurybenthic a. [Gr. *eurys*, broad; *benthos*, depth of the sea] Living in a wide range of depth on the sea bottom. see **stenobenthic**.

eurygamous a. [Gr. *eurys*, broad; *gamos*, marriage] (ARTHRO:Insecta) In Diptera, pertaining to mosquitoes that require a large enclosure when mating in captivity. see **stenogamous**.

euryhaline a. [Gr. *eurys*, broad; *halinos*, saline] Capable of withstanding a wide variation of salinity in the environment; euryhalinity. see **stenohaline**.

eurymorphic a. [Gr. *eurys*, broad; *morphe*, form] Pertaining to a genus with a wide range of characters.

euryoecic a. [Gr. *eurys*, broad; *oikos*, house] Rapidly adaptive to changing conditions in time and space.

euryphagous a. [Gr. *eurys*, broad; *phagein*, to eat] Existing on a wide variety of foods. see **stenophagous**, **omnivorous**.

eurypylous a. [Gr. *eurys*, broad; *pyle*, gate] 1. Having a wide gate. 2. (PORIF) An apopyle that opens directly by wide mouths into the excurrent channels.

euryaline see **euryhaline**

eurytele n. [Gr. *eurys*, broad; *telos*, end] (CNID) Nematocysts with the butt dilated at the apex and bearing spines.

eurythermal a. [Gr. *eurys*, broad; *therme*, heat] Pertaining to organisms capable of living within a wide range of temperatures. see **stenothermal**.

- eurytopic** a. [Gr. *eurys*, broad; *topos*, place] Pertaining to organisms that have a wide geographical distribution or occur in diverse habitats. see **stenotopic**.
- euryvalent** a. [Gr. *eurys*, broad; L. *valens*, strong] Pertaining to organisms adapted to meet a wide variety of environmental conditions. see **stenovalent**.
- eusaprobe** n. [Gr. *eu*, good; *sapros*, rotten] Microbiotroph frequently associated with decaying matter.
- eusocial insects** (ARTHRO:Insecta) A more technical term for the social insects: cooperation in caring for young, reproductive division of labor (more or less sterile individuals working in behalf of reproducing individuals), an overlap of at least two generations of life stages capable of contributing to colony labor.
- eustasy** n. [Gr. *eu*, good; *stasis*, position] When an organ is present in an individual of a natural group, it always appears at the same level of ontogenetic development; if it does not appear at that level, it does not appear.
- eustegal epithelium** (BRYO:Stenolaemata) In free-walled zooids, epithelium that secretes the exterior covering.
- eusternum** n. [Gr. *eu*, good; *sternon*, breast plate] (ARTHRO:Insecta) The ventral plate of a thoracic segment, exclusive of the spinasternum; an antesternite.
- eustipes** see **stipes**
- eutaxiclad** n. [Gr. *eutaxia*, good arrangement; *clado*, branch] (PORIF) A megasclere desma with swollen terminal couplings; dicranoclone type.
- eutelic condition** Constant cell number and arrangement from hatched larva to adult.
- eutely** n. [Gr. *eu*, good; *telos*, end] A term that describes cell or nuclear constancy in tissues, organs or entire organisms; adult organisms possessing their final number of cells at birth. **eutelic** a.
- euthylaematous** a. [Gr. *euthys*, straight; *laimos*, throat] (ANN:Hirudinoidea) Having an upright pharynx, not rotated. see **strepsilaematous**.

euthyneury n. [Gr. *euthys*, straight; *neuron*, nerve] (MOLL:Gastropoda) Especially in Opisthobranchia and Pulmonata, the condition of no crossing of the visceral loop; a straight visceral loop. **euthynerous** a. see **orthoneury**.

eutrochantin see **coxopleurite**

eutrophapsis n. [Gr. *eu*, good; *trophe*, food; *haptin*, to fasten] (ARTHRO:Insecta) The practice of presenting prey or food to young in their nest, e.g., social insects.

eutrophic a. [Gr. *eu*, good; *trophe*, food] Pertaining to a lake being partially depleted or lacking oxygen in the deeper waters in midsummer, with a rich nutrient and plankton supply.

eutrophy n. [Gr. *eu*, good; *trophe*, food] Well nourished.

eutropous a. [Gr. *eu*, good; *tropos*, direction] (ARTHRO:Insecta) Said of species adapted to visiting only certain types of flowers.

evaginate v.t. [L. *ex*, out of; *vagina*, sheath] To turn inside out or to cause an organ or part to protrude.

evagination n. [L. *ex*, out of; *vagina*, sheath] 1. The process or product of evagination; an outpocketing. 2. (ANN:Oligochaeta) Calciferous sacs of the Lumbricidae esophagus.

evanescent a. [L. *evanescere*, to vanish] Disappearing by degrees; fading.

eversible a. [L. *ex*, out of; *versabilis*, changeable] Capable of being everted; turned outward or inside out.

evert v. [L. *ex*, out of; *vertere*, to turn] 1. To turn backward or outward. 2. (MOLL:Gastropoda) The edge of the outer lip of a shell.

evertible a. [L. *ex*, out of; *vertere*, to turn] Capable of being everted or turned outward.

eviscerate v. [L. *ex*, out of; *viscera*, entrails] To disembowel.

evisceration n. [L. *ex*, out of; *viscera*, entrails] The ejection of viscera, as when irritated.

- evocation** n. [L. *ex*, out of; *vocare*, to call] In embryology, the start of development of a structure by a substance diffusing from another tissue or implant.
- evocator** n. [L. *ex*, out of; *vocare*, to call] Substance that causes the beginning of development of a structure in an embryo. see **organizer**.
- evolute** a. [L. *evolutus*, unrolling] 1. Turned back; unfolded. 2. (MOLL) a. In Gastropoda, coiled with whorls out of contact. b. In Cephalopoda, ammonites having a broad umbilicus.
- evolution** n. [L. *evolutus*, unrolling] The change of the genetic constitution of a population, either by the origin of new genotypes, elimination of old ones, or change in the proportions of the various genotypes composing the population.
- evolutionary taxonomy** Taxonomy or classification of living beings according to their evolution from or relationship to other forms.
- exalate** a. [L. *ex*, out of; *ala*, wing] (ARTHRO:Insecta) Lacking wings; apterous.
- exarate** a. [L. *exaratus*, plowed up] Grooved or furrowed.
- exarate pupa** (ARTHRO:Insecta) A pupa in which all appendages are free from the body. see **obtect pupa**.
- exarticulate** a. [L. *ex*, out of; *articulus*, joint] Without distinct joints.
- exarticulate antenna** (ARTHRO:Insecta) A one-segmented antenna.
- excalcarate** see **ecalcarate**
- excaudate** see **ecaudate**
- excavated** a. [L. *ex*, out of; *cavus*, hollow] 1. Formed by hollowing. 2. (MOLL:Gastropoda) The columella.
- excentric** see **eccentric**
- excind** a. [L. *ex*, out of; *cidere*, to cut] Bearing an angular notch on an end.
- excision** n. [L. *ex*, out of; *cidere*, to cut] Cut out; having a cut or notch.

excitation n. [L. *ex*, out of; *citatus*, hastened] The state of protoplasm immediately after being stimulated: an increased rate of metabolism, increased permeability, and an altered electrical charge.

exclusion principle see **competitive exclusion**

excrecence n.; pl. **-cences** [L. *ex*, out of; *crescere*, to grow] An appendage or abnormal outgrowth.

excrete v.t. [L. *ex*, out of; *cretus*, separated] To void waste products from the blood, tissues or the body. see **egest**.

excretion n. [L. *ex*, out of; *cretus*, separated] The elimination of waste products of metabolism either by storing them in an insoluble form or by discharge from the body.

excretory system Those structures concerned in elimination of the metabolic waste products from the body.

excretory tubules (ECHI) Numerous, small, delicate, branched or unbranched tubules, each ending in a ciliated cup or funnel, often present on the coelomic surface of the anal vesicles.

excurrent a. [L. *ex*, out of; *currere*, to run] 1. Pertaining to a current with an outward flow, as at an excurrent orifice. 2. Thinned; narrowly elongated.

excurve a. [L. *ex*, out of; *curvus*, bent] Curved or bent outward.

excyst v. [L. *ex*, out of; Gr. *kystis*, bladder] To emerge from a cyst. see **encyst**.

exhalant a. [L. *ex*, out of; *halare*, to breathe] 1. Having the quality of exhaling or evaporating. 2. (MOLL:Bivalvia) Applied to water currents from the gills outward and all spaces from which it comes.

exhalant channel or **canal** (MOLL:Gastropoda) A channel between extensions or at the junction of the parietal and outer lips of the shells, occupied by the mantle fold, by which the exhalant current leaves the mantle cavity.

exhalant passage (ARTHRO:Crustacea) A canal leading to a large anterior opening, with regulating scaphognathite for driving the water outward.

exhalant siphon (MOLL:Gastropoda) A short outlet for the exhalant current.

exiguous a. [L. *exiguus*, little] Small in amount; slender; diminutive.

exilazoid, exilazooecium n. [L. *exiguus*, little; Gr. *zoon*, animal] (BRYO:Stenolaemata) A small polymorph between feeding zooids with few or no basal diaphragms.

exite n. [L. *ex*, out of; *-ita*, part] 1. A lobe on the outer margin of any limb segment. 2. (ARTHRO:Crustacea) A laterally directed lobe arising from the external margin of a protopodal segment. see **endite, epipod(ite)**.

exobiotic a. [Gr. *exo*, out of; *biosis*, manner of life] Living on the exterior or surface, as opposed to endobiotic.

exochorion n. [Gr. *exo*, out of; *chorion*, membrane] The outer layer of an egg shell; the outer layer of the chorion. see **endochorion**.

exocoele, exocoel n. [Gr. *exo*, out of; *koilos*, hollow] (CNID:Anthozoa) Part of a gastrovascular cavity between adjacent pairs of mesenteries. see **endocoele**.

exocone eye (ARTHRO:Insecta) Ommatidium where the lens is formed from an inward extension of the cornea, not from the Semper cells.

exocorium n. [Gr. *exo*, out of; L. *corium*, leather] (ARTHRO:Insecta) In Heteroptera, the outer margin of the hemelytra, between the embolium and clavus.

exocrine glands Glands that secrete material to the outside of an organism by means of ducts. see **endocrine glands**.

exocuticle, exocuticula n. [Gr. *exo*, out of; L. *cutis*, skin] Layer of cuticle, immediately under the epicuticle.

exocyclic a. [Gr. *exo*, out of; *kyklos*, circle] (ECHINOD:Echinoidea) Pertaining to sea urchins where the periproct and anus are displaced outside the apical plate system.

exocytosis n. [Gr. *exo*, out of; *kytos*, container] The removal of neurosecretions from a cell by pinocytosis.

exoderm see **ectoderm**

- exoenzyme** n. [Gr. *exo*, out of; *en*, in; *zyme*, yeast] An enzyme that functions outside the originating cell.
- exogamy** n. [Gr. *exo*, out of; *gamos*, marriage] Outbreeding; sexual reproduction in which mating partners are unrelated or distantly related. see **endogamy**, **autogamy**.
- exogastric** a. [Gr. *exo*, out of; *gaster*, stomach] (MOLL:Gastropoda) Having the shell coiled so as to extend forward from the aperture over the front of the extruded head-foot mass; found only in the early developmental stage.
- exogenous** a. [Gr. *exo*, out of; *genes*, producing] Due to an external cause; growing from superficial tissue. see **endogenous**.
- exognathite** n. [Gr. *exo*, out of; *gnathos*, jaw] (ARTHRO:Crustacea) External branches of the oral appendages; exopod of the maxilliped; **exognath**.
- exogyrate shell** (MOLL:Bivalvia) Having the left valve strongly convex with the dorsal part coiled posteriorly and the ventral valve flat with a spiral coil, i.e., like the genus *Exogyra*. **exogyroidal** a.
- exoic** a. [Gr. *exo*, out of] (ANN) Pertaining to the excretory system which opens to the exterior through the epidermis, as opposed to enteroic.
- exoloma** n. [Gr. *exo*, out of; *loma*, fringe, hem] (ARTHRO:Insecta) The apical margin of a wing.
- exonephric** a. [Gr. *exo*, out of; *nephros*, kidney] (ANN:Oligochaeta) Having nephridia opening to the exterior. see **enteronephric**.
- exoparasite** see **ectoparasite**
- exophylaxis** n. [Gr. *exo*, out of; *phylax*, guard] Protection of an animal from disease due to its external covering or secretions produced therefrom.
- exophytic** a. [Gr. *exo*, out of; *phyton*, plant] Pertaining to the outer surface of plant tissue.
- exophytic oviposition** (ARTHRO:Insecta) Mode of oviposition of some Trichoptera and Odonata that lay their eggs in or on emergent vegetation.

exopinacocyte n. [Gr. *exo*, out of; *pinax*, tablet; *kytos*, container] (PORIF) Surface cells that form the epithelium, the majority of which are T-shaped.

exoplasm see **ectoplasm**

exopod(ite) n. [Gr. *exo*, out of; *pous*, foot] (ARTHRO:Crustacea) The lateral branch of a biramous appendage; the outer ramus.

Exopterygota, exopterygote n. [Gr. *exo*, out of; *pterygion*, little wing] (ARTHRO:Crustacea) In some classifications, a division of insects with simple or slight metamorphosis and external wing bud development; hemimetabolous or heterometabolous.

exosaccal cavity (BRYO:Phylactolaemata) That part of the body cavity outside of the membranous sac.

exoskeleton n. [Gr. *exo*, out of; *skeleton*, dried body] An external skeleton or supporting structure. see **endoskeleton**.

exoteric a. [Gr. *exotikos*, external] Of external origin; outside of organism.

exotic a. [Gr. *exotikos*, external] Imported; foreign; alien; as opposed to native, endemic and autochthonous.

exotoky n. [Gr. *exo*, out of; *tokos*, birth] A form of reproduction of many invertebrates in which eggs are developed outside of the body and receive no parental care. see **endotoky**.

exotoxin n. [Gr. *exo*, out of; *toxikon*, poison] A poisonous substance produced by a microbial cell and secreted into the surrounding environment, without destruction of the cell. see **endotoxin**.

exozone n. [Gr. *exo*, out of; *zone*, girdle] (BRYO:Stenolaemata) The outer parts of zooids of a colony with strong verticle walls and skeletons.

expalpate see **epalpate**

expantin n. [L. *expandere*, to spread out] (ARTHRO:Crustacea) Assumed neurohumour which induces expansion of the chromatophores.

experimental taxonomy Taxonomy utilizing breeding and other experimental methods to clarify the relationships between organisms and define evolutionary units. see **taxonomy**.

expiration n. [L. *ex*, out of; *spirare*, to breath] Breathing out air or water from the respiratory organs.

explainate a. [L. *ex*, out of; *planus*, flat] 1. Extending outward in a flat form. 2. (ARTHRO:Insecta) Applied to a margin. 3. (BRYO) An erect, sheetlike or frondose colony sometimes with lobate extensions. 4. (MOLL:Gastropoda) Having the outer shell lip spreading outward and becoming flattened.

explant n. [L. *ex*, out of; *plantae*, to plant] An excised fragment of a tissue or an organ used to initiate an in vitro culture.

explicate v. [L. *ex*, out of; *plicatus*, folded] To unfold; open; to expand; without folds or plica.

exploratory trail (ARTHRO: Insecta) An odor trail laid by advance workers of a foraging group of social insects.

explosive cell see **spherule cell**

explosive evolution and speciation Rapid formation of numerous types from a single or a few types.

exsculptate a. [L. *ex*, out of; *sculpere*, to carve] Having more or less irregular longitudinal lines with grooves between.

exscutellate see **escutellate**

exserted a. [L. *exsertus*, projecting] Protruding or projecting from the body.

exsertile a. [L. *exsertus*, projecting] Capable of being exerted or extruded.

exsheath v. [L. *ex*, out of; A.S. *sceath*, case] To escape from the residual membrane (egg shell) of a previous developmental stage.

exsules n. [L. *exule*, exile] (ARTHRO: Insecta) In apterous Adelges on the secondary host, give rise parthenogenetically to the neosistens form.

extend v. [L. *ex*, out of; *tendere*, to stretch] To spread or stretch out.

extensile a. [L. *ex*, out of; *tendere*, to stretch] Capable of being extended, stretched or spread.

extension plate see **unguitractor plate**

extension sole (ARTHRO: Insecta) The pad-like pulvillus.

extensor muscle see **unguitractor**

extenso-tendon see **unguitractor tendon**

extenuate v. [L. *ex*, out of; *tenuis*, thin] To make or become thin or slender; to diminish.

exterior a. [L. *exterus*, out] Situated away from the central axis; outward; outside.

exterior skeletal wall (BRYO: Gymnolaemata) In Cheilostomata, a skeletal wall which calcifies against the cuticle; the membrane forming this wall expands the coelomic volume of the colony.

exterior wall (BRYO) Body wall that increases the size of the zooid body and colony.

external a. [L. *exterus*, outside] Outward; that part away from the center of the body.

external buttress see **buttress**

external cortical layer (NEMATA) The outermost stratum of the cuticle, comprised of a dense outer area, an inner less dense area, and a thinner area.

external exocuticle (NEMATA) In derived forms, a subdivision of the exocuticle.

external genitalia The organs involved with sexual mating and the deposition of eggs.

external medullary mass see **medulla**

external muscle (BRYO) A muscle extending from a body wall across the body cavity, to the lophophore or to the gut.

external parameres (ARTHRO: Insecta) All male external genital appendages.

external parasite An ectoparasite.

external respiration The process of gaseous exchange between an organism and its environment.

external secretion Any secretion to the outside of the body or

into the cavity of the enteron.

external statocysts (ARTHRO: Insecta) Special hair structures for the retention of the air supply that are adapted to underwater life.

external thickening see **buttress**

externomedial vein (ARTHRO: Insecta) 1. In Hymenoptera, the radius. 2. In Orthoptera, the media.

externomedian nerve (ARTHRO: Insecta) The humeral and discoidal veins collectively.

exteroceptors n.pl. [L. *exterus*, outside; *capere*, to take] Sense organs situated externally which respond to conditions in the external environment, as opposed to interoceptors.

extogenous see **exogenous**

extra-axial skeleton (PORIF) Skeletal elements that surround or arise from an axial region.

extracellular a. [L. *extra*, outside; *cellula*, little cell] Pertains to being outside of the cell but within the organism.

extracellular digestion Digestion of food within a cavity of the digestive system.

extraconic a. [L. *extra*, outside; Gr. *konos*, cone] Almost conical, but with concave sides. see **coeloconoid**.

extracorporeal a. [L. *extra*, outside; *corpus*, body] Occurring outside of the body.

extracorporeal digestion A mode of feeding whereby some parasites and predators release esophageal or salivary secretions into the host or prey that predigests the internal contents of the host or prey.

extrados n. [L. *extra*, outside; F. *dos*, the back] The exterior curve of an arch. see **intrados**.

extraembryonic a. [L. *extra*, outside; Gr. *embryon*, fetus] Outside the body of the embryo.

extraembryonic field see **serosa**

extraenteric a. [L. *extra*, outside; Gr. *enteron*, intestine] Outside the enteron.

- extranidal** a. [L. *extra*, outside; *nidus*, nest] (ARTHRO: Insecta) In social insects, outside the nest or hive.
- extranuclear** a. [L. *extra*, outside; *nucleus*, kernel] Structures or processes found outside the nucleus.
- extraocular** a. [L. *extra*, outside; *oculus*, eye] Away from or beyond the eyes.
- extraoral** a. [L. *extra*, outside; *os*, mouth] Away from or beyond the mouth.
- extrapallial space** (MOLL: Bivalvia) A narrow mucus-filled space between the mantle lobe and the valve of the shell.
- extratentacular budding** (CNID: Anthozoa) Development of new polyps of a zoantharian colony from the tissue between existing ones.
- extratropical** a. [L. *extra*, outside; *tropicus*, solstice] Outside of the tropics; not in the tropics.
- extrazoidal** a. [L. *extra*, outside; Gr. *zoon*, animal] (BRYO) A colony structure, protective or supportive in function, that remains outside zooidal boundaries.
- extremity** n.; pl. **-ties** [L. *extremus*, outermost] The remotest part or point from the base.
- extrinsic** a. [L. *extrorsus*, in an outward direction] 1. Not in or a part of a body or congregation; external. 2. Environmental influences on a population. see **intrinsic**.
- extrinsic articulation** One in which the articulating surface of contact is outside of the skeletal parts. see **intrinsic articulation**.
- extrinsic muscles** Muscles which move an organ (leg, etc.), but that originate outside of it. see **intrinsic muscles**.
- extorse** a. [Gr. *extrorsus*, in an outward direction] Turning or facing outwards; toward the outside. see **intorse**.
- extrude** v. [L. *ex*, out of; *trusus*, thrust] To turn; to force out.
extrusion n.
- exudate** n. [L. *exsudo*, discharge by sweating] Any flow from the body or organ through pores or openings by natural discharge.
- exudatoria** n. [L. *exsudo*, discharge by sweating] (ARTHRO:

Insecta) Finger-like appendages of certain larvae of ants and termites that produce secretions attractive to the workers.

exude v. [L. *exsudo*, discharge by sweating] To ooze moisture or other liquids through minute openings.

exumbilicate a. [L. *ex*, out of; *umbilicus*, navel] Lacking an umbilicus.

exumbrella n. [L. *ex*, out of; dim. *umbra*, shade] (CNID: Scyphozoa) The convex aboral surface of a medusa or jellyfish. see **subumbrella**.

exuvia n.; n.pl. **exuviae** [L. *exuvia*, cast] The cast parts of the cuticle; cuticle shed at a molt; usually used only in the plural.

exuvial glands Certain epidermal glands associated with the molting fluid during ecdysis at molting.

exuvial space (ARTHRO: Insecta) An area between the epidermis and the cuticle into which the molting enzymes are secreted after apolysis.

exuviate v. [L. *exuvia*, cast] To cast skin or shell; to molt.

eye n. [A.S. *eage*, eye] An organ of sight; a photoreceptor; a compound eye; an ocellus.

eye-bridge (ARTHRO: Insecta) In Diptera, eyes dorsally joined above the antennae by a narrow line of facets.

eye brush see **prosartema**

eye cap (ARTHRO: Insecta) In Lepidoptera, a structure overhanging or capping the compound eye.

eyespot n.pl. [A.S. *eage*, eye; ME. *spotte*, spotted] Pigmented areas in many invertebrates to which are attributed various functions: a simple eye or visual organ (ocellus); intimidation of predators; to deflect attention to the least vulnerable parts of the body; a sensory organ.

eyestalk see **ocular peduncle**