

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Armand R. Maggenti Online Dictionary of
Invertebrate Zoology

Parasitology, Harold W. Manter Laboratory of

September 2005

Online Dictionary of Invertebrate Zoology: N

Mary Ann Basinger Maggenti
University of California-Davis

Armand R. Maggenti
University of California, Davis

Scott Gardner
slg@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/onlinedictinvertzoology>



Part of the [Zoology Commons](#)

Maggenti, Mary Ann Basinger; Maggenti, Armand R.; and Gardner, Scott, "Online Dictionary of Invertebrate Zoology: N" (2005). *Armand R. Maggenti Online Dictionary of Invertebrate Zoology*. 12.
<https://digitalcommons.unl.edu/onlinedictinvertzoology/12>

This Article is brought to you for free and open access by the Parasitology, Harold W. Manter Laboratory of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Armand R. Maggenti Online Dictionary of Invertebrate Zoology by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

N

nacre n. [F. *nacre*, mother-of-pearl] (MOLL) The pearly or iridescent substance that lines the interior of shells, especially gastropods and pelecypods; mother-of-pearl; **nacreous** a.

naiad n. [Gr. *Naias*, water nymph] (ARTHRO: Insecta) In Hemimetabola, the aquatic, gill-breathing nymph.

nail n. [A.S. *naegel*, nail] (ARTHRO) A tarsal claw; unguis.

naked a. [A.S. *nacod*, nude] Lacking the usual covering.

nanism n. [Gr. *nanos*, dwarf] Dwarfishness. **nanoid** a.

nanitic worker (ARTHRO: Insecta) In Formicidae, dwarf workers produced in first broods or later starved broods.

nanometer n. [Gr. *nanos*, dwarf; *metron*, a measure] Unit of measurement equal to one billionth of a meter; also called millimicron, micromillimeter and bicron.

nanoplankton n. [Gr. *nanos*, dwarf; *plankton*, wandering] Microscopic floating animal and plant organisms.

nanozoid n. [Gr. *nanos*, dwarf; *zoon*, animal; *eidōs*, like] (BRYO: Stenolaemata) In Tubuliporidae, a polymorph with a single tentacle and reduced alimentary sac.

narcosis n. [Gr. *narke*, numbness, torpor] Stupor or unconsciousness caused by a drug or carbon dioxide build up in the blood.

nasale n. [L. *nasus*, nose] (ARTHRO: Insecta) Anterio-median projection from the frons formed by fusion of *frons*, clypeus and *labrum*, or by frons and clypeus alone, especially some Coleoptera larvae.

nascent a. [L. *nascens*, arising, beginning] Beginning to exist, grow, or develop; the act of being born.

naso n. [L. *nasus*, nose] (ARTHRO: Chelicerata) In Acari, an acronal protuberance at the anterior of the body overhanging the chelicerae.

Nassanoff's gland see **Nassanov's gland**

Nassanov's gland (ARTHRO: Insecta) In *Apis*, a gland opening to the exterior beneath abdominal tergites six and seven, that function in pheromone production; well developed in workers, but absent in drones and maybe queens.

nasus n. [L. *nasus*, nose] (ARTHRO: Insecta) 1. The clypeal region; the drawn-out forward part of the face. 2. In Isoptera, the snout-like frontal projection that functions to eject poisonous or sticky fluids at intruders.

nasute n. [L. *nasus*, nose] (ARTHRO: Insecta) A type of soldier termite that bears a frontal snout-like projection or horn through which it ejects a defensive toxin; some possess large hooked mandibles, while in others the mandibles are greatly reduced.

natal a. [L. *natalis*, of birth] Of or pertaining to birth.

natality rate Birth rate; the number of births per population unit during a given period of time.

natant a. [L. *natāre*, to swim] Adapted for swimming; floating; swimming at the surface of the water.

natatory a. [L. *natāre*, to swim] Characterized by swimming; adapted for swimming.

natatory lamellae (ARTHRO: Insecta) In Orthoptera Gryllotalpidae, long slender plates of the hind tibiae.

nates n.pl. [L. *natis*, rump] The umbones of bivalves.

naticid a. [LL. *naticae*, buttocks] (MOLL: Gastropoda) Pertaining to *Natica*, a genus of carnivorous sea snail.

naticiform a. [LL. *naticae*, buttocks; *forma*, shape] (MOLL: Gastropoda) Having globose last whorl and small spire, like the shell of *Natica*.

native a. [L. *nativus*, inherent, conferred by birth] Animals and plants originating and living in a particular area; not imported.

natural classification In biology, a classification of groups of organisms or objects to show their characteristics and evolutionary relationships with each other. see **artificial classification**.

natural decrease The rate of population decrease measured by subtracting the natality rate from the mortality rate. see **natural increase**.

natural group A group of organisms having a common ancestor.

natural increase The rate of population increase measured by subtracting mortality rate from natality rate.

natural requeening see **supersedure**

natural selection The process of elimination of the least fitted individuals, and hence species, by the natural conditions of their habitat.

naupliar eye see **nauplius eye**

naupliiform a. [L. *nauplis*, shellfish; *forma*, shape] (ARTHRO: Crustacea) Pertaining to the nauplius larva.

nauplius eye (ARTHRO: Crustacea) In nauplii and many adults, an unpaired median eye consisting of 1 to few light-sensitive cells; median eye; naupliar eye.

nauplius larva (ARTHRO: Crustacea) The earliest larval stage(s), usually with one central eye, and characterized by having only three pairs of appendages: antennules, antennae, and mandibles, all primarily of locomotive function.

nautilicone a. [Gr. *nautilus*, nautilus shell; L. *conus*, cone] (MOLL: Cephalopoda) Spirally coiled in a single plane.

nautiliform see **nautiloid**

nautiloid a. [Gr. *nautilus*, nautilus shell; *eidos*, form] (MOLL: Cephalopoda) Any nautilid shell coiled in a symmetrical involute spiral; nautiliform.

navicular a. [L. dim. *navis*, ship] Boatshaped; cymbiform; scaphoid.

neala n. [L. *ne*, not; *ala*, wing] (ARTHRO: Insecta) 1. The jugum or jugal region of a wing. 2. Vannus

neallotype n. [Gr. *neos*, new; *allos*, other; *typos*, type] An allotype of the opposite sex from that described in the publication of a neotype.

neanic a. [Gr. *neanikos*, fresh] 1. Being youthful or immature; a stage of development between the brephic and mature.

2. (ARTHRO: Insecta) The pupal stage. 3. (BRACHIO) A youthful stage when generic characters are beginning to become apparent. 4. (BRYO) Zooids laid down in the phase of astogenic change.

neap a. [ME. *neep*, neap] A series of tides exhibiting a small tidal range; occurring midway between spring tides.

Nearctic a. [Gr. *neos*, new; *arktikos*, bear] Pertaining to or belonging to a terrestrial division comprised of Greenland and North America, and including northern Mexico.

neascus larva (PLATY: Trematoda) In Strigeidae and Diplostomatidae, a type of metacercaria with a cup-shaped forebody and a well developed hindbody.

nebulous a. [L. *nebula*, cloud] Clouded; marked with many scattered dilated colors or spots; indistinct.

neck n. [A.S. *hnecca*, neck] 1. (ARTHRO: Insecta) The slender connecting structure between head and thorax where the head is free. 2. (MOLL) Distal part of the base of a siphonostomatous shell, starting where outline of left side changes from convex to concave. 4. (PLATY: Cestoda) The unsegmented area between the scolex and strobilae. 3. (NEMATA) The slender, anterior portion of the body containing the esophagus.

neck organ see **nuchal organ**

necrobiosis n. [Gr. *nekros*, corpse; *bios*, life] A series of tissue changes occurring after the death of an individual cell.

necrocytosis n. [Gr. *nekros*, corpse; *kytos*, container] Death of a cell.

necrophagous a. [Gr. *nekros*, corpse; *phagein*, to eat] Feeding upon decaying flesh.

necrophoresis, necrophoric behavior (ARTHRO: Insecta) Carrying dead colony members away from the nest.

necrosis n. [Gr. *nekros*, corpse; *izein*, cause to be] The death of cells or tissues.

necrotize v.t. [Gr. *nekros*, corpse] To kill cells and tissues in a living organism.

nectar n. [Gr. *nektar*, drink of the gods] A sweet substance secreted by flowers and certain leaves; the food of many

insects.

nectobenthic a. [Gr. *nektes*, swimmer; *benthos*, depths of the sea] Organisms swimming freely on or near the bottom of the sea.

nectocalyx see **nectophore**

nectochaeta larva (ANN: Polychaeta) A free swimming planktogenic larva of some aquatic forms that bear rings of cilia and 3 pairs of parapodia.

necton see **nekton**

nectophore n. [Gr. *nektos*, swimming; *phorein*, to carry] (CNID: Hydrozoa) In Siphonophora, the muscular swimming bell that propels the colony; nectocalyx; nectozoid. see **pneumatophore**.

nectopod n. [Gr. *nektos*, swimming; *pous*, foot] An appendage adapted for swimming.

nectosome n. [Gr. *nektos*, swimming; *soma*, body] (CNID: Hydrozoa) In Siphonophora, the part that bears the swimming bells.

nectozoid see **nectophore**

Needham's sac/organ (MOLL: Cephalopoda) In males, a specialization of the sperm duct for formation and storage of spermatophores; spermatophoric sac.

negative geotropism Movement directed away from the earth's gravitational force.

negative phototropism The tendency to retreat from light.

negative tropism The tendency to retreat from stimuli.

nekton n. [Gr. *nektes*, swimmer] Organisms that swim in the open water, i.e., jellyfish, squid, fishes, turtles, seals and whales; necton. see **seston**.

nema n. [Gr. *nema*, thread] (NEMATA) Any individual of the phylum Nemata; a nematode.

nema curds see **nema wool**

nemaposit v.i. [Gr. *nema*, thread; L. *ponere*, to place] (ARTHRO: Insecta) Mock oviposition by insects parasitized by nematodes; the insect deposits nematodes instead of their own eggs.

Nemata, nematodes n.; n.pl. [Gr. *nema*, thread] A phylum containing a large, diverse group of free-living, plant and animal parasitic roundworms, covered by cuticle and having well developed nervous, reproductive and digestive systems, but lack true segmentation, a true coelom and jointed appendages; formerly called Nematoda and Nematodea.

Nemathelminthes n. [Gr. *nema*, thread; *helmins*, worm] A former name for the phylum that included the phyla Nemata, Nematomorpha and Acanthocephala collectively.

nematicide see **nematocide**

nematize v.i. [Gr. *nema*, thread] (NEMATA) To populate or infest with nematodes. **nematization** n.

nematoblast n. [Gr. *nema*, thread; *blastos*, bud] (CNID) A cell that forms a nematocyst; cnidoblast.

nematocide n. [Gr. *nema*, thread; L. *caedere*, to kill] Any agent lethal to nematodes.

nematocyst, cnida n. [Gr. *nema*, thread; *kystis*, bladder] (CNID) Intracellular organelles that function in defense and capture of prey by injecting a toxin; in hydras, they function in adhesion to the bottom; also called stinging cells, nettle cells, or thread capsule or cell. see **spirocyst**.

nematocyte see **plasmatocytes, cnidocyst**

Nematoda see **Nemata**

nematode n. [Gr. *nema*, thread; *eidos*, form] A member of the phylum Nemata

nematode wool see **nema wool**

nematogen n. [Gr. *nema*, thread; *genos*, offspring] (MESO: Rhombozoa) The vermiform adult that reproduces vermiform embryos. see **rhombogen**.

nematoid a. [Gr. *nema*, thread; *eidos*, form] Thread-like.

Nematoidea see **Nemata**

nematology n. [Gr. *nema*, thread; *logos*, discourse] That branch of zoology dealing with nematodes.

Nematomorpha, nematomorphs n.; n.pl. [Gr. *nema*, thread; *morphos*, form] A phylum of worm-like animals that are

free-living as adults and parasitic in arthropods as juveniles; horsehair worms; gordian worms.

nematophagous a. [Gr. *nema*, thread; *phagein*, to eat] Feeding on nematodes.

nematophore n. [Gr. *nema*, thread; *phorein*, to carry] (CNID: Hydrozoa) A club-like or capitate ended structure in a hydroid colony containing nematocysts or adhesive cells; sarcostyle.

nematopore n. [Gr. *nema*, thread; *poros*, pore] (BRYO: Stenolaemata) A slender tubular kenozoecium that opens on the backside of the zoarium with tubules directed distally.

nematosis n. [Gr. *nema*, thread; *osis*, denotes morbid condition] (NEMATA) A morbid state due to parasitism by nematodes.

nematosphere n. [Gr. *nema*, thread; *sphaira*, ball] (CNID: Anthozoa) In Actinaria, a club-like tentacle tip.

nematostat n. [Gr. *nema*, thread; *stasis*, stand] (NEMATA) 1. Any phenomenon that holds a population in equilibrium. 2. A chemical that does not kill nematodes, but paralyzes them.

nematotheca n. [Gr. *nema*, thread; *theke*, case] (CNID: Hydrozoa) In Leptomedusae, small stemmed structures from which nematophores develop; one-chambered, single and immovable; two-chambered, shaped like a wineglass, with upper chamber capable of limited movement on its stem.

nematozoid n. [Gr. *nema*, thread; *zoon*, animal; *eidos*, form] (CNID: Hydrozoa) A defense polyp; machozoid; dactylozoid.

nema wool (NEMATA) Masses of cryptobiotic nematodes adhering to certain plant tissues (bulbs).

Nemertea, nemerteans, nemertines or rhynchocoels n.; n.pl. [Gr. *Nemertes*, a nereid, sea nymph] A phylum of unsegmented, bilaterally symmetrical acelomate worms, commonly called ribbon worms, that are predatory carnivores or scavengers that frequently use their eversible proboscis to catch prey.

Nemertini see **Nemertea**

nemic a. [Gr. *nema*, thread] Of or pertaining to nematodes.

nemin n. [Gr. *nema*, thread] (NEMATA) An unknown or unidentified endogenous substance in nematodes that causes trap formation by predacious fungi.

nemoricolous, nemoricole a. [L. *nemus*, woodland; *colere*, to dwell] Living in open woodland areas.

neobiogenesis n. [Gr. *neos*, new; *bios*, life; *genesis*, beginning] The theory that life may have been evolved several times; recurring biopoiesis. see **biogenesis**.

neoblast n. [Gr. *neos*, new; *blastos*, bud] Undifferentiated cells that migrate to wounds and participate in repair and regeneration.

Neo-Darwinism 1. The theory of evolution stressing the continuity of germ plasm and non-transmission of acquired characters (Weismannism). 2. Any evolutionary theory featuring natural selection.

neogallicolae-gallicolae (ARTHRO: Insecta) In Phylloxeridae, dimorph fundatrigeniae that will become gallicolae (leaf gall formers).

neogallicolae-radicolae (ARTHRO: Insecta) In Phylloxeridae, dimorph fundatrigeniae that will become radicolae (root gall formers).

neogea see **neotropical region**

neogeic a. [Gr. *neos*, new; *ge*, earth] Belonging to the Western Hemisphere or New World. see **gerontogeous**.

neonatal a. [Gr. *neos*, new; L. *natus*, born] Recently born or hatched.

neontology n. [Gr. *neos*, new; *on*, being; *logos*, discourse] The study of recent organisms.

neophorans n.pl. [Gr. *neos*, new; *pherein*, to carry] (PLATY: Turbellaria) 1. Individuals in which the yolk and oocytes are produced by a separate gland, or are produced in separate parts of an ovovitellarium; ectolecithal eggs. see **archoophorans**. 2. A former division of Turbellaria; a superorder.

neoplasm n.; pl. **neoplasia** [Gr. *neos*, new; *plasma*, formed

or molded] An abnormal mass of tissue.

neosistens n. [Gr. *neos*, new; L. *sistere*, to stop] (ARTHRO: Insecta) In Hemiptera Adelgidae, the overwintering nymph of the sistens.

neosome n. [Gr. *neos*, new; *soma*, body] The entire organism altered by neosomy.

neosomule n. [Gr. *neos*, new; dim. *soma*, body] The new structure that results from the neosomic process.

neosomy n. [Gr. *neos*, new; *soma*, body] External transformation, during the formation of new cuticle, in an active stadium of a group normally metamorphosing by molts, i.e., certain insects, acarines, crustaceans and nematodes.

neosomic a.

neostigma n. [Gr. *neos*, new; *stigma*, point] (ARTHRO: Chelicerata) In Prostigmata Acariformes, a secondary spiracle near the base or farther forward of the chelicera.

neotaxy n. [Gr. *neos*, new; *taxis*, arrangement] A secondary change of characters during phylogeny.

neoteinia see **neoteny**

neote(i)nic a. or n. [Gr. *neos*, new; *teinein*, to extend] (ARTHRO: Insecta) In Isoptera, a supplementary reproductive in a colony that may retain some juvenile characters; the word is used both as a noun and adjective (a neoteinic or neoteinic reproductive). Now spelled neotenic

neotenic see **neoteny**

neotenic plerocercoid (PLATY: Cestoda) All adult Caryophyllidea, whose adult developmental forms are thought to be extinct; exception: *Archigetes*. see **neotenic proceroid**.

neotenic proceroid (PLATY: Cestoda) In Caryophyllidea, adult *Archigetes* that reaches sexual maturity complete with cercomer.

neotenic reproduction see **neoteny**

neotenin n. [Gr. *neos*, young; *teinein*, to extend] One of the juvenile hormones.

neoteny, enoteinia, neoteiny n. [Gr. *neos*, young; *teinein*, to extend] 1. A term referring to the condition in which the

gonad completes its development prematurely before the normal differentiation of imaginal structures are completed. see **hysterotely**. 2. (ARTHRO) Further classified into two categories: prothetely and metathetely. **neotenic** a.

neotrichy n. [Gr. *neos*, new; *trichos*, hair] (ARTHRO: Chelicerata) In Acari, secondary formation of setae by multiplication of primary setae in a given area.

neotropical region A zoogeographical region extending south from the Mexican Plateau throughout Central America, the Caribbean and South America.

neotype n. [Gr. *neos*, new; *typos*, type] A single specimen selected as the type specimen from as near to the original locale as practicable in cases where the original types are known to be destroyed or are lost.

neozoology see **neontology**

nephridial papilla (ANN) The projection marking the opening of the excretory organ.

nephridioblast n. [Gr. *nephros*, kidney; *blastos*, bud] An ectodermal cell that is precursor to a nephridium.

nephridiopore n. [Gr. *nephros*, kidney; *poros*, pore] 1. The exterior opening of an excretory organ (nephridium). 2. (ARTHRO: Crustacea) see **nephropore**.

nephridiostome see **nephrostome**

nephridium n.; pl. **-ia** [Gr. dim. *nephros*, kidney; L. *ium*, nature of] 1. In various invertebrates, simple or branched, tubular structures that function in excretion, opening to the outside through a nephridiopore. see **protonephridium**, metanephridium. 2. (ANN: Oligochaeta) A segment essentially composed of excretory tubules that may discharge directly onto the body surface, or lead to a sinus discharging to the exterior through pores by the setal ring. 3. (ECHI) One to many organs used for the temporary storage of eggs and sperm.

nephroblast see **nephridioblast**

nephrocytes n.pl. [Gr. *nephros*, kidney; *kytos*, container] Cells that occur singly or in groups in various parts in an invertebrate body and function to transform original waste ma-

terial into a form with which the metabolic pathways can deal.

nephrokinic a. [Gr. *nephros*, kidney; *odis*, labor] Having a single duct serving both excretory and genital purposes.

nephrogonoduct n. [Gr. *nephros*, kidney; *gonos*, progeny; L. ductus, leading] Combined genital and excretory ducts.

nephromixium n.; pl. -ia [Gr. *nephros*, kidney; *mixis*, mingling] An organ with flame cells and coelomic funnel serving as both excretory and genital duct; a nephrogonoduct. see **protonephromixium**, **metanephromixium**, **mixonephridium**.

nephropore n. [Gr. *nephros*, kidney; *poros*, pore] (ARTHRO: Crustacea) The elevated opening of the antennal gland on the ventral surface of the coxa of the antenna.

nephrostomal lips (ECHI) The lip-like tissue surrounding the nephrostome; may be inconspicuous, expanded, or leaf-like, or extended into long threads that may be spirally coiled.

nephrostome n. [Gr. *nephros*, kidney; *stoma*, mouth] The coelomic opening of a nephridium.

nepioconch n. [Gr. *nepios*, infant; *konch*, shell] (MOLL: Bivalvia) The first part of the dissoconch, when separated by a discontinuity.

nepionic a. [Gr. *nepios*, infant] Pertaining to very young; postembryonic larva; stage of development succeeding the embryonic.

nepionic constriction (MOLL: Cephalopoda) In a nautiloid shell, a definite growth discontinuity of the shell micro-ornamentation thought to correspond to eclosion from the egg.

nepionotype n. [Gr. *nepios*, infant; *typos*, type] The type larva of a species.

NEPO virus Referring to Nematode-transmitted, POLyhedral-shaped viruses. see **NETU virus**.

neritic zone The region of shallow water over the continental shelf that is subdivided into supratidal (wave splash area), intertidal (littoral), and subtidal regions.

nerve n. [L. *nervus*, nerve] 1. A single fiber or group of fibers of the peripheral nervous system. 2. (ARTHRO: Insecta) A tubular wing vein.

nerve cell see **neuron**

nerve ending The terminal arborization of a neuron.

nerve fiber The dendrite or collateral branch of a neurocyte.

nerve net A network of nerve cells connecting sensory and muscular elements in certain cnidarians, ctenophores, bryozoans, and some other invertebrates.

nerve pentagon (ECHINOD) The nerve ring around the mouth.

nerve ring Any ring of nerve fibers, may be around the mouth, esophagus, anus, bell margin, etc. see **circumesophageal commissure**.

nerve root That part of the nerve close to its origin from a ganglion, cord or brain; may be just inside or outside of the ganglion, etc.

nervicole, nervicolous a. [L. *nervus*, nerve; *colere*, to inhabit] Living on or in leaf veins.

nervous a. [L. *nervus*, nerve] Pertaining to nerves; restless or impulsive behavior as in nervous movements.

nervous system A system of nerves with which an organism adapts to its environment.

nervulation see **venation**

nervules see **nervures**

nervures n. [L. dim. *nervus*, nerve] (ARTHRO: Insecta) 1. The tubular wing veins. 2. Branches of the tracheal system.

nesium n.; pl. **nesia** [Gr. *nesion*, an islet] (ARTHRO: Insecta) In scarab beetle larvae, one or two sclerotized projecting marks between the inner end of the dextrotorma and crepis; when two are present, termed nesium externum and nesium internum; chitinous plate of Hayes.

nest n. [A.S. *nest*] (ARTHRO: Insecta) A dwelling of social insects in which young are raised and reproductive females lay eggs; may be a burrow or hollow in soil, log, etc., or be constructed of materials brought to the site, or materials elaborated by the individuals in the colony.

nestlers n.pl. [A.S. *nestlian*, to build a nest] (MOLL: Bivalvia) Clams nestling in cavities or concealment in clay or among dead shells that occasionally produce variations in shell shape.

nest odor (ARTHRO: Insecta) In social insects, the distinctive odor of a nest that enables its inhabitants to distinguish the nest from those belonging to other colonies or the surrounding environment; hive aura/odor. see **colony odor**.

nest parasitism (ARTHRO: Insecta) In Isoptera, one species of termite that lives on the carton walls of the nest of the host species.

nest robbing see **cleptobiosis**

NETU virus Referring to NEmatode-transmitted, TUbular-shaped viruses. see **NEPO virus**.

nettle cells see **nematocysts**

neuraforamen n. [Gr. *neuron*, nerve; L. *foramen*, hole] (ARTHRO: Insecta) The foramen through which the nerve cord passes when it is separated from the occipital foramen.

neural a. [Gr. *neuron*, nerve] Pertaining to the nerves or nervous system of an organism.

neural arc Simple receptor-effector nerve circuit.

neural canal (ARTHRO: Insecta) The incomplete canal on the floor of the meso- and metathorax, formed by fusion of apodemes; functioning in the reception and protection of the ventral nerve cord and for attachment of muscles.

neural groove (ARTHRO: Insecta) The median ventral groove, extending the entire length of the embryo, between the neural ridges.

neural lamella The noncellular outer covering of the central nervous system consisting of mucopolysaccharides and mucoproteins with collagen-type fibrils in the outer part of this layer.

neural ridges (ARTHRO: Insecta) In embryology, the two longitudinal ventral ridges that contain the lateral cords of the neuroblasts.

neuration see **venation**

neurilemma see **Schwann cell**

neurite see **axon**

neurobiotaxis n. [Gr. *neuron*, nerve; *bios*, life; *taxis*, arrangement] 1. The hypothetical migration of nerve cells and ganglia toward regions of maximum stimulation during phylogeny. 2. In embryology, tendency of nerve cells to migrate toward the source of their stimuli.

neuroblast n. [Gr. *neuron*, nerve; *blastos*, bud] (ARTHRO: Insecta) In embryology, the inner layer of ectodermal cells that forms the nervous tissue. see **dermatoblasts**.

neurocirrus n.; pl. **-ri** [Gr. *neuron*, nerve; L. *cirrus*, curl] (ANN: Polychaeta) Cirrus normally on the lower edge of the neuropodium.

neurocyte n. [Gr. *neuron*, nerve; *kytos*, container] The cell body of a neuron; the nerve cell; cyton.

neurofibrils n.pl. [Gr. *neuron*, nerve; L. dim. *fibra*, thread] Fine fibers running longitudinally in axons and dendrites and through the body of the neuron.

neurogenic a. [Gr. *neuron*, nerve; *gennaen*, to produce] 1. Forming nervous tissue. 2. Stimulating nervous energy for certain muscular or glandular reactions. see **myogenic**.

neuroglia n.pl. [Gr. *neuron*, nerve; *glia*, glue] Nonnerve cells in the brain or ganglia; glia; glial cells; gliocytes.

neurohemal organs (ARTHRO: Insecta) Organs involved with the release of products of neurosecretory cells into the hemolymph; corpora cardiaca best developed though less conspicuous ones make up the perisymphatic system associated with the ventral nerve cord.

neurohormone n. [Gr. *neuron*, nerve; *hormaein*, to excite] A hormone produced by neurosecretory cells.

neurohumor see **neurotransmitter**

neuroid transmission Arousal activity by cells other than nerve cells.

neurolemma see **Schwann cell**

neuromere n. [Gr. *neuron*, nerve; *meros*, part] (ARTHRO: In-

secta) Any of the transitory segmental elevations in the wall of a developing embryo.

neuron n. [Gr. *neuron*, nerve] A nerve cell.

neurone see **neuron**

neuropile n. [Gr. *neuron*, nerve; *pilos*, felt] The central part, or mass of different axons within a ganglion; neurospongium.

neuroplasm n. [Gr. *neuron*, nerve; *plasma*, formed or molded] Cytoplasm of neurons.

neuropodium n. [Gr. *neuron*, nerve; *pous*, foot] (ANN: Polychaeta) The ventral division of the parapodium, supported internally by one or more chitinous rods or aciculae.

neuropore see **trichopore**

Neuropteroidea see **Holometabola**

neuropterous a. [Gr. *neuron*, nerve; *pteron*, wing] (ARTHRO: Insecta) Pertaining to the order Neuroptera.

neurosecretory cells (ARTHRO: Insecta) Cells found in the ganglia of the central nervous system that secrete hormones which act directly on effector organs or on other endocrine organs.

neurospongium see **neuropile**

neurosynapse see **synapse**

neurotransmitter n. [Gr. *neuron*, nerve; L. *trans*, across; *mittere*, to send] A chemical secreted at nerve endings to transmit a nervous impulse across a synapse; neurohumor.

neurotropic a. [Gr. *neuron*, nerve; *tropos*, turn] Having an affinity for nervous tissue.

neurotubules n. [Gr. *neuron*, nerve; L. dim. *tubus*, tube] Microtubules in nervous tissue.

neuston n. [Gr. *neustos*, able to swim] Small organisms that float or swim in or on the surface film of water. see **seston**.

neuter n. [L. *ne*, not; *uter*, either] 1. Sexless. 2. A sterile organism. 3. A non-fertile mature female.

neutralism n. [L. *ne*, not; *uter*, either; *ismus*, denoting a con-

dition] Organisms living together with no mutual harm or benefit; hamabiosis.

neutral synoekete (ARTHRO: Insecta) An insect living on the refuse of a host colony but providing little in return.

new name A replacement name for an available name; nomen novum.

niche n. [L. *nidus*, nest] A position or occupation filled by an organism in the food-web of a community.

nictation see **negative geotropism**

nictitant a. [L. *nictare*, to wink] An ocellus bearing a lunate spot.

nidamental gland Any of various structures that secrete a capsule or covering material for an egg or egg masses.

nidicole a. [L. *nidus*, nest; *colere*, to dwell] Pertaining to an organism that spends much of its life in the nest of its host.

nidificant a. [L. *nidus*, nest; *facere*, to make] Building a nest.

nidifugous a. [L. *nidus*, nest; *fugere*, to flee] Departing the nest soon after birth.

nidus n.; pl. **nidi** [L. *nidus*, nest] 1. A group of regenerative cells; a cell-group. 2. A location for the natural deposit of eggs; a hatching place. 3. The specific locality of a disease, resulting from a combination of ecological factors that favor the disease organism. 4. (ARTHRO: Insecta) Regenerative cells that replace the midintestinal cells used up during holocrine secretion.

niger n. [L. *niger*, black] Black; glossy black.

nigerrima a. [L. *niger*, black; *-rimus*, superlative ending] Very black.

nigrescent a. [L. *nigrescens*, to grow black] Turning black; blackish.

nisto n. (ARTHRO: Crustacea) In Decapoda, the postlarval stage of Scyllaridae and Palinuridae; pseudibacus; puerulus.

nitid, **nitidus** a. [L. *nitidus*, shining] Glossy; shining; brilliant; lustrous.

nitrate n. [Gr. *nitron*, native soda] A salt or ester of nitric acid (HNO₃).

- nitrite** n. [Gr. *nitron*, native soda] A salt or ester of nitrous acid (HNO₂).
- nitrogen** n. [Gr. *nitron*, native soda; *gennaein*, to produce] A colorless, odorless gas that constitutes about four-fifths of the atmosphere.
- nitrogen cycle** Inorganic nitrogen incorporated into organic nitrogen in living organisms and returned to inorganic nitrogen by breakdown of the organic molecules on death of the living organisms.
- nitrogenous** a. [Gr. *nitron*, native soda; *gennaein*, to produce] Pertaining to, or containing nitrogen.
- nits** n.pl. [A.S. *hnitu*, egg of louse] (ARTHRO: Insecta) In Siphunculata, the eggs; particularly when cemented to hair.
- niveous** a. [L. *niveus*, snow] Resembling the color of snow.
- nocturnal** a. [L. *nocturnus*, of the night] Occurring or performed at night. see **diurnal**, **crepuscular**.
- nocturnal eyes** (ARTHRO: Chelicerata) The pearly white eyes of Arachnida.
- nodal furrow** (ARTHRO: Insecta) In Odonata, a transverse suture of the wing, beginning at the costal margin corresponding to the nodus and extending toward the inner margin; costal hinge.
- node** n. [L. *nodus*, knob] 1. A knob or swelling. 2. (BRYO) A place of articulation in a colony.
- nodicorn** a. [L. *nodus*, knob; *cornu*, horn] (ARTHRO: Insecta) Having antennae with joints swollen at the apex.
- nodiferous** a. [L. *nodus*, knob; *fero*, bear] Having or bearing nodes.
- nodiform** a. [L. *nodus*, knob; *forma*, shape] In the form of a knob or knot.
- nodose** a. [L. *nodus*, knob] With small knotlike protuberances.
- nodular** a. [L. dim. *nodus*, knob] Having small knobs or nodule-like projections.
- nodular sclerite** see **epaulett**
- nodule** n. [L. dim. *nodus*, knob] A swollen knob-like structure.

- nodulus** n. [L. dim. *nodus*, knob] (ANN) An enlarged region on a crotchet chaeta at about midlength.
- nodus** n. [L. *nodus*, knob] (ARTHRO: Insecta) 1. In Hymenoptera Ichneumonidae, a dorsal prominence on the tip of the ovipositor, shortly before the apex. 2. In Odonata, a strong cross vein near the middle of the costal border of the wing.
- nomadism** n. [Gr. *nomas*, roaming] (ARTHRO: Insecta) Frequent movement by a colony from one site to another.
- nomenclator** n. [L. *nomen*, name; *calare*, to call] A nomenclatural book containing a list of scientific names, not for taxonomic purposes.
- nomenclature** n. [L. *nomen*, name; *calare*, to call] In biology, a system of names for biological units.
- nomen conservandum** A name preserved by action of the International Commission on Zoological Nomenclature and placed on the appropriate official list.
- nomen dubium** The name of a nominal species that lacks available evidence so as to permit recognition of the zoological species to which it was applied.
- nomen inquirendum** The scientific name is subject to investigation.
- nomen novum** see **new name**
- nomen nudum** A published binominal without an adequate description, definition or illustration to permit its official adoption.
- nomen oblitum** No longer in effect in ICZN after 1973; a name that has not been used in the primary zoological literature for 50 years; a forgotten name.
- nomen taxon** Any named taxon, objectively defined by its type, whether valid or invalid.
- nominalism** n. [L. *nomen*, name; *ismus*, denoting a condition] Doctrine of nominalists denying the existence of universals, and emphasizing the importance of man-given names for the grouping of individuals.
- nominate** a. [L. *nomen*, name] Pertaining to a subordinate taxon that contains the type of the subdivided higher taxon and bears the same name as the original parent taxon.

noncelliferous side of colony (BRYO: Stenolaemata) The reverse or back side of the colony.

noncellular outgrowth A cuticular prominence of the body-wall.

noncoelomate see **acoelomate**

non-congression n. [L. *non*, not; *congressus*, meeting] Chromosomes not pairing on the spindle equator.

non-conjunction n. [L. *non*, not; *cum*, with; *junctus*, joined] Absence of meiotic chromosome pairing.

nondimensional species The concept of a species characterized by the noninterbreeding of two coexisting demes, uncomplicated by space and time.

nondisjunction n. [L. *non*, not; *disjunctus*, unyolked] The failure to separate of paired chromosomes during meiosis.

non-essential amino acids Amino acids that can be synthesized by animals and not required in their diet.

nonincubatory oysters (MOLL: Bivalvia) Oysters that do not incubate their larvae.

non-medullated nerve A nerve fiber lacking a myelin sheath; non-myelinated.

nonsense codon see **nonsense mutation**

nonsense mutation A mutation that changes a coding triplet into a triplet that codes for no amino acid and terminates the polypeptide chain.

normalizing selection The removal of all alleles that produce deviations from the normal (average) phenotype of a population by selection against all deviant individuals.

nosogenic a. [Gr. *nosos*, disease; *gennaein*, to produce] Causing disease; pathogenic.

nosography n. [Gr. *nosos*, disease; *graphos*, writing] A branch of pathology dealing with the description of diseases.

nota pl. of **notum**

notacoria n. [Gr. *notos*, back; L. *corium*, leather] (ARTHRO: Insecta) A membranous area separating the pleuron and notum in the thorax; sometimes reduced to a suture.

notal comb see **genal comb**

notate a. [L. *nota*, mark] Marked by spots or depressed marks.

notation n. [L. *nota*, mark] The method of identifying characters by a system of numbers, letters or ratios.

notaulix n.; pl. **-lices**, [Gr. *notos*, back; L. *aulix*, furrow] (ARTHRO: Insecta) One of a pair of grooves on the mesoscutum, from the front margin to one side of the midline and extending backward; divides the mesoscutum into 3 parts: a median lobe between the notaulices and a lateral lobe on each side (parapsides).

notch n. [ME. *nock*, a notch] (MOLL: Gastropoda) A break or irregularity in the peristome, denoting the position of the siphon.

notched a. [ME. *nock*, a notch] Nicked or indented; usually of a margin.

notocephalon n. [Gr. *notos*, back; *kephale*, head] (ARTHRO: Insecta) 1. In Notonectidae, the dorsal view of the head. 2. (ARTHRO: Chelicerata) In Arachnida, the dorsal shield of the prosoma.

notocirrus n. [Gr. *noton*, back; L. *cirrus*, curl] (ANN: Polychaeta) Cirrus of the notopodium.

notodeltidium see **chilidium**

notodont a. [Gr. *notos*, back; *odous*, tooth] (ARTHRO: Insecta) Pertaining to larval Notodontidae with a variously humped dorsal surface.

Notogaea n. [Gr. *notos*, back; *ge*, earth] The zoogeographical area including Australia, New Zealand and Pacific Ocean Islands regions.

notogaster n. [Gr. *noton*, back; *gaster*, belly] (ARTHRO: Chelicerata) The posterior dorsal opisthosomatal shield.

notonectal a. [Gr. *notos*, back; *nektos*, swimming] Swimming on the back.

notopleura n.pl.; sing. **notopleuron** [Gr. *notos*, back; *pleuron*, side] (ARTHRO: Insecta) In Diptera, a sometimes sunken, triangular area on the thoracic *dorsum*, at the lateral end of the transverse suture, behind the humerus.
notopleural a.

notopleural bristles (ARTHRO: Insecta) In Diptera, bristles located in a small triangular area, one on each corner of the notum just above the anepisternum or mesopleura; between the humeral callus and wing base.

notopleural suture (ARTHRO: Insecta) A suture between the notum and the pleural sclerites.

notopodium n. [Gr. *notos*, back; *pous*, foot] (ANN: Polychaeta) The dorsal or upper division of the parapodium, supported internally by one or more chitinous rods, or aciculae.

notopterale n. [Gr. *notos*, back; *pteron*, wing] (ARTHRO: Insecta) The first axillary sclerite of a wing.

notoseta n. [Gr. *notos*, back; L. *seta*, bristle] (ANN) Seta originating on the notopodium.

nototheca n. [Gr. *notos*, back; *theke*, case] (ARTHRO: Insecta) That region of a pupa covering the dorsal surface of the abdomen.

notothyrium n. [Gr. *notos*, back; *thyron*, door] (BRACHIO) The triangular notch in the dorsal valve, when present, open to the hinge line facilitating pedicle exit, usually closed off from the hinge plate by the chilidium. see **delthyrium**.

notum n. [Gr. *notos*, back] 1. (ARTHRO: Crustacea) The shrimplike decapod posterior part of the dorsal carapace. 2. (ARTHRO: Insecta) The dorsal surface of a body segment, particularly of the thoracic segment. **notal** a.

nucha n. [ML. *nucha*, neck] The upper surface of the neck connecting the head and thorax. **nuchal** a.

nuchal caruncle (ANN) A sensory organ on the prostomium, or extending posteriorly in the form of a ciliated ridge or groove.

nuchal cavity (MOLL: Gastropoda) In Patellacea, the enlarged portion of the pallial cavity above the head.

nuchal cirrus see **cirrus**

nuchal constriction (MOLL: Cephalopoda) In most Sepiidae and Teuthoidea and a few Octopodidae, the separation or constriction between the head and body or neck.

nuchal organ(s) 1. (ANN: Polychaeta) A pair of ciliated sensory pits or slits in the head region. 2. (ARTHRO: Crustacea) In

Branchiopoda, a sensory organ on the upper side of the cephalon. 3. (SIPUN) Ciliated epidermal cells at the mid-dorsal edge of the oral disc; believed to be sensory.

nuchal papilla (ANN: Polychaeta) Small sensory papilla at the base of the prostomium; cirrus.

nuchal tentacles (PLATY: Turbellaria) In Polycladida, tentacles well set back from the anterior part of the body.

nuclear envelope Double layered membrane separating the nucleoplasm from the cytoplasm; nuclear membrane.

nuclear plate A metaphase or equatorial plate.

nuclear sap see **nucleoplasm**

nuclear whorls (MOLL: Gastropoda) The whorls of the protoconch that emerges from the egg.

nucleate a. [L. *nucleus*, kernel] Having a nucleus.

nucleic acids Polymers of nucleotides that are active in inheritance as genes, plasmids, etc.

nuclei of Semper (ARTHRO: Insecta) The nuclei of the crystalline cone cells.

nucleolar chromosome Any chromosome with a nucleolar organizer.

nucleolar organizer Chromosome region that is active in nucleolus formation.

nucleolinus n. [L. dim. *nucleus*, kernel] A small granule within the nucleolus.

nucleolonema n. [L. dim. *nucleus*, kernel; Gr. *nema*, thread] Filamentous structures within the nucleolus of all cells.

nucleolus n. [L. dim. *nucleus*, kernel] Small, dense, more or less spherical bodies in the nucleus of cells associated with the nucleolar organizer.

nucleoplasm n. [L. dim. *nucleus*, kernel; Gr. *plasma*, formed or molded] The protoplasmic fluid contained in the nucleus.

nucleoplasmic index The ratio of nuclear volume to cytoplasmic volume; seems to trigger cell division; nucleoplasmic ratio.

nucleoprotein n. [L. dim. *nucleus*, kernel; Gr. *proteios*, pri-

mary] A compound of nucleic acid and protein.

nucleoside n. [L. dim. *nucleus*, kernel] Compounds derived by hydrolysis of nucleic acids or nucleotides consisting of a purine or pyrimidine base linked to ribose or deoxyribose.

nucleotide n. [L. dim. *nucleus*, kernel] Unit of the DNA and RNA molecules, including phosphoric acid, a purine or pyrimidine base, and a ribose.

nucleus n.; pl. **-lei** [L. *nucleus*, kernel] 1. A spheroidal structure present in a cell containing the chromatin. 2. (MOLL: Gastropoda) The earliest-formed part of the shell, or *operculum*, of a protoconch.

nudibranchiate a. [L. *nudus*, naked; *branchiae*, gills] (BRACHIO) Having the gills uncovered and not protected by a shell or membrane in the brachial chamber.

nudum n. [L. *nudus*, naked] (ARTHRO: Insecta) A small bare, sensitive portion of a butterfly antenna.

nulliplex a. [L. *nollus*, none; *plectare*, to weave] A polyploid having all genes for a particular recessive character.

numerical phenetics The hypothesis that relationship between organisms can be determined by a calculation of an overall, unweighted similarity value.

numerical taxonomy Numerical evaluation of similarity between taxonomic units and grouping of these units into higher taxa on the basis of their affinities; taxometrics. see **taxonomy**.

nuptial flight (ARTHRO: Insecta) In Hymenoptera, the mating flight of winged males and females.

nurse cells 1. Cells of developing oocytes that provide material for further growth; trophocytes. 2. (ARTHRO: Insecta) In some species, the nurse cells synthesize nucleic acids and possibly protein and supply them to the oocyte via intercytoplasmic connections. 3. (NEMATA) A specialized plant response to feeding sessile forms, characterized by special feeding cells around the nemas' head that are not subject to necrosis; giant cells. 4. (PORIF) The archaeocytes.

nutant a. [L. *nutare*, to nod] Nodding; drooping; having a tip bent horizontally.

nutritional castration, castration nutriciale (ARTHRO: Insecta) In Hymenoptera, the condition of undeveloped gonads in young adult females due to devoting itself to nursing larval forms instead of herself taking on the nutrition necessary for the reproductive form. see **alimentary castration**.

nutricism n. [L. *nutrix*, nurse] A symbiotic relationship in which one partner obtains all the benefits.

nutrition n. [L. *nutrire*, to feed] The ingestion, digestion and assimilation of food substances that includes their distribution within the organism, as well as the metabolism and elimination of waste products.

nyctipelagic a. [Gr. *nyktos*, night; *pelagos*, sea] Coming to the water surface only at night.

nymph n. [Gr. *nymphē*, bride] 1. (ARTHRO: Chelicerata) The immature stage of Acari and Ixodoidea with a full complement of legs; an instar. 2. (ARTHRO: Insecta) An immature stage that does not have a pupal stage. 3. (MOLL: Bivalvia) see *nympha*.

nympha n.; pl. **-phae** [Gr. *nymphē*, bride] 1. (ARTHRO: Chelicerata) In Acari, sclerites beneath the epigynium. 2. (MOLL: Bivalvia) The immersed area behind the beak that strengthens the margin to which the ligament is attached, or reinforcement for the normal hinge structure; ligament fulcrum; sometimes *nymph*.

nymphal phase (ARTHRO: Chelicerata) The second or third phase of postembryonic development; in Acari with six stages, the third phase comprised of proto-, deuto- and trito-nymphs.

nymphipara a. [Gr. *nymphē*, bride; L. *parere*, to beget] (ARTHRO: Insecta) Bearing live young in an advanced stage of development. see **pupipara**.

nymphochrysalis n. [Gr. *nymphē*, bride; *chrysalis*, gold colored pupa] (ARTHRO: Chelicerata) In chigger mites, a non-feeding, prenymph; a calyptostasic protonymph.

nymphoid a. [Gr. *nymphē*, bride; *eidōs*, form] (ARTHRO: Chelicerata) Nymphal phase instars that cannot be homologized with nymphal instars of other species.

nymphoid reproductive (ARTHRO: Insecta) A neoteinic repro-

ductive with wing buds; a second-form reproductive; secondary reproductive; a brachypterous neoteinic.

nymphosis n. [Gr. *nymphē*, bride] The process of transforming into a nymph or a pupa.