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# Online Dictionary of Invertebrate Zoology: M

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# M

**macerate** v. [L. *macerare*, to soften] To waste away; to soften or wear away.

**machopolyp, machozoid** see **dactylozoid**

**macraner** n. [Gr. *makros*, large; *aner*, male] (ARTHRO: Insecta) A male ant of unusually large form.

**macrergate** n. [Gr. *makros*, large; *ergate*, worker] (ARTHRO: Insecta) In Formicidae, an unusually large worker.

**macrobiota** n. [Gr. *makros*, large; *bios*, life] Larger organisms in the soil, such as insects and earthworms. see **mesobiota**.

**macrocephalic female** (ARTHRO: Insecta) In Hymenoptera, a large female of Halictidae, that possesses a disproportionately large head, usually the egg layers of the colony.

**macrocerous cercaria** (PLATY: Trematoda) Cystophorous type cercaria with a long, simple, cylindrical tail.

**macrochaetae** n.pl. [Gr. *makros*, large; *chaite*, hair] Large bristles. see **chaetotaxy**.

**macrocilia** n.pl.; sing. **-ium** [Gr. *makros*, large; L. *cilium*, eyelash] (CTENO) In Beroida, 2,500-3,500 giant ciliary shafts interconnected and bound together on the mobile lips that function in food gathering.

**macrocnemes** n.pl. [Gr. *makros*, large; *kneme*, lower leg] (CNID: Anthozoa) In Actinaria, complete and filamented mesenteries in the first one or two cycles of simple tentacles; maybe fertile or sterile and possess acontia and strong retractors. see **microcnemes**.

**macrocyte** see **plasmatoocyte**

**macroesthetes** see **megalaesthetes**

**macroevolution** n. [Gr. *makros*, large; L. *evolvere*, to unroll] Evolutionary processes that extend through geologic eras; large scale evolution of new species and genera due to mutations that result in marked changes in chromosomal

patterns and reaction systems. see **microevolution**.

**macrofauna** n. [Gr. *makros*, large; L. *Faunus*, diety of herds and fields] 1. Widely distributed; from a macrohabitat. 2. Animals measured in centimeters rather than microscopic units.

**macrogamete** n. [Gr. *makros*, large; *gamete*, wife] A large, quiescent, female anisogamete. see **microgamete**.

**macrogametocyte** n. [Gr. *makros*, large; *gamein*, to marry; *kytos*, container] The infected human red blood cell that contains the female form of the malarial parasite which upon transfer to the Culicidae becomes a macrogamete.

**macrogamy** see **hologamy**

**macrogenesis** n. [Gr. *makros*, large; *genesis*, origin] The sudden origin of new species by saltation.

**macrogyne** n. [Gr. *makros*, large; *gyne*, woman] (ARTHRO: Insecta) In Formicidae, a female or queen of unusually large stature.

**macroic** see **meganephridia**

**macrolecithal** a. [Gr. *makros*, large; *lekethos*, egg yolk] With a large amount of yolk. see **microlecithal**.

**macromere** n. [Gr. *makros*, large; *meros*, part] A distinctly large cell resulting from unequal cleavages during early embryology.

**macromesentery** n. [Gr. *makros*, large; *mesos*, middle; *enteron*, gut] (CNID: Anthozoa) One of the larger complete mesenteries.

**macromitosome** n. [Gr. *makros*, large; *mitos*, thread; *soma*, body] (ARTHRO: Insecta) The paranucleus as seen in Lepidoptera.

**macromolecule** n. [Gr. *makros*, large; L. *moles*, mass] Very large molecules such as protein, cellulose, starch, etc.

**macromutation** n. [Gr. *makros*, large; *mutare*, to change] Theory of instantaneous evolution of new taxa by a mutation that establishes reproductive isolation at once.

**macronotal** a. [Gr. *makros*, large; *notos*, back] (ARTHRO: Insecta) Having a large *thorax*, as a queen ant.

**macronucleocyte** see **prohemocyte**

**macrophage** n. [Gr. *makros*, large; *phagein*, to eat] A large phagocytic cell of the body.

**macrophagous** a. [Gr. *makros*, large; *phagein*, to eat] Feeding on large objects. see **microphagous**.

**macrophthalmic** a. [Gr. *makros*, large; *ophthalmos*, eye] Having large eyes; having eyes larger than normal.

**macroplankton** n. [Gr. *makros*, large; *planktos*, wandering] Large organisms such as jellyfish that drift with the currents.

**macropore** see **megalopore**

**macropseudogyne** see **pseudogyne**

**macropterous** a. [Gr. *makros*, large; *pteron*, wing] (ARTHRO: Insecta) Having a long or large wing. see **brachypterous**.

**macroscelere** see **megasclere**

**macroscopic, macroscopical** a. [Gr. *makros*, large; *skopein*, to view] Capable of being studied with the unaided eye; megascopic. see **microscopic**.

**macroseptum** n. [Gr. *makros*, large; L. *septum*, partition] 1. (CNID: Anthozoa) The variously functioning primary septum. 2. (NEMER) In asexual reproduction, a partition across the body marking the plane of subsequent fragmentation.

**macrosiphon** n. [Gr. *makros*, large; *siphon*, tube] (MOLL: Cephalopoda) Internal siphon of certain cuttlefishes, and all octopuses.

**macrosymbiont** n. [Gr. *makros*, large; *symbios*, living together] The larger of two symbiotic organisms.

**macrotaxonomy** n. [Gr. *makros*, large; *taxis*, arrangement] The classification of higher taxa.

**macrotrichia** n.pl.; sing. **-ium** [Gr. *makros*, large; *thrix*, hair] 1. The larger surface hairs. 2. (ARTHRO: Insecta) The large hairs on the wing membrane.

**macrotype** n. [Gr. *makros*, large; *typos*, type] (CNID: Anthozoa) Modified arrangement of mesenteries consisting mainly of macromesenteries. see **microtype**.

**macrurous** a. [Gr. *makros*, large; *oura*, tail] Long-tailed.

**macula** n.; pl. **maculae** [L. *macula*, spot] 1. A colored spot of rather large size. 2. A spot level with surrounding surface. 3. (BRYO: Stenolaemata) Prominences, and less commonly flat or depressed areas on colony surfaces regularly spaced among feeding zooids caused by clusters of a few polymorphs, and/or extrazoooidal skeleton. see **monticule**. 4. (MOLL: Cephalopoda) An oval spot on the wall of a statocyst to which a calcareous statolith is attached; gives information on position relative to gravity.

**maculate** a. [L. *macula*, spot] Splashed or spotted; blotched.

**madrepore** n. [L. *mater*, mother; Gr. *poros*, friable stone] (CNID) A stony, branched, reef building coral of the order Madreporia.

**madreporic plate** (ECHINOD: Asteroidea) An enlarged interradial plate on the disc, that connects the water vascular system to the sea.

**madreporite** n. [L. *mater*, mother; *porus*, pore] (ECHINOD) An oral or aboral perforated plate of the water-vascular system connecting with the stone canal; sieve plate.

**main bud** (BRYO: phylactolaemata) The largest of three bud primordia which occurs on every mature zooid, and is the first to form a new polypide.

**major gene** Controls production of qualitative phenotypic effects in contrast to its modifiers.

**major worker** (ARTHRO: Insecta) The largest worker subcaste in social insects; in Formicidae, usually specialized for defense and referred to as a soldier. see **media worker, minor worker**.

**mala** n.; pl. **malae** [L. *mala*, cheek, jaw] 1. A lobe; ridge or grinding surface. 2. (ARTHRO) *a.* Part of the maxilla of certain insects. *b.* Mandible of some myriapods.

**malacoid** a. [Gr. *malakos*, soft] Soft textured.

**malacology** n. [Gr. *malakos*, soft; *logos*, discourse] The branch of zoology dealing with mollusks, the animal inside the shell.

**malacophilous** a. [Gr. *malakos*, soft; *philius*, loving] (MOLL: Gastropoda) Being pollinated by the action of gastropods.

**malapophysis** n.; pl. **-ses** [L. *mala*, cheek, jaw; Gr. apophysis, projection] (ARTHRO: Chelicerata) In Acari, the paired anterior region of the infracapitulum.

**malar** a. [L. *mala*, cheek] Of or about the cheek region.

**malar cavity** (ARTHRO: Chelicerata) In Acari, interior of the malapophysis that connects to the pharynx.

**male** n. [L. *mas*, a man] An individual that produces sperm cells but not egg cells; designated by ♂.

**male-cell receptacle** (ARTHRO: Crustacea) In Rhizocephala, a pocket or pair of pockets within the mantle cavity of the female where cells of male cyprid undergo spermatogenesis.

**male ducts, male gonoducts** see **sperm ducts**

**male funnel** (ANN: Oligochaeta) A funnel or rosette-shaped enlargement of the ental end of the sperm duct for passage of sperm through the central aperture into lumen of the duct on their way to the exterior.

**malella** n. [L. dim. *mala*, jaw] (ARTHRO: Symphyla) The distal toothed process on the outer stipes of the deutomala of some myriapods.

**male tube** (ECHI) A sexually maturing area in which developing males are housed for one to two week inside the female.

**malleate mastax** (ROTIF) Chewing apparatus; rami untoothed and unci are curved plates with prong type teeth.

**malleations** n.pl. [L. dim. *malleus*, hammer] A hammered appearance.

**malleolus** n.; pl. **-li** [L. dim. *malleus*, hammer] 1. (ARTHRO: Chelicerata) In Solpugida, 3 to 5 innervated appendages on the coxae and trochanter of the fourth leg; function uncertain; racket-organs. 2. (ARTHRO: Insecta) see **halteres**.

**malleoramate mastax** (ROTIF: Monogononta) Chewing apparatus, variant of the ramate type of mastax occurring in the order Flosculariaceae.

**malleus** n.; pl. **malli** [L. *malleus*, hammer] (ROTIF) Unci and manubria of the mastax, collectively.

**Malpighian tubules** (ARTHRO) Long, thin excretory tubules

extending into the body cavity from the posterior region of the gut in insects, arachnids and myriapods.

**maltha** see **mesogloea**

**mamelon** n. [F. *mamelon*, protuberance] 1. (ECHINOD: Echinoidea) Terminal knob on the boss that articulates with the spine on the test. 2. (NEMATA: Secernentea) Two or three ventral, serrated projections on the ventral surface of the male of the genus *Syphacia*; function unknown.

**mammillate** a. [L. *mamilla*, small breast] Having rounded protuberances or wart-like projections; mammiform; mambose.

**manca** n. [L. *mancus*, imperfect] (ARTHRO: Crustacea) In Peracarida, a juvenile or postlarva that lack the last thoracopod when released from the marsupium.

**manchette** n. [F. *manchette*, cuff] (NEMATA) Line of demarcation between the cheilostome and esophastome; nema's collar; sleeve.

**mancoid stage** (ARTHRO: Crustacea) Postlarval stage in Leptostraca, with rudimentary 4th pleopod.

**mandible** n. [L. *mandibula*, jaw] 1. A jaw. 2. (ANN: Polychaeta) The ventral chitinous plates or rods, maybe dentate, against which the maxilla work. 3. (ARTHRO: Crustacea) One of the third pair of cephalic appendages. 4. (ARTHRO: Diplopoda) The first pair of jaws, consisting of *cardo*, stipes and gnathal lobe. 5. (ARTHRO: Insecta) One of the variously modified anterior pair of paired mouthpart structures. 6. (BRYO) A modified orificial wall of the avicularium. see **operculum**.

**mandibular fossa** (ARTHRO: Insecta) The dorsal articulation of the mandible.

**mandibular gland** (ARTHRO: Insecta) A sac-like reservoir usually paired, and partially or completely lined by secretory cells, opening in the mesal junction of the mandible with the head; functioning as alarm pheromone, fungistatic agent, aggregation pheromone, sex pheromone, territory defending secretion, location of food and/or the 'burning' secretion of the 'fire bees'; in larval Lepidoptera, large and secrete saliva (with the normal salivary glands specialized

for silk production).

**mandibular palp** 1. (ARTHRO: Crustacea) In Cirripedia, distally articulated part of the mandible functioning in feeding or cleaning; in Acrothoracica associated with the mandibular gnathobase; setose lobe on labrum. 2. (ARTHRO: Insecta) see prostheca.

**mandibular plates** (ARTHRO: Insecta) In Hemiptera, plates between and attached to the mandibular stylets and the ventral surface of the sucking pump.

**mandibular pouch** (ARTHRO: Insecta) In Thysanoptera, a ventrally oriented cone formed by the labrum and labium containing maxillary stylets and a single (left) functional mandible, emerging at the apex.

**mandibular ring** (NEMATA: Adenophorea) In Enoplida, transverse extension of the mandibles in the buccal cavity.

**mandibular scar** (ARTHRO: Insecta) In certain Coleoptera pupae, round or oval areas with raised margins that serve as supports for the deciduous provisional mandibles.

**mandibular sclerite** (ARTHRO: Insecta) In some larval Diptera, mouth-hooks articulating basally with the intermediate (hypostomal) sclerites.

**Mandibulata** n. [L. *mandibula*, jaw] Formerly a subphylum of arthropods including Myriapoda, Crustacea and Insecta.

**mandibulate** a. [L. *mandibula*, jaw] Having jaws fitted for chewing; mandibuliform.

**manducate** v. [L. *manducare*, to chew] To bite; eat.

**manica** n. [L. *manica*, sleeve] (ARTHRO: Insecta) In Lepidoptera, the inner layer of the anellus, that fastens around the aedeagus.

**maniform** a. [L. *manus*, hand; *forma*, shape] Hand-shaped.

**manitruncus** see **prothorax**

**manna** n. [Gr. *manna*, morsel or honey dew] (ARTHRO: Insecta) Honeydew (90-95% sugar) produced by certain coccids, used as human food.

**manometabola** see **hemimetabolous metamorphosis**

**mantle** n. [L. *mantellum*, cloak] 1. Something that enfolds,

envelopes or covers. 2. (ARTHRO: Crustacea) In thoracic Cirripedia, membranous covering of the body, often strengthened by calcareous plates. 3. (BRACHIO) Prolongation of the body wall as fold of ectodermal epithelium. 4. (BRYO: Phylactolaemata) Ciliated fold of colony wall covering one to four small, sexually produced colony progenitor polypides. 5. (MOLL) A membranous covering that secretes the shell; the marginal glands produce the periostracum; pallium.

**mantle canal** (BRACHIO) One of several flattened, tube-like extensions of the body cavity into each mantle lobe.

**mantle cavity** Specialized cavity found in certain mollusks, brachiopods and crustaceans lined with epidermis and usually exposed to sea or fresh water, or air, due to habitat; may or may not contain part of the viscera; pallial chamber or cavity; mantle chamber.

**mantle cells** (ARTHRO: Insecta) Corneagenous cells of the eye enclosing the retina.

**mantle fold** (MOLL: Bivalvia) In oysters, one of 3 small folds at the edge of a mantle lobe.

**mantle groove** (BRACHIO) Site of proliferation of the periostracum and bears the setae.

**mantle lobe** 1. (BRACHIO) Lobe of the body wall that secretes and lines the valves; in some, caecae project into perforations (punctae) in the shell serving as food repositories of glycoproteins and mucroproteins, inhibitors of boring organisms, and accessory respiratory structures. 2. (MOLL: Bivalvia) In oysters, one of 2 thin epithelial extensions of the mantle adjoining the valve.

**mantle papilla** see **caecum**

**mantle skirt** (MOLL) Roof of the mantle cavity formed by the projection of the mantle from the edge of the visceral mass.

**manubrium** n. [L. *manubrium*, handle] 1. (ARTHRO: Crustacea) In fish parasitic Copepoda, the handle or distal part of the attachment organ. 2. (ARTHRO: Insecta) The basal part of the furcula of collembolan springtails; part of the sternum associated with the cavity of the prothorax of Coleoptera.

3. (CNID: Hydrozoa) The extension between the stomach cavity and the mouth of a medusae or polyp; also called gullet or esophagus. 4. (NEMATA) The proximal portion of a spicule; a capitulum. 5. (ROTIF) One of two paired trophi in the mastax.

**manus** n. [L. *manus*, hand] 1. The hand. 2. (ARTHRO: Crustacea) Broad proximal part of a propodal cheliped of a Decapoda. 3. (ARTHRO: Insecta) Formerly applied to the anterior tarsus. 4. (MOLL: Cephalopoda) see **tentacle**.

**manuscript name** An unpublished scientific name. see **nomen nudum**.

**marble gall** (ARTHRO: Insecta) The hard spherical gall of Cynipidae *Adleria kollari*, usually on oak that produce the agamic generation of that species.

**margaritaceous** a. [Gr. margarites, a pearl] Pearly in texture; nacreous.

**margin** n. [L. *margo*, border] 1. A border or an edge. 2. (ARTHRO: Insecta) The edge of a wing. 3. (CNID: Anthozoa) The junction of the oral disk and collum of a sea anemone. 4. (MOLL) The edge of a shell. **marginal** a.

**marginal bodies** (PLATY: Trematoda) In Aspidogastrea, sensory pits or short tentacles between marginal loculi of the opisthaptor.

**marginal bristles** (ARTHRO: Insecta) In Diptera, abdominal bristles inserted dorsally on the margins of the segment.

**marginal cell** (ARTHRO: Insecta) A cell in the distal part of the wing bordering the costal margin.

**marginalia** n. [L. *margo*, border] (PORIF) Spicules protruding upward around an oscule.

**marginal nuclei** (NEMATA) Nuclei of marginal cells in the nematode esophagus; believed to lay down the fibers from the apex of the lateral arm to the basement membrane of the esophagus, or to secrete the cuticular lining of the esophagus, or both.

**marginal tubes** (NEMATA) The distal cylindrical endings of some esophageal radii, other forms have convergent terminals.

**marginal carina** (MOLL: Bivalvia) A ridge running from umbo

to posteroventral angle of the shell delimiting the posterior area in Trigoniacea.

**marginal veins** (ARTHRO: Insecta) A vein running along the front margin of a wing that gives off a stigmal vein.

**marginate** a. [L. *margo*, border] Having a distinct margin in appearance or structure.

**marine** a. [L. *mare*, sea] Pertaining to or inhabiting the sea, ocean, or other salt waters.

**marita** n. [L. *maritus*, conjugal] (PLATY: Trematoda) A sexually mature fluke.

**marker gene** Genetic marker; gene of known position and conspicuous in its action.

**marmorate** a. [L. *marmor*, marble] Having color or veined like marble.

**marsh** n. [A.S. *mersc*, marsh] An area of wet soil.

**marsupium** n. [L. *marsupium*, bag] 1. Brood pouch. 2. (ARTHRO: Crustacea) The oostegite in Peracarida, or brood chamber or pouch in others. 3. (ARTHRO: Insecta) In marsupial coccids, a waxen ovisac, longer than the body, filled with eggs that hatch while the insect is still mobile. 4. (BRYO) The ovicell. 5. (CNID: Hydrozoa) In some, the internal pouch borne by the blastostyle. 6. (ECHINOD) *a.* In some, the cardiac stomach. *b.* In Viviparous Crinoidea, present on the base of the pinnules adjacent to the gonad and having an external opening; a brood chamber.

**mask** n. [Ar. *maskhara*, buffoon] (ARTHRO: Insecta) In dragonfly nymphs, the prehensile labium that conceals the other mouthparts. **masked** a.

**masked pupa** see **pupa larvata**

**mass communication** (ARTHRO: Insecta) In Hymenoptera, transfer of information among large groups of individuals which cannot be accounted for by one to one communication.

**mass provisioning** (ARTHRO: Insecta) Social behavior of solitary bees and wasps by storing cells with sufficient food to satisfy their developing offspring and closing them down before the eggs hatch. see **progressive provisioning**.

**mastax** n. [Gr. *mastax*, jaws] (ROTIF) A muscular rounded, trilobed, or elongate organ containing trophi; in suspension feeders adapted for grinding, in carnivores modified as forceps that can be projected from the mouth to seize prey; the pharynx.

**mastication** n. [L. *mastecare*, to chew] The act of chewing; to grind or crush.

**masticatory process** see **gnathal lobe**

**masticatory stomach** see **gastric mill**

**masticomorphic** a. [L. *mastecare*, to chew; Gr. *morphos*, form] Designed for chewing.

**mastidia** n.pl.; sing. **mastidion** [Gr. *mastos*, breast] (ARTHRO: Chelicerata) Small, conical, nipple-like tubercles on the front of the chelicerae of small spiders.

**mastigobranch, mastigobranchia** n. [Gr. *mastix*, whip; *branchos*, gill] (ARTHRO: Crustacea) A slender respiratory process at the base of the epipod.

**mastigophore** n. [Gr. *mastix*, whip; *pherein*, to bear] (CNID: Anthozoa) A nematocyst with a cylindrical hempe and tube extending beyond the hempe; microbasic with hempe not more than 3 times the capsule length; macrobasic with hempe 4 or more times the capsule length.

**mastigopus larva** (ARTHRO: Crustacea) Larva in the megalopa stage found among some Decapoda.

**maternal inheritance** Inheritance controlled by maternal extra chromosomal determinants.

**maternal zooid** (BRYO: Gymnolaemata) An autozooid that extrudes eggs.

**mating plug** (ARTHRO: Insecta) A plug formed from the accessory gland secretions of the male, deposited in the genital chamber of the female, thought to prevent loss of sperm in some Culicidae and Lepidoptera; also called spermatophragma. see **sphragis**.

**mating spines** (ARTHRO: Insecta) In female mayflies, compound conical spines covering the lower surface of the egg valve.

**matricidal hatching** (NEMATA) Intrauterine larval development

leading to the destruction of the female by the larvae or juveniles; eclosion intrauterine.

**matrifilial** a. [L. *mater*, mother; *filia*, daughter] (ARTHRO: Insecta) In Apis, having colonies made up of mothers and daughters.

**matrix** n.; pl. **matrices** [L. *mater*, mother] 1. That which gives form, origin or foundation to something enclosed or embedded in it. 2. (NEMATA: Secernentea) The gelatinous substance secreted by some female nematodes into which eggs are deposited to form an egg mass. 3. (PLATY) In Cestoda and Trematoda, a living interface of interacting photoplasmic layer; part of the syncytium of the tegument. 4. (PORIF) The non-cellular ground material of a sponge in which the cellular elements are dispersed.

**matrix glands** (NEMATA: Secernentea) An excretory cell or modified rectal glands that secrete the gelatinous matrix through the anus or excretory pore and into which eggs may be imbedded.

**matrix layer** (NEMATA) Historically, a cuticular stratum of spongy material between the fibrillar layer and the boundary layer.

**matrone** n. [L. *mater*, mother] (ARTHRO: Insecta) Macromolecular components (proteins) contained in the seminal fluid of some male Culicidae that inhibits further insemination of the female.

**maturation** n. [L. *maturus*, ripe] The act or process pertaining to the developmental steps leading to reproducing adults.

**maturation divisions** A series of nuclear divisions in the formation of the gametes in which the chromosome number, through meiosis is reduced from diploid to haploid.

**maturation feeding** (ARTHRO: Insecta) Feeding required by some insects before their gonads can mature to produce eggs.

**maturation zone** In males of many invertebrates, that part of the genital follicle below the germarium in which each spermatocyte undergoes the two meiotic divisions to produce spermatids. see **transformation zones**.

**mature region** see **exozone**

**maxaponta** n. [L. *maxilla*, jaw; *pons*, bridge] (ARTHRO: Insecta) A bridge formed by a midline fusion of the lower maxillariae and the postgenae. **maxapontal** a.

**maxilla** n.; pl. **-llae** [L. *maxilla*, jaw] 1. (ANN: Polychaeta) The large, hook-shaped, dorsal chitinous jaw plate. 2. (ARTHRO) In most arthropods, one of the paired mouth-part structures posterior to the mandibles or jaws; third pair of head appendages. 3. (ARTHRO: Diplopoda) One of the paired second jaws to form the gnathochilarium.

**maxillary** a. [L. *maxilla*, jaw] (ARTHRO) Of or pertaining to the maxilla.

**maxillary carrier** (ANN: Polychaeta) A posterior support structure for the maxilla.

**maxillary glands** (ARTHRO) Glands belonging to the maxillary segment, possibly functioning in the lubrication of the mouthparts.

**maxillary guides** (ARTHRO: Insecta) In Anoplura, paired structures of wrinkled sucking lice arising from the maxillary appendages that function as guides for the dorsal stylet.

**maxillary palp/palpus**; pl. **-pi** (ARTHRO: Insecta) Small sensory organ arising from the *maxilla*, used to test quality of food. see **labial palp**.

**maxillary segment** see **maxillulae**

**maxillary stylets** (ARTHRO: Insecta) In Hemiptera, the inner pair of stylets of the trophic sac.

**maxillary tentacle** (ARTHRO: Insecta) In female Tegeticula Lepidoptera, an inner elongate lobe of the *maxilla*, adapted for holding a large mass of pollen; perhaps palpiifers.

**maxilliped, maxillipede, maxillipe** a. [L. *maxilla*, jaw; *pes*, foot] (ARTHRO: Crustacea) The paired appendages on thoracic somites 1-3 posterior to the maxillae, that usually function in feeding; sometimes adapted for other functions such as prehension in parasitic forms.

**maxillulae** n.pl.; sing. **-ula** [L. dim. *maxilla*, jaw] 1. (ARTHRO: Crustacea) The first maxillae having more than one pair of maxillae; paragnath. 2. (ARTHRO: Insecta) In primitive

forms, the non-functional appendages between mandibles and first maxillae. see **superlinguae**.

**maxim** n. [L. *maximus*, greatest] (ARTHRO: Insecta) In Formicidae, a major worker or one of the soldier caste.

**mayrian furrow** see **notautilx**

**meatal cleft** (ARTHRO: Insecta) A slit or line on the trumpet of some mosquito pupae extending into the meatus from the spiracular opening, facilitating enlargement of the opening at the surface of the water.

**meatus** n. [L. *metus*, passage] A channel or duct.

**mechanical isolation** Reproductive isolation due to mechanical incompatibility of male and female genitalia.

**mechanoreceptor** n. [Gr. *mechane*, contrivance; L. *recipere*, to receive] Specialized structures that perceive any mechanical distortion of the body, i.e., touch, vibrations, altitude and gravity.

**meconida** n.pl.; sing. **-ium** [Gr. *mekon*, poppy] 1. (ARTHRO: Insecta) Waste products of pupal metabolism that are discharged shortly after adult emergence. 2. (CNID: Hydrozoa) Medusoid gonophores, sessile or pedicellate, which upon emergence from the gonangium act as external brood sacs. **meconium** n.

**media** n. [L. *medius*, middle] 1. The middle structure. 2. (ARTHRO: Insecta) The longitudinal vein between the cubitus and the radius of the wing. **medial** a.

**mediad** adv. [L. *medius*, middle; *ad*, toward] Toward the median plane or line; mesad; admedial.

**medial cross vein** (ARTHRO: Insecta) A cross vein connecting two branches of the media of the wing.

**medial-cubital cross vein** (ARTHRO: Insecta) A cross vein of an insect wing between the posterior medial vein and the anterior cubital vein.

**median** a. [L. *medius*, middle] In the middle; along the midline of the body; middle variate when variates are arranged in order of magnitude.

**median bulb** see **metacarpus**

**median caudal nerve** (NEMATA) A nerve extending from the dorsorectal ganglion to the tail.

**median cercus** see **urogomphus**

**median cord** (ARTHRO: Insecta) An embryonic chain of cells derived from the ectoderm lining the neural groove.

**median dorsal plate** (ARTHRO: Crustacea) In some Peracardia, an elongate plate separating carapace valves posterodorsally.

**median esophageal bulb** see **metacarpus**

**median eye** see **nauplius eye**

**median lamina** see **median wall**

**median latus** (ARTHRO: Crustacea) In Lepadomorpha, a plate between the rostral and carinal latera in forms with paired latera in one whorl. see **lateral**.

**median ligament** (ARTHRO: Insecta) A common thread formed by the ovarioles of opposite sides that help maintain the ovaries in position and is attached to the body-wall, the fat-body or the pericardial diaphragm.

**median oviduct** see **common oviduct**

**median segment** (ARTHRO: Insecta) The basal segment of the abdomen when it is fused with the metathorax during the change from larva to pupa. see **propodeum**, **epinotum**.

**median tubuli** (BRYO: Stenolaemata) Aligned pustules or mural lacunae in a laminated skeleton.

**median valve** see **intermediate valve**

**median wall** (BRYO: Stenolaemata) Erect colony wall parallel to the growth direction from which zooids bud to form a bifoliate colony.

**mediator** n. [L. *medius*, middle] Association, internuncial, neuron; chemical such as a hormone that controls or modifies a metabolic process.

**media worker** (ARTHRO: Insecta) In Formicidae, an individual belonging to the medium-size subcaste in a polymorphic series of three or more worker subcastes. see **minor worker**, **major worker**.

**medio-cubital cross vein** see **medial-cubital cross vein**

**mediolateral nerve cord** (NEMATA) Several nerves extending from the median and posterior externolateral ganglia and the posterior internolateral ganglia to the lumbar ganglia.

**mediotergite** n. [L. *medius*, middle; *tergum*, back] (ARTHRO: Insecta) In Diptera, the median region of the mesopostnotum.

**medioventral** a. [L. *medius*, middle; *venter*, belly] In the middle ventral line.

**mediproboscis** see **haustellum**

**medulla** n. [L. *medulla*, marrow, pith] 1. Central portion of an organ. 2. (ARTHRO) Apical lobes of the brain; the central synaptic region; epipticon; medulla externa; external medullary mass.

**medulla externa** see **medulla**

**medulla interna** (ARTHRO: Insecta) The lobular complex.

**medulla X-organ, medulla terminalis ganglionic X-organ, MTGX** (ARTHRO: Crustacea) A group of neurosecretory cells in the medulla terminalis; the main source of eyestalk hormones.

**medusa** n.; pl. **-sae** [L. *Medusa*, a gorgon of mythology] (CNID) The free swimming umbrella-like forms.

**megabenthos** see **abysobenthos**

**megacephalic** a. [Gr. *megas*, large; *kephale*, head] Having an abnormally large head. see **microcephalic**, **mesocephalic**.

**megaclad** n. [Gr. *megas*, large; *klados*, branch] (PORIF) In megascleres, a relatively large smooth desma; megaclone.

**megaclone** see **megaclad**

**megadrile** n. [Gr. *megas*, large; *drilos*, worm] (ANN: Oligochaeta) Terrestrial forms; not used systematically, although recognized as a general term. see **microdrile**.

**megalaesthetes** n.pl. [Gr. *megas*, large; *aisthesis*, sensation] (MOLL: Polyplacophora) Large sensory organs terminating in the tegmentum in the forms of eyes with cornea, lens, pigment layers, iris and retina. see **micraesthetes**.

**megalolecithal** see **macrolecithal**

**megalopa stage** (ARTHRO: Crustacea) 1. Larvae of Malacostraca with functional pleopods; also referred to as glaucothoe. 2. First postlarval stage in development of Eucarida, not present in other crustaceans. 3. Originally applied to Brachyura larvae with large stalked eyes and functional pleopods.

**megalopore, megapore** n. [Gr. *me-gas*, large; *poros*, pore] (MOLL: Polyplacophora) Large pore in the dorsal plate; associated with aesthete.

**megalops** see **megalopa stage**

**megamere** see **macromere**

**megameric** a. [Gr. *me-gas*, large; *meros*, part] With relatively large parts; autosomes with large heterochromatic segments.

**meganephridia** n.pl.; sing. **-ium** [Gr. *me-gas*, large; dim. *nephros*, kidney] (ANN: Oligochaeta) A pair of large nephridia in each segment of the body except, for first and last segments; holonephridia; holoic; macroic. see **nephridium, micronephridia**.

**megaplankton** see **macroplankton**

**me-gasclere** n. [Gr. *me-gas*, large; *skleros*, hard] (PORIF) A large structural spicule. see **microscelere**.

**me-gascolecin** n. [Gr. *me-gas*, large; *skolex*, worm] (ANN: Oligochaeta) The single pair of prostates, tubular or racemose, opened to the exterior, along side of or together with the sperm ducts.

**me-gascopic** see **macroscopic**

**megetic** a. [Gr. *me-gas*, large] Pertaining to size variations in polymorphic forms. see **epimegetic, eumegetic, hypomegetic**.

**Mehlis' glands** (PLATY: Trematoda) Unicellular mucous and serous glands surrounding the ootype in the reproductive system.

**meiocyte** n. [Gr. *meion*, smaller; *kytos*, container] Primary oocytes and spermatocytes.

**meiofauna** n. [Gr. *meion*, smaller; L. *Faunus*, diety of herds and fields] Microscopic and small macroscopic fauna on the

sea bottom.

**meiolecithal** a. [Gr. *meion*, smaller; *lekithos*, egg yolk] Having little yolk.

**meiomery** n. [Gr. *meion*, smaller; *meros*, part] The condition of possessing fewer than the normal number of parts.

**meiosis** n.; pl. **meiotes** [Gr. *meiosis*, to make smaller] Two successive cell divisions in the developing germ cells characterized by the pairing and segregation of homologous chromosomes, resulting in reduction from a diploid number to a haploid one. **meiotic** a.

**meiotic drive** A meiotic mechanism of cell division resulting in two kinds of gametes produced by a heterozygote with unequal recovery.

**meiotrichy** n. [Gr. *meion*, smaller; *thrix*, hair] Loss of setae in ontogenetic development or of homologous setae in natural groups.

**melania** n. [Gr. *melas*, black] Blackness.

**melanin** n. [Gr. *melas*, black] A term for a group of chemically ill-defined pigments, often found associated with protein, produced by insects and marine animals responsible for colors from brown to black. **melanoid** a.

**melanism** n. [Gr. *melas*, black; *ismos*, denoting condition] 1. An excessive darkening of color owing to increased amounts of black pigment. 2. A certain percentage of individuals in a population that give rise to polymorphism. see **industrial melanism, albinism**.

**melanoid** a. [Gr. *melas*, black; *eidōs*, like] Looking black or dark.

**meliphagous** a. [Gr. *meli*, honey; *phagein*, to eat] Honey-eating; melivorous.

**melittology** n. [Gr. *melitta*, honeybee; *logos*, discourse] The study of bees.

**melittophily** n. [Gr. *melitta*, honeybee; *philos*, love] (ARTHRO: Insecta) 1. A symbiont of social bees. 2. Any organism that must spend a portion of its life cycle in a bee colony.

**melivorous** see **meliphagous**

- mellifera** n. [L. *mel*, honey; *ferre*, to bear] (ARTHRO: Insecta) Honey-makers; bees as a whole.
- melliferous** a. [L. *mel*, honey; *ferre*, to bear] Honey producing.
- mellisugent** a. [L. *mel*, honey; *sugere*, to suck] Honey-sucking.
- member** n. [L. *membrum*, part] A limb or organ.
- membrane** n. [L. *membrana*, skin] A thin film of tissue.
- membranization** n. [L. *membrana*, skin] Changed into a membrane.
- membranous** a. [L. *membrana*, skin] Consisting of membranes; soft and pliable; membranaceous.
- membranous sac** (BRYO: Stenolaemata) Membrane surrounding digestive and reproductive systems of zooid; the entosaccal and exosaccal cavity.
- membranule, membranula** n. [L. dim. *membrana*, skin] (ARTHRO: Insecta) A small semi-opaque membrane on the base of the hind wing of certain Odonata.
- Mendelian character** Character formed under the control of chromosomal genes.
- Mendelian inheritance** Mode of inheritance from chromosomal genes.
- Mendelian mutation** True gene mutation and recombination.
- Mendelian population** A population with unrestricted interbreeding of organisms sharing a common gene pool.
- Mendelism** n. [Gregor Mendel] Particulate inheritance of chromosomal genes.
- Mendel's laws of inheritance** Genetic principles proposed by Mendel; law of segregation and law of independent assortment.
- meniscoidal** a. [Gr. *meniskos*, a crescent] 1. Crescent-shaped lens; concavo-convex lens; one side convex and the other concave. 2. With one side concave, crescent shape of water in a tube, or convex, crescent-shaped as with mercury in a tube.
- menognath** n. [Gr. *menein*, to remain; *gnathos*, jaw] (AR-

THRO: Insecta) Having biting mandibles in both larval and adult stages. menognathous a. see **Menorhyncha, metagnath**.

**Menorhyncha** n.pl. [Gr. *menein*, to remain; *rhynchos*, snout] (ARTHRO: Insecta) A former division of insects composed of those who ingest by suction in both larval and adult stages. see **menognath and metagnath**.

**menotaxis** n. [Gr. *menein*, to remain; *taxis*, arrangement] Orientation in a fixed direction with respect to the stimulus.

**mental** a. [L. *mentum*, chin] Of or pertaining to the mentum.

**mental plate** (ARTHRO: Insecta) In Lepidoptera, representing the basal sclerites of the labium. see **labial plate**.

**mental setae** (ARTHRO: Insecta) Setae located on the mentum.

**mental suture** (ARTHRO: Insecta) A distinct sclerite defined by a suture intervening between the mentum and the gula.

**mentasuture** see **mental suture**

**mentigerous** a. [L. *mentum*, chin; *gerere*, to bear] (ARTHRO: Insecta) Having a mentum.

**mentum** n. [L. *mentum*, chin] 1. (ARTHRO: Diplopoda) A median, slightly triangular sclerite in the gnathochilarium. 2. (ARTHRO: Insecta) *a*. The distal sclerite of a typical insect *labium*, bearing the palps and the ligula. *b*. In bees, the second joint bearing the palps, paraglossa and ligula.

**meraspis larva** (ARTHRO: Trilobita) The second larval stage with the pygidium located behind the cephalon; the thoracic region will appear during succeeding molts. see **holaspis larva**.

**merdivorous** see **scatophagous**

**mereopodite** see **merus**

**meridional canal** (CTENO) One of the eight canals extending in an oral-aboral direction under the external surface; part of the gastrovascular system; in Pleurobranchia it emits a greenish-blue luminescence.

**meristal annuli** (ARTHRO: Insecta) In Orthoptera and Odonata, annuli derived from, and adjacent to, the meriston that di-

vides.

**meriston** n. [L. *merizein*, to divide] (ARTHRO: Insecta) The most basal annulus of the antennal flagellum.

**meritrichy** a. [Gr. *meros*, part; *trichos*, hair] (ARTHRO: Chelicerata) In Acari, chaetotaxy characterized by a reduction in number and size of setae from the holotrichous form.

**mermithaner** n. [Gr. *mermis*, cord; *aner*, male] (ARTHRO: Insecta) Male Formicidae parasitized by the nematode *Mermis*; a mermithophore.

**mermithergate** n. [Gr. *mermis*, cord; *ergates*, worker] (ARTHRO: Insecta) In Formicidae, a worker parasitized by the nematode *Mermis*; a mermithophore.

**mermithized** a. [Gr. *mermis*, cord] (NEMATA) Pertaining to parasitism by nematodes of the genus *Mermis*.

**mermithodinergate** see **mermithostratiote**

**mermithogyne** n. [Gr. *mermis*, cord; *gyne*, woman] (ARTHRO: Insecta) A female Formicidae parasitized by the nematode *Mermis*; a mermithophore.

**mermithophore** n. [Gr. *mermis*, cord; *pherein*, to carry] (NEMATA) An anomalous form resulting from parasitism by the nematode *Mermis*; a mermithaner, mermithergate, mermithogyne, mermithostratiote.

**mermithostratiote** n. [Gr. *mermis*, cord; *stratiotes*, soldier] (ARTHRO: Insecta) Soldier Formicidae parasitized by the nematode *Mermis*; a mermithophore.

**mermitoid esophagus** see **stichosome**

**meroandry** n. [Gr. *meros*, part; *aner*, male] The condition of possessing less than the normal number of testes.

**meroandric** a. see **holandry**.

**meroblastic cleavage** Cleavage of a heavily yolked egg in which only the egg cell divides, leaving the yolk undivided.

**merocerite** n. [Gr. *meros*, part; *keras*, horn] (ARTHRO: Crustacea) The 4th segment of an antenna.

**merocrine** a. [Gr. *meros*, part; *krinein*, to separate] The passing of a secretion by a gland in which the nucleus remains intact and thereby can recover. see **holocrine**.

**merognathite** see **merus**

**meroic** a. [Gr. *meros*, part] (ANN: Oligochaeta) Pertaining to the excretory system with nephridial tubules formed by longitudinal or transverse fragmentation of the original single pair of embryonic rudiments of each segment.

**meroistic ovariole** (ARTHRO: Insecta) An ovariole in which nurse cells, or trophocytes are present; telotrophic (acrotrophic) and polytrophic types; panoistic; meroistic egg tube.

**meromyarian** a. [Gr. *meros*, part; *mys*, muscle] (NEMATA) Muscle arrangement with only a few, frequently only two, flat muscle cells seen in each quadrant of a cross section of the animal.

**meron** n. [Gr. *meros*, upper thigh] (ARTHRO: Insecta) The posterior part of the basicoxite; in higher Diptera, separated from the coxa and forms part of the thoracic wall (mesomeron, metameron).

**meronephridium** see **micronephridia**

**meropleuron** n.; pl. -**ura** [Gr. *meros*, part; *pleuron*, side] (ARTHRO: Insecta) A sclerite composed of the meron of the coxa and the lower region of the epimeron.

**meropodite** n. [Gr. *meros*, part; *pous* foot] (ARTHRO) 1. The fourth segment of a generalized limb. 2. The femur in Chelicerata and Insecta. 3. For Crustacea see **merus**.

**merosome** n. [Gr. *meros*, part; *soma*, body] A body segment; a somite or metamere.

**merospermy** n. [Gr. *meros*, part; *sperma*, seed] Fusion of an egg cell with a sperm that has lost its nucleus; therefore, it cannot take part in karyogamy with the egg nucleus.

**merus** n. [Gr. *meros*, part] (ARTHRO: Crustacea) The fourth segment of the mouth part, articulating with the ischium anteriorly and carpus posteriorly; a meropodite.

**mesad, mesiad** adv. [Gr. *mesos*, middle; *ad*, toward] Toward the midline of the body.

**mesadenia** n.pl.; sing. **mesadene** [Gr. *mesos*, middle; *aden*, gland] (ARTHRO: Insecta) 1. Mesodermal accessory glands of male genitalia. 2. In some male Heteroptera, paired,

highly coiled tubules that run side by side to enter anteriorly the bulbus ejaculatorius or closely associated with the short vasa deferentia.

**mesal, mesial** a. [Gr. *mesos*, middle] At or near the midline of the body.

**mesal penellipse** (ARTHRO: Insecta) In larvae, a series of crochets covering at least the mesal half of the proleg, incomplete laterally. see **penellipse**.

**mesanapleural suture** (ARTHRO: Insecta) In Diptera, a suture between the mesanepisternum and the meskatepisternum.

**mesanepisternum** n. [Gr. *mesos*, middle; *ana*, up; *epi*, on; *sternon*, chest] (ARTHRO: Insecta) 1. In Diptera, the upper area of the mesepisternum separated from the meskatepisternum by the mesanapleural suture; sometimes divided into anterior and posterior by anepisternal cleft; the anepisternum. 2. In Odonata, the anepisternum.

**mesaxon** n. [Gr. *mesos*, middle; *axon*, axel] (ARTHRO: Insecta) The spiral arrangement of a Schwann cell around an axon; suspensory fold.

**mesenchymatous cell** see **hemocyte**

**mesenchyme, mesenchyma** n. [Gr. *mesos*, middle; *enchyma*, infusion] Embryonic connective tissue derived primarily from mesoderm and consisting of a diffuse network of loosely connected or scattered cells not segregated into layers or blocks.

**mesenteron** n. [Gr. *mesos*, middle; *enteron*, gut] The midgut or midportion of the alimentary tract, endodermal in origin; ventriculus; midintestine.

**mesenteron rudiments** (ARTHRO: Insecta) Groups of embryologic endodermal cells that regenerate the midgut (stomach) including the anterior and posterior; becomes the epithelium of the adult mesenteron.

**mesentery** n. [Gr. *mesos*, middle; *enteron*, gut] A supporting membrane or one that forms a partition.

**mesepimeral scale or seta** (ARTHRO: Insecta) Any scale or seta borne on the mesepimeron.

**mesepimeral suture** see **mesopleural suture**

**mesepimeron** n.; pl. **-mera** [Gr. *mesos*, middle; *epi*, on; *meros*, part] (ARTHRO: Insecta) 1. The area of the mesopleuron posterior to the mesopleural suture; the epimeron of the mesothorax. 2. In Odonata, the area between the humeral and first lateral suture.

**mesepisternum** n.; pl. **-sterna** [Gr. *meros*, middle; *epi*, on; *sternum*, chest] (ARTHRO: Insecta) 1. The area of the mesopleuron anterior to the mesopleural suture; sometimes divided into an upper mesanepisternum and a lower meskatepisternum; the episternum of the mesothorax. 2. In Diptera, horizontally divided into a large mesanepimeron but with a minute meskatepimeron below. 3. In Hymenoptera Ichneumonidae, usually termed mesopleurum.

**mesiad** see **mesad**

**mesial** see **mesal**

**mesial sclerite** see **labellar mesial sclerite**

**mesic** a. [Gr. *mesos*, middle] Climate characterized by a moderate amount of water.

**mesinfraepisternum** n. [Gr. *mesos*, middle; L. *infra*, below; Gr. *epi*, on; *sternon*, chest] (ARTHRO: Insecta) A ventral subdivision of the mesepisternum.

**meskatepimeron** n. [Gr. *mesos*, middle; *kata*, inferior; *epi*, on; *meros*, part] (ARTHRO: Insecta) The lower division of the mesepimeron.

**meskatepisternum** n. [Gr. *mesos*, middle; *kata*, inferior; *epi*, on; *sternon*, chest] (ARTHRO: Insecta) In Diptera, the lower area of the mesepisternum.

**mesobasisternum** n. [Gr. *mesos*, middle; *basis*, bottom; *sternon*, chest] (ARTHRO: Insecta) 1. The basisternum of the mesothorax. 2. In Diptera, maybe separated from the mesofurcasternum by a secondary line of inflection. see **furcasternum**.

**mesobiota** n. [Gr. *mesos*, middle; *bios*, life] Organisms in the soil ranging in size from nematodes to microannelids, microarthropods and mites; mesofauna.

**mesoblast** n. [Gr. *mesos*, middle; *blastos*, bud] Embryonic mesoderm; the middle germ layer. **mesoblastic** a.

- mesoblastic somites** Segmental divisions of embryonic mesoderm.
- mesobranchial lobe or area** (ARTHRO: Crustacea) In Decapoda, an intermediate part of the branchial region of the carapace.
- mesocardiac ossicle** (ARTHRO: Crustacea) In Decapoda, a triangular or oblong plate, the apex pointing forward maybe more or less truncated; forming the keystone of the anterior arch of the gastric mill.
- mesocephalic** a. [Gr. *mesos*, middle; *kephale*, head] Having a medium size head.
- mesocephalic pillars** (ARTHRO: Insecta) In bees, two oblique chitinous bars forming a brace between the anterior and posterior walls of the head.
- mesocercaria** n. [Gr. *mesos*, middle; *kerkos*, tail] (PLATY: Trematoda) A juvenile stage occurring in digenetic trematodes, an uncysted stage between the cercaria and the metacercaria.
- mesocerebrum** n. [Gr. *mesos*, middle; L. *cerebrum*, brain] (ARTHRO: Crustacea) Ganglion of antennular somite; deutocerebrum.
- mesocoel** n. [Gr. *mesos*, middle; *koiolos*, hollow] 1. The body cavity of the second division of the deuterostome body. 2. (BRYO) Assumed to be the cavity within and at the base of the tentacles. 3. (MOLL) Second or middle division of the coelom.
- mesocole** a. [Gr. *mesos*, middle; L. *colere*, to inhabit] Living conditions with neither too much nor too little water.
- mesoconch** n. [Gr. *mesos*, middle; *konche*, shell] (MOLL: Bivalvia) An intermediate stage in formation of the dissoconch; separated from other stages by pronounced discontinuities.
- mesocuticle** n. [Gr. *mesos*, middle; L. *cutis*, skin] A layer with distinctive staining properties between the exocuticle and endocuticle.
- mesoderm** n. [Gr. *mesos*, middle; *derma*, skin] The cell layer between ectoderm and endoderm in the embryonic cells of

- all animals above the Cnidaria.
- mesodermal tube** The dorsal blood vessel; heart.
- mesodont** a. [Gr. *mesos*, middle; *odous*, tooth] (ARTHRO: Insecta) Pertaining to male Lucanidae bearing mandibles intermediate in size; amphiodont. see **teleodont**, **priodont**.
- meso-epinotal suture** (ARTHRO: Insecta) In Formicidae, the transverse seam separating the mesonotum from the epinotum.
- mesoepisternum** see **mesepisternum**
- mesofacial plate** see **face**
- mesofauna** see **mesobiota**
- mesofurca** see **furca**
- mesogastric lobe/area** (ARTHRO: Crustacea) In Decapoda, the medial division of the gastric region of the carapace; usually five-sided in outline with a long narrow forward projection.
- mesogloea** n. [Gr. *mesos*, middle; *gloios*, glutinous] A thin to very thick, acellular to rather cellular, gelatinous connective tissue between the inner and the outer layers of a two-layered animal.
- mesohyl** n. [Gr. *mesos*, middle; *hyle*, matter] (PORIF) The space lying between the pinacoderm and the choanoderm.
- mesolamella** n. [Gr. *mesos*, middle; L. dim. *lamina*, layer] A thin mesogloea layer between epidermis and gastrodermis in Cnidaria and Porifera.
- mesolecithal egg** Eggs with moderate yolk content. see **centrolecithal egg**.
- mesology** see **ecology**
- mesomere** n. [Gr. *mesos*, middle; *meros*, part] 1. A blastomere of medium size. 2. A mesoblastic somite. 3. Central zone of coelomic pouches in an embryo. 4. (ARTHRO: Insecta) The inner divisions of the phallic lobes that unite to form the aedeagus (the intromittent organ).
- mesomerites** n.pl. [Gr. *mesos*, middle; *meros*, part; *-ites*, having nature of] (ARTHRO: Diplopoda) Modified 9 pair of limbs; together with 8 pair (promerites) of limbs function-

ing as pincers to pull out female vulvae.

**mesomeron** n. [Gr. *mesos*, middle; *meros*, thigh] (ARTHRO: Insecta) In Diptera, the meron of the mesothorax behind the midcoxa below the mesepimeron. see **metameron**, **meron**.

**meson** n. [Gr. *mesos*, middle] The central plane; the midline of the body; an imaginary plane dividing the body into right and left halves; the saggital plane.

**mesonephridium** n. [Gr. *mesos*, middle; *nephros*, kidney] Nephridium of mesodermal origin.

**mesonotum** n. [Gr. *mesos*, middle; *notos*, back] (ARTHRO: Insecta) The back or upper side of the mesothorax.

**mesopelagic** a. [Gr. *mesos*, middle; *pelagos*, sea] Pertaining to the pelagic zone of intermediate depth of 200-1000 m; between the epipelagic and bathypelagic zones.

**mesopeltidium** see **schizopeltid**

**mesophragma** n. [Gr. *mesos*, middle; *phragma*, fence] (ARTHRO: Insecta) A chitinous piece that descends into the interior of an insect body with the postscutellum as the base.

**mesoplankton** n. [Gr. *mesos*, middle; *plankton*, wandering] Floating life below euphotic zone; plankton organisms retained by a plankton net.

**mesoplax** n. [Gr. *mesos*, middle; *plax*, plate] (MOLL: Bivalvia) A calcareous transverse plate straddling the two valves on their dorsal margins. see **protoplax**, **metaplax**.

**mesopleural bristles** (ARTHRO: Insecta) In Diptera, a row of bristles on the posterior margin of the mesopleura.

**mesopleural fovea** (ARTHRO: Insecta) In Hymenoptera Ichneumonidae, a pit or short horizontal groove on the mesopleurum, anterior to the mesopleural suture and below the speculum.

**mesopleural ridge** (ARTHRO: Insecta) In Diptera, the pleural ridge marked externally by the mesopleural suture, between pleural apophyseal pit above the midcoxal articulation to the base of the wing.

**mesopleural sulcus** (ARTHRO: Insecta) In Diptera, passing downwards from the wing base to the middle coxa.

**mesopleural suture** (ARTHRO: Insecta) The external groove of the mesopleural ridge, between the base of the wing to the midcoxal articulation.

**mesopleuron** n.; pl. **-ra** [Gr. *mesos*, middle; *pleuron*, side] (ARTHRO: Insecta) 1. The pleuron of the mesothorax; in winged insects, composed of basalare, subalare, mesepisternum, mesepimeron and mesotrochantin. 2. In Diptera, the dorsal part of the mesepisternum; area in front of the root of the wing between the noto- and sternopleural sutures.

**mesopleurosternal ridge** (ARTHRO: Insecta) In Diptera, a large, posteriorly curved invagination of the mesopleurosternal suture.

**mesopleurosternal suture** (ARTHRO: Insecta) In Diptera, the external groove between the meskatepisternum and the mesobasisternum, or mesosternum when the mesobasisternum is not distinguishable; the pleurosternal suture.

**mesopleurum** n. [Gr. *mesos*, middle; *pleuron*, side] (ARTHRO: Insecta) In Hymenoptera Ichneumonidae, the mesepisternum.

**mesopostnotum** n. [Gr. *mesos*, middle; L. *post*, after; Gr. *notos*, back] (ARTHRO: Insecta) The postnotum of the mesothorax. see **metapostnotum**.

**mesopostscutellum** n. [Gr. *mesos*, middle; L. *post*, after; *scutellum*, small shield] (ARTHRO: Insecta) The postscutellum of an insect's mesothorax.

**mesopraescutum** n. [Gr. *mesos*, middle; L. *prae*, before; *scutum*, shield] (ARTHRO: Insecta) The praescutum of the mesothorax. see **prescutum**.

**mesopsammic** a. [Gr. *mesos*, middle; *psammos*, sand] Pertaining to organisms living interstitially in sand or a material in the form of rounded grains; psammous. **mesopsammon** n. see **sabulous**.

**mesopseudogyne** see **pseudogyne**

**mesorhabdions** n.pl. [Gr. *mesos*, middle; dim. *rhabdos*, rod] (NEMATA) The walls of the mesostome. see **rhabdion**.

**mesoscutellum** n. [Gr. *mesos*, middle; L. *scutellum*, little

shield] (ARTHRO: Insecta) The scutellum of the mesothorax, usually referred to as scutellum.

**mesoscutum** n. [Gr. *mesos*, middle; L. *scutum*, shield] (ARTHRO: Insecta) The scutum of the mesothorax.

**mesoseries** n. [Gr. *mesos*, middle; L. *series*, row] (ARTHRO: Insecta) In *larva*, a band of crochets or hooks extending longitudinally on the mesal side of a proleg; when curved, varying from a quadrant to slightly more than a semicircle in extent, seldom exceeding two-thirds of a circle.

**mesosoma** n. [Gr. *mesos*, middle; *soma*, body] 1. The middle part of an invertebrate's body. 2. (ARTHRO: Chelicerata) In Arachnida, the anterior portion of the abdomen, often clearly set off from the metasoma. 3. (ARTHRO: Insecta) For Hymenoptera, see **alitrunk**. 4. (POGON) The short frenular region of the body.

**mesosome** n. [Gr. *mesos*, middle; *soma*, body] (ARTHRO: Crustacea) A collective term for all free thoracic somites behind the head.

**mesospermalege** n. [Gr. *mesos*, middle; *sperma*, seed; L. *legere*, to gather] (ARTHRO: Insecta) A special pouch in certain females for reception of sperm; Ribaga's or Berlese's organ.

**mesosternal cavity** (ARTHRO: Insecta) In Elateridae, the opening into which the prosternal process catches.

**mesosternellum** n. [Gr. *mesos*, middle; L. dim. *sternum*, breast bone] (ARTHRO: Insecta) A small rod-like plate that articulates posteriorly with the mesosternum.

**mesosternum** n. [Gr. *mesos*, middle; *sternon*, breast] 1. (ARTHRO: Crustacea) In some Decapoda Brachyura, the median plate of the sternum. 2. (ARTHRO: Insecta) In Hymenoptera, the ventral part of the mesothorax; between the fore and mid-coxae.

**mesostome, mesostom** n. [Gr. *mesos*, middle; *stoma*, mouth] (NEMATA) A division of the protostome preceded anteriorly by the prostome and posteriorly by the metasome. see **prostome**.

**mesostracum** n. [Gr. *mesos*, middle; *ostrakon*, shell] (MOLL: Polyplacophora) A calcareous shell layer between the teg-

mentum and the articulamentum in certain more highly developed living species.

**mesotarsal ring** see **basitarsal ring**

**mesotarsus** n. [Gr. *mesos*, middle; *tarsos*, sole of foot] (ARTHRO: Insecta) The tarsus of the middle leg.

**mesotergum** see **mesonotum**

**mesothoracotheca** n. [Gr. *mesos*, middle; *thorax*, chest; *theke*, case] (ARTHRO: Insecta) In pupal forms, the covering of the mesothorax.

**mesothorax** n. [Gr. *mesos*, middle; *thorax*, chest] (ARTHRO: Insecta) The middle of the thoracic divisions.

**mesothyridid** n. [Gr. *mesos*, middle; *thyridos*, a window] (BRACHIO) Pedicle opening partly in the ventral umbo and partly in the delthyrium, with beak ridges appearing to bisect the opening.

**mesotriaene** n. [Gr. *mesos*, middle; *triaina*, trident] (PORIF) A megasclere triaene with a rhabd projecting on both sides of a cladome.

**mesotroch** n. [Gr. *mesos*, middle; *trochos*, wheel] (ANN: Polychaeta) A ciliated band around the midbody of a marine annelid.

**Mesozoa, mesozoans** n.; n.pl. [Gr. *mesos*, middle; *zoon*, animal] Ciliated, multicellular organisms, endoparasitic in a variety of marine invertebrates; two layered, having no skeletal, muscular, nervous, digestive, respiratory, or excretory elements.

**mesozona** n. [Gr. *mesos*, middle; *zone*, belt] (ARTHRO: Insecta) The middle portion of the pronotum. see **prozona**.

**metabiosis** n. [Gr. *meta*, between; *bios*, life] A condition of life where an organism precedes and prepares the environment for another organism, inducing an exchange of growth factors beneficial among species.

**metablastic** see **ectoderm**

**metabola** n. [Gr. *metabole*, change] (ARTHRO: Insecta) Species having distinct external changes during the stages of their life history. see **paurometabola**, **hemimetabola**, **holometabola**.

- metabolic activities** Any forms of activity that have to do with metabolism.
- metabolic water** Water produced in the cells as a by-product of metabolism.
- metabolism** n. [Gr. *metabole*, change; *ismos*, denoting condition] The sum total of chemical reactions occurring in living matter. **metabolic** a. see **catabolism**, **anabolism**.
- metabolite** n. [Gr. *metabole*, change; *ites*, like] Any by-product of a living organism; a metabolized substance.
- metabranial lobe or area** (ARTHRO: Crustacean) In Decapoda, the posterior branchial region of the carapace.
- metacentric** a. [Gr. *meta*, after; *kentron*, center of circle] Having the centromere situated along the chromosome, except at or near the tip, e.g., J- or V-shaped in metaphase. see **telocentric**, **acrocentric**.
- metacephalon** n. [Gr. *meta*, after; *kephale*, head] (ARTHRO: Insecta) In Diptera, the area behind the mouth extending up toward the neck.
- metacercaria** n. [Gr. *meta*, after; *keros*, tail] (PLATY: Trematoda) The stage succeeding the cercarial, following loss of tail; it may invade the definitive host (blood flukes) or may become encysted and await passive transfer to that host.
- metacerebrum** n. [Gr. *meta*, after; L. *cerebrum*, brain] (ARTHRO: Crustacea) Ganglion of antennal somite; tritocerebrum.
- metacestode** n. [Gr. *meta*, after; *kestos*, girdle; *eidos*, form] (PLATY: Cestoda) The developmental stage of the plerocystoid where proglottids are evident but generative organs are not fully mature.
- metachemogenesis** n. [Gr. *meta*, change of; *chemeia*, infusion; *genesis*, beginning] (ARTHRO: Insecta) In holometabolous forms, post-emergence biochemical maturation; does not include sexual maturation.
- metachromasia, metachromasis, metachromasy** n. [Gr. *meta*, change of; *chroma*, color] Staining of tissue components in different colors by a single dye.
- metacnemes** n.pl. [Gr. *meta*, after; *kneme*, leg] (CNID: Antho-

- zoa) Secondary mesenteries between the primary cycle.
- metacoel** n. [Gr. *meta*, after; *koilos*, hollow] 1. The body cavity of the third division of the deuterostome body. 2. (BRYO) Believed to be the main body cavity.
- metacorporal valve** (NEMATA) An expanded, strongly cuticularized portion of the triradiate lumen at the center of the metacarpus that functions as a pump during feeding.
- metacarpus** n. [Gr. *meta*, after; L. *corpus*, body] (NEMATA) The median esophageal bulb; the middle bulb; the median bulb.
- metacoxal plate** (ARTHRO: Insecta) In Coccinellidae, a portion of the first ventral segment included above the ventral lines, visible on the metathorax.
- metacyclic** a. [Gr. *meta*, after; *kyklos*, circle] Pertaining to a stage in the life cycle of a parasite that is infective to its definitive host.
- metacyst** n. [Gr. *meta*, after; *kystis*, bladder] A cystic stage of a parasite in a host.
- metaepisternum** see **metepisternum**
- metaerucism** n. [Gr. *meta*, after; L. *eruca*, caterpillar] (ARTHRO: Insecta) Poisoning by larval setae on cocoons, etc. see **lepidopterism**.
- metafemale** n. [Gr. *meta*, after; L. *femella*, little woman] (ARTHRO: Insecta) In Diptera, an individual with 3 X-chromosomes and 2 sets of autosomes; found in *Drosophila*.
- metagastric lobe or area** (ARTHRO: Crustacea) In Decapoda, the posterior division of the gastric region of the carapace; sometimes ill-defined.
- metagenesis** n. [Gr. *meta*, after; *genesis*, beginning] Alternation of sexual and asexual reproduction in the life cycle of certain animals; alternation of generations. see **heterogenesis**.
- metagnath** n. [Gr. *meta*, change of; *gnathos*, jaw] (ARTHRO: Insecta) Those insects with biting mandibles when young and sucking mouth parts as adults. see **menognath**, **Menorhyncha**.
- metagonia** n. [Gr. *meta*, after; *gonia*, angle] (ARTHRO: In-

secta) The anal angle of a wing.

**metagynous** a. [Gr. *meta*, after; *gyne*, female] (ANN: Oligochaeta) Having the ovaries only in segment xiii or a homoeotic segment.

**metagyny** see **protandry**

**metakinesis** n. [Gr. *meta*, after; *kinesis*, movement] Separation of chromatids during anaphase.

**metamale** n. [Gr. *meta*, change of; L. *mas*, male] (ARTHRO: Insecta) A male *Drosophila* with three (3) sets of autosomes and one X-chromosome.

**metamere** n. [Gr. *meta*, after; *meros*, part] One or more of a series of homologous parts of many animals; a merosome; a somite. **metameric** a.

**metameric** sac see **osmeterium**

**metamerism** n. [Gr. *meta*, after; *meros*, part] Segmental repetition of homologous body parts; metameres; metasomes.

**metameron** n. [Gr. *meta*, after; *meros*, upper thigh] (ARTHRO: Insecta) In Diptera, the meron of the metathorax; a vertical sclerite above the hindcoxa. see **mesomeron**, **meron**.

**metameros** n. [Gr. *meta*, after; *meros*, part] (ARTHRO: Insecta) In Lepidoptera, the combined sixth to eighth abdominal segments.

**metamorphosis** n.; pl. **-ses** [Gr. *meta*, change of; *morphe*, form] A marked change in form or structure an animal undergoes from one growth stage to another; also applies to the actual process of changing from larval to adult form. see **anamorphosis**, **epimorphosis**, **hypermetamorphosis**.

**metanauplius** n. [Gr. *meta*, after; *nauplios*, shellfish] (ARTHRO: Crustacea) One to several larval stages subsequent to the first (nauplius) larva; characterized by increasing size and the appearance of additional appendages.

**metandry** n. [Gr. *meta*, after; *aner*, male] (ANN) Possessing only the posterior pair of testes; in earthworms, testes restricted to segment xi. **metandric** a. see **proandry**, **holandry**.

**metaneme** n. [Gr. *meta*, after; *nema*, thread] (NEMATA) Filamentous organs in or near the lateral epidermal cords that usually have anterior and sometimes posterior filaments and a central scapulus; thought to be stretch receptors. see **orthometaneme**, **proprioceptor**.

**metanephridium** n.; pl. **-ia** [Gr. *meta*, after; *nephros*, kidney] Paired osmoregulatory or excretory tubules in some phyla; tubules that open into the body cavity and are found in coelomate animals.

**metanephromixium** n. [Gr. *meta*, after; *nephros*, kidney; *mixis*, mingling] (ANN: Polychaeta) Nephromixium in which the coelomostome and nephrostome are combined into a genital and/or excretory duct. see **mixonephridium**.

**metanotal** gland (ARTHRO: Insecta) In male *Oecanthus* (Orthoptera) and some blattids, special glands on the dorsum of the thorax that produces a secretion attractive to females.

**metanotal slopes** (ARTHRO: Insecta) In Diptera, the pleurotergites.

**metanotum** n.; pl. **-nota** [Gr. *meta*, after; *notos*, back] (ARTHRO: Insecta) The dorsal sclerite of the metathorax. **metanotal** a.

**metaparapteron** n. [Gr. *meta*, after; *para*, beside; *pteron*, wing] (ARTHRO: Insecta) In Formicidae, the postscutellum.

**metapeltidium** see **schizopeltid**

**metaphase** n. [Gr. *meta*, after; *phasis*, to appear] The stage of mitosis when the chromosomes line up in the equatorial plane of the spindle.

**metaplasia** n. [Gr. *meta*, after; *plasis*, molding] The mature period in an individual's life.

**metaplasma** n. [Gr. *meta*, after; *plasma*, formed or molded] Non-living protoplasmic inclusions. **metaplastic** a.

**metaplastax** n. [Gr. *meta*, after; *plax*, plate] (MOLL: Bivalvia) A long narrow posteriorly pointed, rounded or forked accessory plate covering the gape between the two valves on the dorsal margins posterior to the umbo. see **protoplastax**, **mesoplastax**.

**metapleural bristles** (ARTHRO: Insecta) In Diptera, a bristle or bristles on the metapleura.

**metapleural gland** (ARTHRO: Insecta) In most Formicidae, a gland with an external bulla and a small orifice, opening on each side of the metathorax at its lower posterior corners; thought to function as a protection against microorganisms in the nest chamber due to fungistatic and bacteriostatic activity.

**metapleuron** n.; pl. **-ura** [Gr. *meta*, after; *pleuron*, side] (ARTHRO: Insecta) 1. The lateral sclerites of the metathorax. 2. In Diptera, the pleuron of the metathorax. **metapleural** a.

**metapleurum** n. [Gr. *meta*, after; *pleuron*, side] (ARTHRO: Insecta) In Hymenoptera Ichneumonidae, ordinarily divided into two parts, the lower is largest and generally referred to; the lower part an oval or subtriangular area on the side of the *thorax*, between middle and hind coxae to the propodeum; the upper area lies behind the upper half of the mesepimeron and below and behind the base of the hind wing, separated from the propodeum by a suture.

**metapneustic** a. [Gr. *meta*, after; *pneustikos*, of breathing] (ARTHRO: Insecta) Said of aquatic insect larvae having only the posterior pair of spiracles open and functioning. see **oligopneustic**.

**metapodeon** n. [Gr. *meta*, after; *podeon*, neck] (ARTHRO: Insecta) That part of an abdomen behind the podeon or petiole.

**metapodium** n. [Gr. *meta*, after; *pous*, foot] (MOLL) The posterior portion of the foot.

**metapodosoma** n. [Gr. *meta*, after; *pous*, foot; *soma*, body] (ARTHRO: Chelicerata) In ticks or mites, that portion of the podosoma that bears the third and fourth pair of legs.

**metapolar cells** (MESO) The posterior tier of cells in the calotte.

**metapon** n. [Gr. *metopon*, forehead] (ARTHRO: Crustacea) In Decapoda, the entire preoral area, including part of the mandibular somite.

**metapostnotum** n. [Gr. *meta*, after; L. *post*, after; Gr. *notos*, back] (ARTHRO: Insecta) The postnotum of the metathorax.

see **mesopostnotum**.

**metapostscutellum** see **postscutellum**

**metapraescutum, metaprescutum** n. [Gr. *meta*, after; L. *prae*, before; *scutum*, shield] The prescutum of the metathorax.

**metapygidium** n. [Gr. *meta*, after; *pyge*, rump] (ARTHRO: Insecta) 1. In Dermaptera, the posterior ventral segment of the supra-anal plate. 2. In Coleoptera, the penultimate tergite when the elytra are shorter than the abdomen.

**metarhabdions** n.pl. [Gr. *meta*, after; *rhabdos*, rod] (NEMATA) The cuticularized walls of the metastome. see **rhabdion**.

**metascolex** n. [Gr. *meta*, after; *scolex*, worm] (PLATY: Cestoda) The posterior portion of a transversely divided scolex.

**metascutellum** n. [Gr. *meta*, after; L. *scutellum*, dim. *scutum*, shield] (ARTHRO: Insecta) The scutellum of the metathorax.

**metasoma** n. [Gr. *meta*, after; *soma*, body] 1. The posterior region of many invertebrates. 2. (ACANTHO) The posterior part of the body or trunk. 3. (ARTHRO) The abdomen or urosome. 4. (ARTHRO: Chelicerata) In Arachnida, the abdominal body segments and telson; posterior part of opisthosoma. 5. (ARTHRO: Crustacea) see **metasome**. 6. (PHORON) The long gonadal region following the mesosoma, and bearing external papillae and chitinous attachment structures. see **opisthosoma**.

**metasome** n. [Gr. *meta*, after; *soma*, body] (ARTHRO: Crustacea) In Copepoda, a portion of the prosome, consisting of free thoracic somites anterior to the major point of body flexion; or first three abdominal somites; metasoma.

**metastasis** n.; pl. **-ses** [Gr. *meta*, after; *stasis*, standing] The transfer of pathogenic microorganisms to parts of the body remote from the origin of infection.

**metasternal glands** (ARTHRO: Insecta) In Formicidae, paired organs in the posterior area of the *thorax*, opening to the outside near the pleural-sternal margins of the metathorax.

**metasternal orifice** (ARTHRO: Insecta) In Formicidae, the opening of the metasternal gland.

**metasternum** n. [Gr. *meta*, after; *sternon*, chest] (ARTHRO: Insecta) 1. The sternum or ventral sclerite of the metathorax. 2. For Diptera, see **mesepimeron**.

**metastigmata** n.pl. [Gr. *meta*, after; *stigma*, point] (ARTHRO: Insecta) The posterior spiracles of the synthorax.

**metastome, metastom** n. [Gr. *meta*, after; *stoma*, mouth] (NEMATA) The posterior subdivision of a prostome.

**metastoma** n.; pl. **-mata** [Gr. *meta*, after; *stoma*, mouth] 1. (ARTHRO: Crustacea) The lower lip posterior to the mandibles, usually cleft into paragnaths; hypostoma; hypostome; hypopharynx; labium. 2. (ARTHRO: Insecta) In Orthoptera, the hypopharynx.

**metasyndesis** see **acrosyndesis**

**metatarsus** n.; pl. **-si** [Gr. *meta*, after; *tarsos*, flat of the foot] (ARTHRO) The basal segment of a tarsus; next to the tibia; the basitarsis.

**metatentorium** n.; pl. **-ia** [Gr. *meta*, after; L. *tentorium*, tent] (ARTHRO: Insecta) A posterior arm of the tentorium.

**metatergum** see **metanotum**

**metathetely** n. [Gr. *meta*, after; *thein*, to run; *telos*, end] (ARTHRO) 1. A neotenous adult arthropod after undergoing normal or more than normal numbers of molts. 2. In Insecta, often resulting in failure to develop wings, or forming brachypterous adults.

**metathoracotheca** n. [Gr. *meta*, after; *thorax*, chest; *theke*, case] (ARTHRO: Insecta) The pupal covering of the metathorax.

**metathorax** n. [Gr. *meta*, after; *thorax*, chest] (ARTHRO: Insecta) The third or posterior segment of the *thorax*, bearing the hind legs and the hind wings.

**metatroch** n. [Gr. *meta*, after; *trochos*, wheel] (ANN) In Polychaeta, trochophore larvae, as well as some other groups, the postoral girdle of cilia. see **prototroch**, **telotroch**.

**metatrochophore** n. [Gr. *meta*, after; *trochos*, wheel; *phorein*, to bear] (ANN: Polychaeta) A ciliated trochophore larva developing trunk segments.

**metaxyphus** n. [Gr. *meta*, after; *xiphos*, sword] (ARTHRO: In-

secta) In Hemiptera, spinose or triangular process of the metasternum.

**Metazoa, metazoans** n.; n.pl. [Gr. *meta*, after; *zoon*, animal] 1. A small phylum of endoparasitic, ciliated, multicellular organisms composed of two layers, lacking skeletal, muscular, nervous, digestive, respiratory or excretory elements. 2. Often regarded as degenerate flatworms appended to phylum Platyhelminthes. **metazoic** a.

**metazoea** n. [Gr. *meta*, after; *zoe*, life] (ARTHRO: Crustacea) A late zoeal stage in Anomura and Brachyura with simple uniramous limbs on posterior thoracomeres, budding pleopods 1-5 at the same time, and having stalked eyes.

**metazona** n. [Gr. *meta*, after; *zone*, belt] (ARTHRO: Insecta) The posterior part of the pronotum. see **prozona**.

**metazonite** n. [Gr. *meta*, after; *zone*, belt] (ARTHRO: Diplopoda) The posterior portion of a diplosomite, divided by a transverse groove. see **prozonite**.

**metecdysis** n. [Gr. *meta*, after; *ekdysis*, molt] (ARTHRO) The period following a molt before the new cuticle hardens, especially in Decapoda (Crustacea).

**metelattosis** n. [Gr. *meta*, after; *elattōn*, smaller] (ARTHRO: Chelicerata) Regression of postembryonic development, initiated after the beginning stasis.

**metenchium** n. [L. *meta*, conical column; Gr. *enchos*, spear] (NEMATA: Secernentea) Conus of the stylet in plant parasites in the order Tylenchida. see **telenchium**.

**metenteron** n. [Gr. *meta*, after; *enteron*, intestine] (CNID) The radial digestive chamber. see **mesenteron**.

**metepimeron** n.; pl. **-mera** [Gr. *meta*, after; *epi*, on; *meros*, part] (ARTHRO: Insecta) The epimeron of the metathorax.

**metepisternum** n.; pl. **-sterna** [Gr. *meta*, after; *epi*, on; *sternon*, breast] (ARTHRO: Insecta) 1. The episternum of the metathorax. 2. In Culicidae, behind and below the metathoracic spiracle.

**meter** n. [Gr. *metron*, a measure] A measure of length in the metric system; 39.37 inches. see **centimeter**, **millimeter**.

**metinfraepisternum** n. [Gr. *meta*, after; L. *infra*, underneath;

Gr. *epi*, on; *sternon*, breast] (ARTHRO: Insecta) In Odonata, a ventral subdivision of the metepisternum.

**metochy** see **symphily**, **synechthry**

**metoecious parasite** A parasite that is not host-specific. see **heteroecious**.

**metope** n. [Gr. *metopon*, forehead] The middle frontal portion of a head. see **metapon**.

**metopic suture** see **coronal suture or branch**

**metopidium** n. [Gr. *metopidios*, of the forehead] (ARTHRO: Insecta) In Membracidae, the anterior downward sloping surface of the prothorax.

**metraterm** n. [Gr. *metra*, womb; *terma*, end] (PLATY: Trematoda) In Digenea, the muscular, terminal portion of the uterus.

**metric system** A decimal system of measures and weights.

**metrocyte** n. [Gr. *metros*, mother; *kytos*, container] A cell having given rise to other cells by division; mother cell; precursory cell.

**micelle** n.; pl. **-ae** [L. *micarius*, crumbs] A supermolecular colloid particle, often an orderly packet of chain molecules in parallel arrangement.

**micraesthetes** n.pl. [Gr. *mikros*, small; *aisthetes*, one who perceives] (MOLL: Polyplacophora) One or more small sensory organs, in the form of eyes, sometimes accompanying the megaesthetes. see **aesthete**.

**micraner** n. [Gr. *mikros*, small; *aner*, male] (ARTHRO: Insecta) In Formicidae, a dwarf male. see **microgyne**.

**micrergate** n. [Gr. *mikros*, small; *ergate*, worker] (ARTHRO: Insecta) In Formicidae, a dwarf worker, a microergate.

**microbe** n. [Gr. *mikros*, small; *bios*, life] A microscopic organism.

**microbiota** n. [Gr. *mikros*, small; *bios*, life] 1. The combined or singularly considered microflora and microfauna of an organism. 2. Microscopic soil organisms.

**microbivorous** a. [Gr. *mikros*, small; *bios*, life; L. *vorare*, to devour] Microbe eating; microbiotrophic.

**microbody** n. [Gr. *mikros*, small; Eng. body] Spherical or ovoid bodies that are rich in enzymes of peroxide metabolism.

**microbotroph** n. [Gr. *mikros*, small; *bios*, life; *trophein*, to feed] Microscopic faunal forms that obtain nourishment from digesting living microorganisms; microbivorous.

**microcalthrop**, **microcaltrop** n. [Gr. *mikros*, small; ML. *calci-trapa*, a four-pointed weapon] (PORIF) A microsclere tetraxon spicule with four rays, one elongated and three short; a euaster with 4 persistent rays.

**microcentrum** see **centrosome**

**microcephalic** a. [Gr. *mikros*, small; *kephale*, head] Having an abnormally small head. see **megacephalic**, **mesocephalic**.

**microcercous cercaria** (PLATY: Trematoda) Small cercaria with a very short tail and a stylet in the oral sucker. see **xiphidiocercaria**.

**microchaetae** n.pl. [Gr. *mikros*, small; *chaeta*, mane] Small bristles. see **chaeta**, **macrochaetae**.

**microclimate** n. [Gr. *mikros*, small; *klima*, slope] The climate of the habitat in which the individual lives.

**microcnemes** n.pl. [Gr. *mikros*, small; *knemis*, leg] (CNID: Anthozoa) In Actinaria, younger, narrow mesenteries lacking filaments. see **macrocnemes**.

**microcotylate** cercaria (PLATY: Trematoda) A group of small xiphidiocercariae with a postequatorial ventral sucker, and finless tail equal to the body length.

**microdrile** n. [Gr. *mikros*, small; *drilos*, worm] (ANN: Oligochaeta) A general term for the aquatic forms. see **megadrile**.

**microelectrode** n. [Gr. *mikros*, small; *elektron*, amber] Small electrode for sensing electrical activity in a neuron.

**microergate** see **micrergate**

**microevolution** n. [Gr. *mikros*, small; L. *evolutus*, unrolling] All processes of species formation and differentiation brought about by the combined action of various evolutionary factors. see **macroevolution**.

- microfauna** n. [Gr. *mikros*, small; L. *Faunus*, diety of herds and fields] Very small animals; animals less than 200  $\mu$ m.
- microfibril** n. [Gr. *mikros*, small; L. dim. *fibra*, fiber] Microscopic or submicroscopic fiber.
- microfilaria** n. [Gr. *mikros*, small; L. *filum*, thread] (NEMATA) The uncoiled mobile embryo of a filaria, that either escapes from the egg shell (unsheathed) or causes stretching of the shell into an elongated sac accommodated to the uncoiled embryo (sheathed).
- microgamete** n. [Gr. *micros*, small; *gametes*, husband] 1. A slender, active, male anisogamete. 2. Derived from the microgametocyte of the malarial protozoan. see **macrogamete**.
- microgametocyte** n. [Gr. *mikros*, small; *gamete*, husband; *kytos*, container] The male gametocyte that gives rise to microgametes.
- microgeographic race** A local race, restricted to a small area.
- microgram** n. [Gr. *mikros*, small; *gramma*, small weight] One thousandth of a gram.
- microgranular cells** (PORIF) Cells with cytoplasm charged with small dense granules.
- microgyne** n. [Gr. *mikros*, small; *gyne*, woman] (ARTHRO: Insecta) In Formicidae, a dwarf female. see **micraner**.
- microhabitat** n. [Gr. *mikros*; small; L. *habitare*, to dwell] A small or restricted habitat. see **niche**.
- microhexactine** n. [Gr. *mikros*, small; *hex*, six; *aktis*, ray] (PORIF) A small hexactine spicule.
- microic** a. [Gr. *mikros*, small; *eidōs*, like] (ANN: Oligochaeta) Smaller than macroic, a substitute for micronephridial, often applied to nephridia as large as or larger than meganephridia.
- microlecithal** a. [Gr. *mikros*, small; *lekithos*, egg yolk] Containing little yolk.
- microleucocyte** n. [Gr. *mikros*, small; leukos, white; *kytos*, container] A small amoebocyte.
- micromere** n. [Gr. *mikros*, small; *meros*, part] Small cells of

the animal pole in eggs with abundant yolk.

- micromesentary** n. [Gr. *mikros*, small; *mesos*, middle; *enteron*, gut] (CNID: Anthozoa) In Zoantharia, an incomplete secondary mesentary.
- micrometer** n. [Gr. *mikros*, small; *metron*, a measure] A unit of microscopic measure, designated by the Greek letters  $\mu$ ; one-thousandth of a millimeter.
- micromillimeter** see **nanometer**
- micromutation** see **point mutation**
- micron** see **micrometer**
- micronekton** n. [Gr. *mikron*, small; *nektos*, swimming] Small, swimming organisms in the ocean.
- micronephridia** see **microic**, **nephridium**
- microniscus**, **micronicus** see **epicaridum**
- micronucleocytes** see **plasmatocytes**
- microorganism** n. [Gr. *mikros*, small; *organon*, instrument] A microscopic organism such as most nematodes, rotifers, etc.
- micropaleontology** n. [Gr. *mikros*, small; *palaios*, ancient; *logos*, discourse] The study of microscopic fossils.
- microphagous** a. [Gr. *mikros*, small; *phagein*, to eat] Feeding on small objects. see **macrophagous**.
- microphthalmmy** n. [Gr. *mikros*, small; *ophthalmos*, eye] An abnormally small antenna. **microphthalmic** a.
- microplankton** n. [Gr. *mikros*, small; *plankton*, wandering] Small organisms floating in water.
- microplasmatoocyte** n. [Gr. *mikros*, small; *plasmatos*, image; *kytos*, container] (ARTHRO: Insecta) A small plasmatoocyte having a small amount of vacuolar cytoplasm. see **eo-plasmatoocyte**.
- micropore** n. [Gr. *mikros*, small; *poros*, pore] (MOLL: Polyplacophora) A small pore in the dorsal plates; associated with an aesthete.
- micropredator** n. [Gr. *mikros*, small; L. *praedator*, plunderer] A temporary parasite.

**micropseudogyne** see **pseudogyne**

**micropterism, microptery** n. [Gr. *mikros*, small; *pteron*, wing] Small wings.

**micropterogyne** n. [Gr. *mikros*, small; *pteron*, wing; *gyne*, woman] (ARTHRO: Insecta) A female with small wings.

**micropterous** a. [Gr. *mikros*, small; *pteron*, wing] Having small or vestigial wings.

**micropyle** n. [Gr. *mikros*, small; *pyle*, entrance] A pore in the investing membrane of an egg through which a spermatozoan enters for fertilization. **micropylar** a.

**micropyle apparatus** (ARTHRO: Insecta) Raised structures around the micropyle of an egg.

**micropyrenic** a. [Gr. *mikros*, small; *pyren*, kernel] Having nuclei smaller than average for a particular cell type of an individual or species.

**microsclere** n. [Gr. *mikros*, small; *skleros*, hard] (PORIF) A packing or reinforcing spicule, usually of a size, and ornate shape that occur strewn throughout the mesenchyme. see **me gasclere**.

**microsolecin, microscolecine** n. [Gr. *mikros*, small; *skolex*, worm] (ANN: Oligochaeta) Provided with a pair of tubular prostates opening to the exterior in segment xvii along side of, or together with, the sperm ducts.

**microscopic** a. [Gr. *mikros*, small; *skopein*, to view] Being invisible with the naked eye, usually requiring the aid of a microscope for elucidation of structure or recognition of whatever characters are involved. see **macroscopic**.

**microsensillum** n. [Gr. *mikros*, small; L. *sensillus*, sensitive] Small sensillum or sensory puncture.

**microseptum** n. [Gr. *mikros*, small; L. *septum*, partition] (CNID: Anthozoa) A Zoantharia with incomplete or imperfect mesentary.

**microsomes** n. [Gr. *mikros*, small; *soma*, body] Formerly any small granules in the cytoplasm; fragments of endoplasmic reticulum.

**microsomia** n. [Gr. *mikros*, small; *soma*, body] Dwarfishness; nanism.

**microsomites** n.pl. [Gr. *mikros*, small; *soma*, body] (ARTHRO: Insecta) In embryology, small secondary rings or somites of the macrosomites later to become body segments.

**microspecies** n.pl. [Gr. *mikros*, small; L. *species*, a kind] A small local species population that shows little variability; jordanon.

**microspines** n.pl. [Gr. *mikros*, small; L. *spina*, thorn] (ARTHRO: Insecta) In some larvae, minute spines on the exterior body wall.

**microstome** n. [Gr. *mikros*, small; *stoma*, mouth] A small opening or orifice.

**microsymbiote** n. [Gr. *mikros*, small; *symbiosis*, life together] A term designating the smaller organism, or microorganism, of a symbiotic association.

**microthorax** n. [Gr. *mikros*, small; *thorax*, chest] (ARTHRO: Insecta) The neck or cervix, when the cervix is a reduced body segment.

**microthrix** n.; pl. **microtrices** [Gr. *mikros*, small; *thrix*, hair] (PLATY: Cestoda) One of the minute folds of the tegument that aid in absorption of nutrients.

**microtome** n. [Gr. *mikros*, small; *temnein*, to cut] Instrument for cutting thin sections of tissues for microscopic examination.

**microtomy** n. [Gr. *mikros*, small; *temnein*, to cut] The science of cutting and staining of thin sections of tissues for microscopic examination.

**microtrichia** n.pl.; sing. **-ium** [Gr. *mikros*, small; *thrix*, hair] 1. (ARTHRO: Insecta) Minute, abundant, non-articulate hairs found on the wings (aculeae). see **macrotrichia**. 2. (PLATY: Cestoda) see **microthrix**.

**microtubules** n.pl. [Gr. *mikros*, small; L. *tubulus*, small water pipe] Minute tubules in cells that are often cross-linked; found in cilia, spindle fibers, and in the cytoplasm where they form the cytoskeleton.

**microtype** n. [Gr. *mikros*, small; *typos*, type] (CNID: Anthozoa) A normal mesentery arrangement. see **macrotype**.

**microvillus** n.; pl. **-villi** [Gr. *mikros*, small; L. *villus*, shaggy

hair] Minute processes on the inner surface of epithelial cells. see **brush border**.

**microxea** n. [Gr. *mikros*, small; *oxys*, sharp] (PORIF) A microscleere similar to an oxea, but very small.

**microzoon** n. [Gr. *mikros*, small; *zoon*, animal] A microscopic animal.

**mictic egg** Eggs that have undergone meiosis and are therefore haploid; when unfertilized they produce haploid males. see **amictic egg**.

**micton** n. [Gr. *mictos*, mixed] Widely distributed species produced by interspecific hybridization which are fully fertile with parent species.

**mid-axis** n. (MOLL: Bivalvia) Straight line in commissural plane at a right angle to the hinge axis and beginning at the midpoint of the ventral margin of the resilifer.

**midbody** n. [A.S. *middel*, middle; *bodig*, body] The equatorial region of the body.

**middle bulb** see **metacarpus**

**middle cuticular layer** (NEMATA) Formerly used for the matrix layer of the cuticle.

**middle field** see **discoidal area**

**middle plate** (ARTHRO: Insecta) In embryology, that area between the mesodermal rudiment and the lateral ectodermal plates.

**middorsal** a. [A.S. *middel*, middle; L. *dorsum*, back] Pertaining to the true dorsal line of an individual; dorsomedian.

**midgut** n. [A.S. *middel*, middle; gut] The mesenteron; the middle portion of the alimentary tract.

**midgut gland** (MOLL) A lobed or unlobed gland, of a compound tubular or acinous nature, opening into the gut in one or more places; sometimes called liver.

**midintestine** see **midgut**

**midventral** a. [A.S. *middel*, middle; L. *venter*, belly] Pertaining to the true ventral line; ventromedian.

**midventral glands** see **supplementary organs**

**migrante** n. [L. *migrator*, wanderer] (ARTHRO: Insecta) In aphids, the winged, parthenogenetic, viviparous females that develop on the primary host, then fly to the secondary host. see **alienicola**, **fundatrix**.

**migration** n. [L. *migratus*, change habitat] The act or instance of any form of invertebrate that moves from the place of birth for food or other purposes. **migrational** a.

**milk gland** (ARTHRO: Insecta) Specialized accessory gland of Glossina and the Pupipara that produces a milk containing lipids, proteins and amino acids.

**millepunctatus** a. [L. *mille*, a thousand; punctum, prick] Covered or studded with many dots, points, or minute depressions.

**millimeter** n. [L. *mille*, a thousand; Gr. *metron*, a measure] One-thousandth of a meter, or 0.03937 of an inch; mm.

**millimicron** see **nanometer**

**mimesis** see **mimicry**

**mimetic** a. [Gr. *mimikos*, imitative] Characterized by mimicry.

**mimetic polymorphism** Polymorphism in which the various morphs resemble other species distasteful or dangerous to a predator; often restricted to females.

**mimic** n. [Gr. *mimos*, actor] 1. An organism that resembles another in color, habit or structure for the purpose of protection. 2. Nonallelic genes with similar phenotypic effects.

**mimicry** n. [Gr. *mimikos*, imitative] The resemblance in color or structure to other species that are distasteful or poisonous to a predator. see **Batesian** and **Mullerian mimicry**.

**mines** n. [Celtic origin] (ARTHRO: Insecta) Larval galleries or burrows on the inside of leaf tissue.

**minim** n. [L. *minimus*, least] 1. A very small object. 2. 1/60 of a fluid dram or 0.06 ml. 3. (ARTHRO: Insecta) In Formicidae, a minor worker.

**minor worker** (ARTHRO: Insecta) An individual belonging to the smallest worker subcaste, esp. in Formicidae; a minim. see **media worker**, **major worker**.

**minute** a. [L. *minutus*, small] 1. Very small. 2. (ARTHRO: In-

secta) A few millimeters in length or less.

**miolecithal** a. [Gr. *meion*, less; *lekithos*, egg yolk] Referring to eggs containing little yolk.

**miracidium** n.; pl. **-dia** [Gr. dim. *meirakion*, young girl] (PLATY: Trematoda) In Digenea, the first larval stage; a ciliated, free-swimming form.

**mirror** n. [L. *miror*, to look at] (ARTHRO: Insecta) In Hemiptera Cicadidae, clear cuticular membrane located near the stridulatory apparatus; specular membrane.

**missense mutation** Gene mutation in which one amino acid is changed; the altered proteins may show some activity.

**mitochondria** n.pl.; sing. **mitochondrion** [Gr. *mitos*, thread; *chondros*, grain] Sausage-shaped structures in the cytoplasm of animal and plant cells.

**mitogen** n. [Gr. *mitos*, thread; *genos*, birth] An agent that stimulates a cell to undergo mitosis.

**mitosis** n.; pl. **-ses** [Gr. *mitos*, thread] The division and separation of chromosomes during cell division, involving the longitudinal splitting of each chromosome resulting in two equal sets of daughter chromosomes. **mitotic** a.

**mitosome** n. [Gr. *mitos*, thread; *soma*, body] A body arising from the spindle fibers of the preceding mitosis; spindle remnant.

**mitraria larva** (ANN: Polychaeta) Post-trochophore larva of *Owenia* with three hypertrophied setae for defense or floatation.

**mixed nerve** A nerve with both motor and sensory fibers.

**mixed nest** (ARTHRO: Insecta) A nest inhabited by two or more species of social insects with intermingling between adults and broods. see **compound nest**.

**mixocoel** n. [Gr. *mixis*, mingling; *koilos*, hollow] (ARTHRO) The adult body cavity (not a true coelom) derived from a blastocoel and secondary body cavities that functions as a hemocoel.

**mixonephridium** n. [Gr. *mixis*, mingling; *nephros*, kidney] (ANN: Polychaeta) A type of nephromixium in which the nephridium and coelomoduct are combined into a single

organ having both excretory and genital functions.

**mixoploidy** n. [Gr. *mixis*, mingling; *aploos*, onefold; *eidōs*, like] Having cells with different chromosome numbers in cell populations.

**mnemotaxis** n. [Gr. *mneme*, memory; *taxis*, arrangement] Movements in which memory plays a part.

**mode** n. [L. *modus*, measure] The most frequent value of any measurable characteristic in a population.

**modifer genes** Genes that affect the phenotypic expression of genes at other loci.

**modification** n. [L. *modus*, measure; *facere*, to make] Any variation caused by non-genetic factors.

**modioliform** a. [L. *modiolus*, a small measure or drinking vessel; *forma*, form] 1. In the form of a nave or hub of a wheel; more or less globular with truncated ends. 2. (MOLL: Bivalvia) Beaks are not terminal and anteroventral region forms a slight bulge; shell shaped like the genus *modiolus*.

**modulation** n. [L. *modulare*, to measure] 1. Alteration in cells by environment without change in their basic character. 2. Interactive modification of cells during development.

**moiety** n.; pl. **-ties** [L. *medius*, the middle] 1. One of two equal parts. 2. An indefinite portion.

**mola** n. [L. *mola*, mill] (ARTHRO: Insecta) In Coleoptera, the thickened and enlarged basal part of the internal ridge of the mandible used for grinding. see **molar lobe**.

**molar** a. [L. *mola*, mill] 1. Adapted for grinding. 2. (ARTHRO: Crustacea) Pertaining to the grinding surface on the inner edge of the mandibles or jaws.

**molar lobe** (ARTHRO: Insecta) The proximal lobe of the mandibles used for chewing or grinding. see **mola**.

**molar process** (ARTHRO: Crustacea) The grinding portion of the gnathal lobe of the mandible; pars molaris.

**molecular biology** The study of biological phenomena in terms of the physiochemical properties of molecules in a cell.

**molecular genetics** The study of genetics at the level of mole-

cules.

**molecules** n.pl. [L. dim. *moles*, mass] The small particles into which any substance can be divided without chemical change.

**Mollusca** n.; pl. **mollusks, molluscs** [L. *molluscus*, soft] A phylum of invertebrates with a soft unsegmented body and usually covered with a double or single shell, or having an internal shell; includes snails, chitons, tusk shells, bivalves, limpets, squids, octopi, etc.

**molluscicide** n. [L. *molluscus*, soft; *caedere*, to kill] An agent that kills snails.

**molt, moult** n. [L. *mutare*, to change] The periodic process of loosening and discarding the cuticle, accompanied by the formation of a new cuticula in the process of growth; may be divided into two distinct processes: apolysis and ecdysis. see **pharate**.

**molting fluid** 1. Often undetermined fluid that causes the loosening of the old cuticle. 2. (ARTHRO: Insecta) A fluid containing chitinase and proteinase that digests the unsclerotised cuticle (except the ecdysial membrane).

**molting hormone** see **ecdysone**

**moltinism** n. [L. *mutare*, to change] Polymorphs of differing strains or biotypes that undergo a different number of larval molts.

**molula** n. [L. dim. *mola*, mill] (ARTHRO) The dicondylic joint by which the tibia articulates with the femur.

**monacanthid** a. [Gr. *monos*, one; *acantha*, thorn] (ECHINOD: Asteroidea) Having one row of ambulacral spines.

**monactinal** a. [Gr. *monos*, one; *aktis*, ray] (PORIF) Spicule development originating from a fixed point in one direction only.

**monaene** a. [Gr. *monos*, one; *triaina*, trident] (PORIF) A modified tetraaxon with only one clad.

**monarsenous** a. [Gr. *monos*, one; *arsen*, masculine] Polygamous; having one male to numerous females.

**monaster** n. [Gr. *monos*, one; *aster*, star] A unipolar spindle that results in a nucleus with an unreduced chromosome

number instead of two nuclei.

**monaulic** a. [Gr. *monos*, one; *aulos*, pipe] (MOLL: Gastropoda) Male and female portions with a common gonopore. see **diaulic, triaulic**.

**monaxon** n. [Gr. *monos*, one; *axon*, axis] (PORIF) Spicules formed by growth in one or both directions along a single axis. **monaxonid** a.

**monecious** see **monoecious**

**monila** n. [L. *monile*, necklace] (BRYO) Concentric thickening of the zooecial wall causing a beadlike appearance.

**monilicorn** see **moniliform**

**moniliform** a. [L. *monile*, necklace; *forma*, shape] Beadlike; resembling a string of beads; contracted or jointed at regular intervals.

**moniliform glands** (NEMATA) Beadlike cells around the uvette of the demanian system, usually forming a rosette.

**monoallelic** a. [Gr. *monos*, one; *allelon*, one another] Referring to a polyploid in which all alleles at a locus are identical.

**monobasic** a. [Gr. *monos*, one; *basis*, step] Describing genera originally based on one species only.

**monocentric** a. [Gr. *monos*, one; *kentron*, point] Pertaining to a chromosome with one centromere.

**monochromatic** a. [Gr. *monos*, one; *chromos*, color] Of one color only; unicolored.

**monocondylar** see **monocondylic**

**monocondylic** a. [Gr. *monos*, one; *kondylos*, knuckle] Having one condyle.

**monocondylic joint** A joint with a single point of articulation between segments.

**monocrepid** a. [Gr. *monos*, one; *krepis*, base] (PORIF) Pertaining to a desma formed on a monaxon.

**monocule** n. [Gr. *monos*, single; L. *oculus*, eye] (ARTHRO) A one-eyed animal, as certain crustaceans and insects.

**monocyclic** a. [Gr. *monos*, one; *kyklos*, circle] (ECHINOD: Cri-

noidea) Refers to calyx plates of primitive stalked crinoids having an aboral cycle of 5 plates (basal) and 5 plates (radial) oral to the basal plates.

**monodactyl, monodactyle, monodactylous** a. [Gr. *monos*, one; *dactylos*, finger] (ARTHRO) Pertaining to an appendage, ambulacrum or claw with only one unguis. see **bidactyl**.

**monodelphic** a. [Gr. *monos*, one; *delphys*, womb] (NEMATA) Having one uterus.

**monodesmotic** a. [Gr. *monos*, one; *desmos*, tendon] (ARTHRO: Chelicerata) Pertaining to an articulation between two segments of an appendage with one tendon inserted at the base of the distal segment.

**monodisk, monodisc** n. [Gr. *monos*, one; *diskos*, disc] (CNID: Scyphozoa) One ephyra developed and released at a time before another forms by transverse fission. see **polydisk, strobilization**.

**monodomous** a. [Gr. *monos*, one; *doma*, house] (ARTHRO: Insecta) Having one nest per colony. see **polydomous**.

**monoecious** a. [Gr. *monos*, one; *oikos*, house] Having two kinds of gametes produced by the same individual; hermaphrodite; ambisexual. **monoecism** n. see **dioecious**.

**monoembryony** n. [Gr. *monos*, one; *embryon*, fetus] The production of only one embryo from a fertilized ovum or egg.

**monogamy** n. [Gr. *monos*, one; *gamos*, marriage] The condition of having only one mate. **monogamous** a. see **polygamy**.

**monogenesis** n. [Gr. *monos*, one; *genesis*, beginning] 1. The development of life from a single entity or cell. 2. Asexual reproduction. 3. Direct development without metamorphosis.

**monogenetic** a. [Gr. *monos*, one; *genesis*, beginning] 1. Pertaining to monogenesis. 2. Designates parasites with a simple direct life cycle that is completed in one host. 3. Producing offspring of one sex by arrhenogenesis or thelygenesis.

**monogenic** a. [Gr. *monos*, one; *genesis*, beginning] 1. Monogenetic. 2. Reproducing in only one way. 3. Determined by the alleles of a single gene. see **polygenic**. 4. Monomeric.

**monogeny** n. [Gr. *monos*, one; *genos*, offspring] The production of offspring of one sex by arrhenogenesis or thelygenesis.

**monogonoporus** a. [Gr. *monos*, single; *gonos*, offspring; *poros*, channel] Having both male and female gonads opening through a common orifice.

**monogony** n. [Gr. *monos*, one; *gonos*, offspring] Asexual reproduction.

**monograph** n. [Gr. *monos*, one; *graphos*, a writing] An account or description of one subject or class of subjects; a treatise discussing a single subject in detail.

**monogyny** n. [Gr. *monos*, one; *gyne*, woman] (ARTHRO: Insecta) The existence of only one functional queen in a nest. see **polygyny**.

**monohybrid** n. [Gr. *monos*, one; L. *hybrida*, mongrel] The offspring of parents differing in one character.

**monolayer** n. [Gr. *monos*, one; Eng. layer] A single layer of cells growing on a substrate.

**monomers** n.pl. [Gr. *monos*, one; *meros*, part] Simple compounds from which polymers are synthesized.

**monomeri** n.pl., sing. **-us** [Gr. *monos*, one; *meros*, part] (ARTHRO: Insecta) Insects with one-jointed tarsi.

**monomeric** a. [Gr. *monos*, one; *meros*, part] 1. Pertaining to a single segment. 2. Derived from one part. 3. Monogenic.

**monomerosomatous** a. [Gr. *monos*, one; *meros*, part; *soma*, body] Having all body segments fused.

**monomerosus** a. [Gr. *monos*, one; *meros*, part] Having only one joint or part.

**monometrosis** see **haplometrosis**

**monomial** a. [Gr. *monos*, one; L. *nomen*, name] Having one name or designation consisting of one term only; uninomial. see **binomial**.

**monomorphic colony** (BRYO) A colony in which only one kind

of zooid occurs in the zone of asexual reproduction.

**monomorphic polypides** (BRYO: Phylactolaemata) One morphologic type of organ system in an asexual budding zone.

**monomorphic zooids** (BRYO: Gymnolaemata) Zooids of one morphologic type in the zone of asexual reproduction.

**monomorphism** n. [Gr. *monos*, one; *morphe*, form] 1. A population that exhibits a single form. see **polymorphism**. 2. Species that contain only the female sex. see **dimorphism**. 3. (ARTHRO: Insecta) In social insects, having within a species or colony only a single worker subcaste. **monomorphic** a.

**monomyarian** a. [Gr. *monos*, one; *mys*, muscle] 1. Having only one muscle. 2. (MOLL: Bivalvia) In oysters and scallops, pertaining to the anterior adductor muscle that has completely disappeared, and the posterior adductor shifted to a more central location between the valves; monomyarian condition. see **anisomyarian**.

**mononchoid** a. [*Mononchus*; Gr. *eidos*, like] (NEMATA: Adenophorea) Having the characteristics of the predacious nematode genus *Mononchus*.

**mononychous** a. [Gr. *monos*, single; *onyx*, claw] Pertains to organisms having a single or uncleft claw.

**monoparental** a. [Gr. *monos*, one; L. *parens*, progenitor] With females only.

**monophagous** a. [Gr. *monos*, one; *phagein*, to eat] Adapted to subsist on a single kind of food; specialized on a single host species; monotrophic. see **polyphagous**, **oligophagous**.

**monophyletic** a. [Gr. *monos*, single; *phyle*, tribe] 1. With a single common ancestry. 2. Any group whose most recent common ancestor is cladistically a member of that group. see **polyphyletic**, **oligophyletic**.

**monophyly** see **monophyletic**

**monoplacid** a. [Gr. *monos*, one; *plax*, flat plate] Having only one plate.

**Monoplacophora**, **monoplacophorans** n., n.pl. [Gr. *monos*, one; *plax*, flat plate; *pherein*, to carry] A class of Mollusca

mostly extinct, with a limpet-like, cap-shaped, cone-shaped or spoon-shaped shell with serially paired muscle scars.

**monoploid** a. [Gr. *monoploos*, onefold] 1. Any somatic cell or individual with one set of chromosomes. 2. Having the basic number of chromosomes in a polyploid series. see **euploid**, **aneuploid**.

**monoplont** see **haplont**

**monorchic** a. [Gr. *monos*, one; *orchis*, testicle] Having one testis. see **diorchic**.

**monosiphonous** a. [Gr. *monos*, one; *siphon*, tube] (CNID: Hydrozoa) Having a single central tube as in the hydrocaulus.

**monosome** n. [Gr. *monos*, one; *soma*, body] 1. A chromosome lacking an allele. see **polysome**. 2. A single ribosome bound to messenger RNA.

**monosomic** a. [Gr. *monos*, one; *soma*, body] Lacking one chromosome of a normal complement (somatic number is 2N-1).

**monospermy** n. [Gr. *monos*, one; *sperma*, seed] One sperm fertilizing an ovum; normal fertilization of an ovum.

**monostich** n. [Gr. *monos*, one; *stichos*, row] 1. Cells arranged in a row along one side of an axis. 2. (NEMATA: Adenophorea) Esophagi in Stichosomida (=Trichocephalida; Mermithida) in which the cells are external to the esophagus and along one side. **monostichous** a. see **distich**.

**monostigmatous** a. [Gr. *monos*, single; *stigma*, mark] Having one stigma only.

**monostome** n. [Gr. *monos*, one; *stoma*, mouth] (PLATY: Trematoda) A fluke lacking a ventral sucker.

**monostome cercaria** (PLATY: Trematoda) A cercaria with a muscular oral sucker anteriorly and no ventral sucker; encysts on objects in water.

**monothalamous** a. [Gr. *monos*, one; *thalamos*, chamber] Unilocular; single chambered. see **monotheal**.

**monotheal** a. [Gr. *monos*, one; *theke*, case] 1. Having one chamber or loculus. see **monothalamous**. 2. (ANN: Polychaeta) Having only one spermatheca. see **polytheal**.

- monothely** n. [Gr. *monos*, one; *thelys*, woman] Polyandry, with one female being fertilized by many males. **monothelious** a.
- monothetic** a. [Gr. *monos*, one; *tithenai*, to place] Pertaining to taxa based on only one or a few characters. see **polythetic**.
- monotrochous** a. [Gr. *monos*, one; *trochous*, wheel] (ARTHRO) Having the trochanter composed of a single piece.
- monotrophic** see **monophagous**
- monotropic** a. [Gr. *monos*, one; *tropikos*, a turning] 1. Turning in one direction. 2. (ARTHRO: Insecta) Visiting only one kind of flower for nectar. see **polytropic**.
- monotype** n. [Gr. *monos*, one; *typos*, type] A holotype of a species based on a single specimen.
- monotypic** a. [Gr. *monos*, one; *typos*, type] Pertains to a taxon containing only one immediate subordinate taxon, as a genus containing only one species, or a species containing only one subspecies.
- monovalent articulation** Articulation permitting movement in one mode only; forward and backward, but not up and down, etc.
- monovarial** a. [Gr. *monos*, one; L. *ovum*, egg; *arium*, producing organ] Having one ovary.
- monovoltine** see **univoltine**
- monoxenic** a. [Gr. *monos*, one; *xenos*, guest] Pertaining to the rearing of an organism with only one known species as a food source. see **axenic**.
- monoxenous** a. [Gr. *monos*, one; *xenos*, guest] Living within a single host during a parasite's life cycle. see **dixenous**.
- monozoic** a. [Gr. *monos*, one; *zoon*, animal] (PLATY: Cestoda) Non-strobilated cestodes.
- monozonian** a. [Gr. *monos*, one; *zone*, girdle] (ARTHRO: Diplopoda) Having a cylindrical sclerite composed of fused tergites, pleurites and sternites.
- montane** a. [L. *mons*, mountain] Pertaining to mountains and coniferous forests of mountains.

- monticolous** a. [L. *mons*, mountain; *colare*, to inhabit] Living in mountains.
- monticule** n. [L. dim. *mons*, mountain] (BRYO: Stenolaemata) A prominence on the colony surface made by a cluster of polymorphs. see **macula**.
- morgan** n. [named for T. H. Morgan] A chromosome map unit; expresses the relative distance between genes on a chromosome, as determined by crossing-over phenomena.
- moribund** a. [L. *mors*, death] Dying; near death.
- morph** n. [Gr. *morphe*, form] Any of the individual variants of a polymorphic population.
- morpha** n. [Gr. *morphe*, form] (ARTHRO: Insecta) A word ending recently incorporated in Hemiptera indicating major groups; Nepomorpha (=Hydrocorisae).
- morphallaxis** n. [Gr. *morphe*, form; *allaxis*, exchange] A regenerative process in which the new parts are reorganized from the old, instead of being formed anterior or posterior to the level of amputation.
- morphism** see **polymorphism**
- morphogenesis** n. [Gr. *morphe*, form; *genesis*, beginning] The development of the characteristic form and structure of a cell or an organism.
- morphology** n. [Gr. *morphe*, form; *logos*, discourse] The science of structural characteristics, particularly those on the surface of the body. **morphological** a.
- morphometrics** n. [Gr. *morphe*, form; *metron*, measurement] Body measurements.
- morphometry** n. [Gr. *morphe*, form; *metron*, measurement] Measurement of external form.
- morphopathology** n. [Gr. *morphe*, form; *pathos*, suffering; *logos*, discourse] The branch of pathology dealing with the morbid changes occurring in the structure of tissues, cells and organs.
- morphosis** n. [Gr. *morphosis*, a shaping] Nonadaptive and unstable variation in an individual's morphogenesis associated with environmental changes.

**morphospecies** n.pl. [Gr. *morphe*, form; L. *species*, kind] A typological species based on morphological differences. see **phenon**.

**morphotype** n. [Gr. *morphe*, form; L. *typos*, type] The type specimen of one of the forms of a dimorphic species.

**morula** n. [L. dim. *morus*, mulberry] In embryology, consisting of a cluster of cleaving blastomeres; stage preceding blastula.

**morular cell** (BRYO) A cell filled with refringent spheres in the peritoneal membrane and funicular strand.

**morular organ** see **columella**

**morulation** n. [L. dim. *morus*, mulberry] Formation of the morula during holoblastic egg cleavage.

**morulit** see **nucleolus**

**mosaic** n. [Gr. *Mousaios*, of the Muses] 1. An organism composed of two or more cell lines of different genetic or chromosomal constitution, both cell lines being derived from the same zygote; genetic mosaic. see **chimera**. 2. An individual displaying characteristics of more than one sex or polymorphic form; phenotypic mosaic.

**mosaic evolution** Evolution that involves differential rates for different structures, organs, or other components of the phenotype.

**mosaic theory** (ARTHRO) The theory explaining the function of the compound eye, with the numerous ommatidia receiving a portion of the image and then combining them into a total image in the brain.

**moschate** a. [L. *moschus*, musk] Having an odor similar to musk.

**mother cell** A precursory cell or metrocyte.

**mother genus** An original genus from which others have derived by nomenclatorial division.

**motile** a. [L. *movere*, to move] Capable of spontaneous movement.

**motor nerve** see **motor neuron**

**motor nervous system** A part of the nervous system lying

entirely within the body that transmits stimuli from the central nervous system to the motor elements of the body.

**motor neurocyte** The neurocyte of a motor neuron.

**motor neuron** A neuron that transmits excitation directly to an effector; motor nerve.

**mottled** a. [F. *mattele*, curdled] Spotted with different colors; maculated; blotched.

**moult** see **molt**

**mound nest** (ARTHRO) Nest or part of one built above ground of soil or carton material.

**mouse unit** (MOLL: Bivalvia) A unit of measurement employed as a gradient of shellfish poisoning.

**mouth** n. [A.S. *muth*, mouth] The oral aperture.

**mouth-anus axis** (MOLL: Bivalvia) In oysters, a line through the mouth and anus.

**mouth capsule** see **buccal cavity**

**mouth cirri** (ARTHRO: Crustacea) In Cirripedia, the first pair of modified cirri.

**mouth cone** (ARTHRO: Insecta) The rostrum; proboscis, prostomium.

**mouth fork** see **lacinia**

**mouth hooks** (ARTHRO: Insecta) In Cyclorrhapha 2nd instars, cuticular claw-like structures, one on each side of the atrial opening, thought to articulate with a small ventral sclerite that may represent the maxillary cardo; mandibular sclerites.

**mouth spear** see **stomatostyle, odontostyle**

**movable finger** (ARTHRO: Crustacea) The dactyl of the chela.

**movable hook** (ARTHRO: Insecta) In Odonata, a small tooth on the inner border of the lateral lobe slightly external to the end-hook.

**mucid** a. [L. *mucidus*, mucus-like] Mouldy; slimy.

**mucific** a. [L. *mucus*, mucus; *facere*, to make] Pertains to mucus-secreting.

**mucigen** n. [L. *mucus*, mucus; *genos*, to produce] A substance

from which mucin is derived in mucin secreting cells.

**mucilaginous** a. [L. *mucus*, mucus] Pertaining to gum-like or mucilage.

**mucin** n. [L. *mucus*, mucus] A glycoprotein secreted by various cells or glands.

**mucivorous** a. [L. *mucus*, mucus; *vorare*, to devour] Feeding on the juices of plants. **mucivore** n.

**mucoid** a. [L. *mucus*, mucus; Gr. *eidos*, like] Glycoproteins that are found in cartilage, cuticle, etc.

**mucolytic** a. [L. *mucus*, mucus; *lysis*, loosen] The breaking down or dissolving of mucus.

**mucopolysaccharides** n.pl. [L. *mucus*, mucus; Gr. *polys*, many; *sakcharon*, sugar] Polysaccharides with aminosugar and uronic acid; a constituent of glycoproteins.

**mucoprotein** a. [L. *mucus*, mucus; Gr. *protos*, first; *eidos*, form] A glucoprotein containing more than 4% hexosamine. see **glucoprotein**, **glycoprotein**.

**mucoreous** a. [L. *mucor*, mould] Pertaining to or appearing mouldy; surface covered with small fringe-like processes.

**mucosa** n. [L. *mucus*, mucus] Mucus membrane; lining of internal passageways.

**mucous** a. [L. *mucus*, mucus] Secreting mucus or a similar sticky substance by various cells, glands, or membranes.

**mucous membrane** see **mucosa**

**mucro** n.; pl. **mucrones** [L. *mucro*, sharp point] A small pointed projection, or spine-like ending on a terminus. **mucronate** a.

**mucron** see **mucro**

**mucronate valve** see **beak**

**mucus** n. [L. *mucus*, mucus] A slimy fluid secreted by gland cells present in many epithelia known as mucous membranes.

**mulberry corpuscle** see **spherule cell**

**Mullerian association** A group of species showing Mullerian mimicry.

**Mullerian mimicry** Similarity (usually consisting of coloration) of several species that are distasteful, poisonous, or otherwise harmful to a predator. see **Batesian mimicry**.

**Muller's larva** (PLATY: Turbellaria) In Polycladida, larva possessing eight posteriorly directed postoral lobes. see **cephalotrocha larva**.

**Muller's organ** (ARTHRO: Insecta) A group of numerous scolopophores forming a swelling; in Acridoidea, applied to the inner surface of each tympanum and connected by the auditory nerve to the metathoracic ganglion.

**Muller's thread** see **ovarial ligament**

**multiangular, multiangulate** a. [L. *multus*, many; *angulus*, angle] Having many angles.

**multiarticulate** a. [L. *multus*, many; *articulus*, joint] Many-jointed; polyarthric.

**multicamerate** a. [L. *multus*, many; *camera*, chamber] Having multiple chambers. see **multilocular**.

**multicarinate** a. [L. *multus*, many; *carina*, keel] Having many ridges or carinae.

**multicellular** a. [L. *multus*, many; *cella*, cell] Comprised of two or more cells; many-celled.

**multicolonial** n. [L. *multus*, many; *colonia*, colony] (ARTHRO: Insecta) Population of social insects divided into independent colonies or nests.

**multifactorial** a. [L. *multus*, many; *facere*, to do] Controlled by several gene loci.

**multifarious** a. [L. *multifarius*, manifold] Arranged in several rows. see **polystichous**.

**multifid** a. [L. *multus*, many; *findere*, to cleave] Having many divisions or clefts.

**multiforous** a. [L. *multus*, many; *foris*, gate] (ARTHRO: Insecta) A spiracle with three or more secondary openings in or near the peritreme.

**multilocular** a. [L. *multus*, many; *loculus*, little place] Many celled or chambered; having many divisions or compartments; plurilocular. see **multicamerate**.

**multilocular hydatid cyst** see **alveolar hydatid cyst**

**multinucleate** a. [L. *multus*, many; *nucleus*, kernel] Pertaining to cells with many nuclei; a coenocyte; polykaric.

**multiordinal crochets** (ARTHRO: Insecta) Crochets of larvae when they arise from a single row, but with many alternating lengths. see **ordinal**.

**multiovulate** a. [L. *multus*, many; dim. *ovum*, egg] With many ovules.

**multiparasitism** n. [L. *multus*, many; Gr. *para*, near; *sitos*, food] The coincident parasitism of an organism by two or more parasites of different species.

**multiparous** a. [L. *multus*, many; *parere*, to beget] Bearing many offspring.

**multipartite** a. [L. *multus*, many; *partitis*, divided] Divided into many parts.

**multiple allele** A series of three or more alternative forms of a gene at a single locus in a chromosome.

**multiplicate** a. [L. *multus*, many; *plicare*, to fold] Having many folds or plicae.

**multipolar cell** Cells with more than two nerves preceding from it.

**multiporous septulum** (BRYO: Gymnolaemata) A membrane or plate with many holes; a rosette-plate.

**multiramous** a. [L. *multus*, many; *ramus*, branch] Many branched.

**multiramous plasmatocyte** A plasmatocyte with three spindle ends.

**multiramous vermiform cell** A vermiform cell with three spindle ends.

**multiserial** a. [L. *multus*, many; *series*, a row] Having many series or rows.

**multiserial bands** (ARTHRO: Insecta) In Lepidoptera, caterpillars with crochets absent from the mesial and lateral parts of the circle.

**multiserial circle** (ARTHRO: Insecta) In Lepidoptera, caterpillar crochets arranged in three or more concentric circles.

**multiserial crochets** (ARTHRO: Insecta) In Lepidoptera, crochets arranged in several rows.

**multisetiferous** a. [L. *multus*, many; *seta*, bristle; *ferre*, to bear] With many setae.

**multispinose** a. [L. *multus*, many; *spina*, spine] With many spines.

**multispiral** a. [L. *multus*, many; *spira*, a coil] With numerous whorls.

**multistriate** a. [L. *multus*, many; *stria*, furrow] With many striations; numerous thread-like lines, grooves or scratches.

**multivalent** a. [L. *multus*, many; *valens*, strong] Pertaining to several chromosomes being attached together.

**multivalved** a. [L. *multus*, many; *valva*, leaf of a folding door] (MOLL: Polyplacophora) Having more than two sections.

**multivincular** a. [L. *multus*, many; *vinculum*, to bind] (MOLL: Bivalvia) Having a ligament with many bonds of union.

**multivoltine** a. [L. *multus*, many; It. *volta*, time] Having two or more generations or broods in a year or season. see **bivoltine**.

**multizoidal bud** see **giant bud**

**mumia** n. [ML. *mumia*, mummy] (ARTHRO: Insecta) A pupa.

**mumia pseudonympha** (ARTHRO: Insecta) A pupa with some degree of locomotion.

**munite** a. [L. *munitus*, fortify] Provided with armature.

**mural lacuna** see **pustula**

**mural plate** see **compartmental plate**

**mural spine** (BRYO: Stenolaemata) A small skeletal spine extending into the zooidal chamber.

**mural tooth** (NEMATA) A tooth attached to, or derived from the stomatal wall.

**muricate** a. [L. *murex*, a pointed stone] Formed with sharp elevated points; covered with sharp points.

**muscidiform larva** (ARTHRO: Insecta) Like a Diptera larva; sub-cylindrical larva with the cephalic-end pointed and the

caudal-end broad.

**muscle** n. [L. *musculus*, muscle] Tissue made up of specialized cells for the production of motion by contraction; a sheet, bundle, or mass of such tissue.

**muscle fibers** see **fibroplasm**

**muscle layer(s)** 1. One or more layers of muscle below the epithelium. 2. (BRYO: Phylactolaemata) Both longitudinal and circular muscles between epithelial and peritoneal layers of the colony wall.

**muscle scar** A mark on the interior of valve or carapace in Crustacea, Mollusca and Brachiopoda representing the position of muscle attachment, recognizable by surface texture, elevation, depression or a delimiting narrow groove; a muscle imprint.

**muscle segment** A myomere.

**muscularis** n. [L. *musculus*, muscle] (ARTHRO: Insecta) A muscular sheath surrounding the alimentary canal.

**muscular pad** (ECHI) A muscular tissue pad or pads associated with the ventral setae.

**muscular sheath** (ARTHRO: Insecta) In Culicidae, a sheath enclosing a coelomic section of each of the ventral setae.

**musculature** n. [L. *musculus*, muscle] The system or arrangement of muscular structure of an organism.

**musculus bursae basalis** (NEMATA: Secernentea) Bursal muscle that arises from the ventral side of the bursa and extends dorsally to the root of the dorsal ray.

**musculus costae dorsalis** (NEMATA: Secernentea) A many branched bursal muscle that arises mediodorsally in the dorsal ray, and extending anteriorly to become trifurcate, then the median arm splits into four parts.

**musculus costae lateralis externus anterior** (NEMATA: Secernentea) Bursal muscles that arise anterior to the musculus costae lateralis externus posterior, extending posteriorly to the base of the ventral rays; possibly functioning to extend the bursa.

**musculus costae lateralis externus posterior** (NEMATA: Secernentea) A bursal muscle that arises anteriorly dorsad of

the lateral cords, extending posteriorly and becoming trifurcate at the base of the lateral rays; possibly functioning to extend the bursa.

**musculus costerum lateraliurn internis** (NEMATA: Secernentea) Bursa muscle that arises as paired submedian muscles at the body wall anterior to the intestino-rectal valve; each laterally extended branch entering the root of the lateral ray; possibly functioning to bend the bursa inwards.

**mushroom bodies** (ARTHRO: Insecta) The two stalked nerve structures of the protocerebrum, that are connected with the optic lobes. see **corpora pedunculata**.

**mushroom gland** (ARTHRO: Insecta) Large mushroom-shaped seminal vesicles.

**mutafacient** n. [L. *mutatus*, change; *facere*, to make] Gene or genetic element that causes or increases the chance of mutation at another site.

**mutagen** n. [L. *mutare*, to change; Gr. *gennaen*, to produce] Any physical or chemical agent that increases mutational events.

**mutant** n. [L. *mutare*, to change] An organism that undergoes mutation.

**mutation** n. [L. *mutare*, to change] A structural change in a gene, consisting of a replacement, duplication, or deletion of one or several pairs in the DNA.

**mutation frequency** The frequency of mutants in a population.

**mutationism** see **De Vriesianism**

**mutation rate** Frequency with which a mutation occurs per site per generation.

**mutation theory** A theory of the origin of new characteristics in organisms as a result of changes in the genes. see **sal-tation**.

**mutator genes** Any gene that causes an increase in mutation rates in other genes. see **mutafacient**.

**mutein** n. [L. *mutatus*, change; Eng. protein] A mutationally altered protein analogous to the normal type.

- mutic, mutilous** a. [L. *muticus*; shortened] Unarmed; lacking defensive processes that usually occur.
- mutilate** v.t. [L. *mutilus*, cut-off] To deprive of one or more essential part(s); to amputate.
- muton** n. [L. *mutare*, to change] The smallest element in the array of mutation sites, that when altered, may give rise to a mutant.
- mutualism** n. [L. *mutuus*, reciprocal] A type of symbiosis in which both host and symbiont benefit from the association.
- muzzle** n. [OF. *musel*, snout] Snout.
- myarian** a. [Gr. *mys*, muscle] 1. Referring to muscle, as in meromyarian. 2. (MOLL: Bivalvia) Used in classification as to number and position of the adductor muscles.
- mycelium** n. [Gr. *mykes*, fungus] In fungi, the network of filaments that form the vegetative part.
- mycetangium** n. [Gr. *mykes*, fungus; *angeion*, vessel] (ARTHRO: Insecta) The fungus-storing organs of Platypodinae, a sac-like invagination of the epidermis at the posterior part of the prothorax.
- mycetocyte** n. [Gr. *mykes*, fungus; *kytos*, container] A large, polyploid cell containing intracellular mutualistic and commensalistic microsymbiotes; one of many cells that make up the mycetome. see **symbiosis**.
- mycetome** n. [Gr. *mykes*, fungus; *-oma*, mass] A specialized structure or organ that houses symbiotes.
- mycetometochy** n. [Gr. *mykes*, fungus; *metochos*, sharing] (ARTHRO: Insecta) Symbiosis between fungi and the dwellers of compound nests.
- mycetophagous** a. [Gr. *mykes*, fungus; *phagein*, to eat] Feeding on fungi; mycophagous; fungivorous.
- mycohelminths** n.pl. [Gr. *mykes*, fungus; *helmins*, worm] Fungivorous nematodes.
- mycophagous** a. [Gr. *mykes*, fungus; *phagein*, to eat] Feeding on fungi; mycetophagous; fungivorous.
- mycosis** n. [Gr. *mykes*, fungus; *-sis*, process of] Any disease caused by the invasion of fungi.

- mycotoxin** n. [Gr. *mykes*, fungus; *toxikon*, poison] A low molecular weight metabolite of fungi which is poisonous to animals.
- myelin sheath** A fatty material surrounding a nerve fiber.
- myiasis** n. [Gr. *myia*, fly; *-iasis*, morbid condition] A condition deriving from invasion by dipterous larvae.
- myoblast** n. [Gr. *mys*, muscle; *blastos*, bud] A cell that produces muscular fiber.
- myochordotonal organ** (ARTHRO: Crustacea) In Decapoda, a proprioceptor at the proximal end of the meropodite, a flat membrane lying between the skeleton and sheath of the accessory flexor muscle of the carpus, with distal bipolar sensory cells passing through the membrane and attached to the skeleton; having scolopidia similar to the insect chordotonal organs.
- myocytes** n.pl. [Gr. *mys*, muscle; *kytos*, container] (PORIF) Cells that cause contraction.
- myoepithelial** n. [Gr. *mys*, muscle; *epi*, upon; *thele*, nipple] 1. (BRYO) A contractile ectodermal cell with intracellular striated muscles. 2. (CNID) Epithelium with a longitudinal contractile fiber at the base; epitheliomuscular.
- myofibrillae, myofibrils** n.pl; sing. **-a** [Gr. *mys*, muscle; dim. *fibra*, fiber] Longitudinal fibrils of muscle cells.
- myogenic** a. [Gr. *mys*, muscle; *gennaen*, to produce] Pertains to a muscle contraction initiated by nerve impulse. see **neurogenic**.
- myoglobin** n. [Gr. *mys*, muscle; L. *globus*, ball] A type of hemoglobin occurring in muscle cells concerned with oxygen transport and storage; also called myohemoglobin.
- myohematin, myohaematin** n. [Gr. *mys*, muscle; *haima*, blood] An iron pigment said to occur in muscles; thought to be a cytochrome.
- myoid** a. [Gr. *mys*, muscle; *eidos*, like] Composed of muscle fibers.
- myology** n. [Gr. *mys*, muscle; *logos*, discourse] That branch of anatomy dealing with the arrangement of muscles.
- myomere** n. [Gr. *mys*, muscle; *meros*, part] A muscular segment.

- myoneural junction** Point of junction between a motor nerve and the muscle which it activates.
- myoneure** n. [Gr. *mys*, muscle; *neuron*, nerve] A motor neuron.
- myonicity** n. [Gr. *mys*, muscle] The contracting power of muscle tissue.
- myophore** n. [Gr. *mys*, muscle; *pherein*, to bear] (MOLL: Bivalvia) A spoon- or sickle-shaped structure beneath the beak on the interior of the shell; functioning as a place of attachment for certain muscles.
- myoplasm** n. [Gr. *mys*, muscle; *plasma*, formed or molded] The contractile portion of a muscle cell.
- myosin** n. [Gr. *mys*, muscle] Muscle protein that combines with actin to form actomyosin in muscle contraction.
- myostracum** n. [Gr. *mys*, muscle; *ostrakon*, shell] (MOLL: Bivalvia) That part of the shell wall secreted at the attachment of the adductor muscles.
- myotaxis** n. [Gr. *mys*, muscle; *taxis*, tension] Muscular tonicity or tension.
- myotome** n. [Gr. *mys*, muscle; *tome*, to cut] A muscle segment, somite or myomere.
- myrmecobiosis** n. [Gr. *myrmex*, ant; *biosis*, life] A symbiotic relationship between ants; consociation.
- myrmecochory** n. [Gr. *myrmex*, ant; *chorein*, to spread] Active dispersion of seeds by ants.
- myrmecoclepty** n. [Gr. *myrmex*, ant; *kleptes*, thief] (ARTHRO: Insecta) A form of symbiosis in which the guest ant steals food from the host ant.
- myrmecodomatium** n.; pl. **-ia** [Gr. *myrmex*, ant; *domos*, house] A plant tissue cavity inhabited by ants.
- myrmecole** n. [Gr. *myrmex*, ant; L. *colere*, to inhabit] An organism that lives in ants' nests, but does not otherwise interact with them. see **myrmecophilous**.
- myrmecology** n. [Gr. *myrmex*, ant; *logos*, discourse] The division of entomology that studies ants.
- myrmecophagous** a. [Gr. *myrmex*, ant; *phagein*, to eat]

Feeding on ants.

- myrmecophile** n. [Gr. *myrmex*, ant; *philos*, love] A symbiont of ants.
- myrmecophilous** a. [Gr. *myrmex*, ant; *philos*, love] Fondness of, or benefited by an association with ants. see **myrmecole**.
- myrmecophily** n. [Gr. *myrmex*, ant; *philos*, love] (ARTHRO: Insecta) The utilization by other insects, mainly beetles, of ant colonies as domiciles and sources of food; ant symbiosis. **myrmecophilous** a.
- myrmecophobic** a. [Gr. *myrmex*, ant; *phobeisthai*, to flee] Having the ability to repel ants.
- myrmecophyte** n. [Gr. *myrmex*, ant; *phyton*, plant] A myrmecophilous plant that has an obligatory, mutualistic relationship with ants.
- myrmecoxenes** n.pl. [Gr. *myrmex*, ant; *xenos*, guest] True guests of ants. see **symphile**.
- mysis stage** (ARTHRO: Crustacea) In Decapoda, a larval stage in which only the thoracopods are used in swimming and the compound eye is stalked; schizopod larva. see **zoea**.
- mystacine** a. [Gr. *mystax*, moustache] Bearded; having tactile hairs or vibrissae.
- mystax** n. [Gr. *mystax*, moustache] (ARTHRO: Insecta) A cluster of hairs or bristles above the mouth; beard.
- mytiliform** a. [L. *mytilus*, sea mussel; *forma*, shape] 1. (ARTHRO: Insecta) In aquatic Hemiptera, the shell-shaped swimming feet. 2. (MOLL: Bivalvia) Having the form of a mussel shell; mytiloid; shell shaped like the genus *Mytilus*.
- myzesis** n. [Gr. *myzein*, to suck] Suction or sucking.
- myzorhynchus** n. [Gr. *myzein*, to suck; *rhynchos*, snout] (PLATY: Cestoda) In some Tetracystida, an apical stalked, sucker-like organ on the scolex.