

Mosaic vision, in which as in mosaic work the view of an object is obtained by the combination of many small pieces, this according to Johannes Müller being the mode of sight resulting from the structure of the compound eyes of the Arthropoda, 139, 483, 490, 495, 1635.

Muscles, 489, 503, 1636, 1647.

Muticus (ante-classical form of mutilus, curtailed, docked), a word used by the early writers apparently not in accordance with its meaning; Latreille, Hist. Nat., t. iv. p. 13 (An. X), thus describes the "pattes mutiques" in the Millepieds, "Leurs pattes sont composées d'articles diminuant sensiblement de grandeur, ce qui leur donne une forme conique; l'article qui les termine est d'une matière plus dure, cornée ou écaillueuse, va en pointe plus ou moins arquée, et sert de crochet; mais on observe ici que ce crochet, par la diminution graduelle des articles de la patte, en est une suite, et que ce n'est pas un corps surajouté brusquement, de même que les petits ongles des tarses des autres insectes. On remarque une semblable configuration dans les tetracères et les crustacés, dont les pattes ne sont pas en nageoires." 23, 26, 29, 44, 51, 96, 126.

Myeloid substance ($\mu\nu\epsilon\lambda\delta\sigma$, marrow), 489, 567.

Myogène ($\mu\nu\delta\sigma$, muscle), muscle-producing, 1647.

Nackendrüse, 504.

Nackenorgan, 477.

Natatorii pedes, appendices natatorii, natatory feet, i piedi natatori, 102, 116, 150, 154, 198, 286. See Pleopods.

Nektopoden ($\nu\eta\kappa\tau\delta\sigma$, swimming, $\pi\omega\delta\sigma$, foot), 1654. See Pleopods.

Nervous system, 132, 153, 154, 304, 364, 504, 567, 597. See Brain, Commissure, Ganglion.

Neusteri ($\nu\epsilon\nu\sigma\tau\delta\sigma$, a swimmer), 37. See Pleopods and Uropods.

Nidifica, nest-makers, 290, 307.

Normalia, 290, 360.

Nuclei of Semper, 490, 495, 597.

(Esophagus ($\omega\sigma\phi\acute{\alpha}\gamma\sigma$, the swallow or gullet), 154, 304, 321, 489.

Olfactory, cylinders, filaments, organs, setæ, organa cylindroformia, papilles olfactoires, Riechhaare, Riechzapfen, Spürfaden, 154, 304, 324, 349, 448, 457, 481, 510, 515, 548, 552, 597, 1648.

Olfactory denticle or tubercle (so-called), 290, 372, 481.

Oostegites ($\omega\delta\nu$, an egg, $\sigma\tau\acute{\epsilon}\gamma\omega$, I protect), 553. See Incubatory pouch.

Ostia, ostioles, of the heart, 489, 549. See Heart.

Otoliths ($\omega\delta\sigma$, $\omega\tau\delta\sigma$, an ear, $\lambda\theta\sigma\sigma$, a stone), 405, 473, 553, 597.

Ovaries, 320, 471, 490.

Palma. "By palma (palm of the hand) we mean the part of the margin of the hand against which the finger closes" (Dana, U.S. Explor. Exped., vol. xiii. p. 855). Sometimes, however, the palm is defined by some process of the hand, which the finger either passes beyond or does not reach; Costa uses the expression "the unguicular palm."

Palpi, a term used by Scopoli for the upper antennæ, 24, 25; applied by Fabricius to various parts of the mouth-organs, 43, Olivier using the word antennules as an equivalent, 57; by Milne-Edwards the name palp was given to that part of the limb which he afterwards called the exopodite, 153, 154; in writings on the Amphipoda

the term is usually and exclusively applied to what is presumably the endopodite of the mandibles, first maxillæ, and maxillipeds; Bate and Westwood, vol. i. p. xiv, observe "The mandibles are no exception to the fact that all appendages are but modified legs. In all Crustacea, we think that it can readily be demonstrated that the mandible consists of the first three joints being closely ankylosed. The small appendage, that generally consists of three freely articulated joints, represents the fourth, fifth, and sixth joints; the seventh, or dactylos, being seldom present. An homological examination of the genera *Nebalia* and *Pontia*, with *Homarus*, together with the homotypical parts in other appendages in the same animals, we think will readily confirm this opinion;" Milne-Edwards had earlier taken the same view, 154; Huxley, The Crayfish, p. 171, says of the mandible, "The endopodite is represented by the three-jointed palp;" Claus, Die Platysecliden, p. 9, appears to take a different view, for he says, "Spence Bate und Westwood betrachten merkwürdigweise den Kauheil der Mandibel bei den Amphipoden als aus drei verschmolzenen Gliedern hervorgegangen und führen den Taster auf das 4., 5. und 6. Glied der Extremität zurück, deren Dactylus selten erhalten sei. Es bedarf wohl keiner weiteren Ausführung, dass diese Ansicht eine willkürliche ist und durch keine Thatsache gestützt wird."

Paragnathen, Paraguatha, Paragnathi ($\pi\alpha\rho\delta$, beside, $\gamma\nu\acute{\alpha}\theta\sigma\sigma$, a jaw), 477, 488, 553. See Labium.

Parasites, 149, 317, 427, 490, 566, 579, 714, 1137, 1630.

Parasitic Amphipoda, 137, 392, 436, 464, 579, 1630.

Pata-quijadas, maxillipeds, 231.

Pedestria, 24.

Pedipalpi. See Maxillipeds.

Peduncle, in the Amphipoda applied to the basal portion of the antennæ, pleopods, and uropods.

Peræon, pereion ("from $\pi\epsilon\rho\alpha\delta\omega$, to walk about, pereion, part which supports the walking legs," Spence Bate, Brit. Assoc. Report, 1855, p. 27), normally consisting of seven segments to which the two pairs of gnathopods and five pairs of pereopods are attached; the equivalents are—body, thorax, truncus (*thorax* and *abdomen*), Mittelleib, Rumpf, Brust.

Pereopoda, pereiopoda, pedes ambulatorii, the five pairs of appendages that follow the gnathopods. The term is occasionally extended to include the gnathopods, and is then equivalent to—pattes thoraciques, Brustfüsse, Thoracalbeine, Fusspaaren.

Pericardium ($\pi\epsilon\rho\pi\ell$, round, $\kappa\alpha\rho\delta\iota\alpha$, the heart), 516, 526.

Pericerebral ring, 526.

Perioesophageal collar, 526.

Perirenal ring, 526.

Permian, the geological system between the Carboniferous and the Triassic, 300.

Phosphorescentia, 75, 76, 87, 108, 123, 194, 275, 327.

Phylogenetic, 537. See Genealogy.

Phytibranchia ($\phi\pi\tau\delta\sigma$, a plant, $\beta\rho\delta\gamma\chi\alpha$, breathing-organs), 99, 125, 138.

Piedi mascellari, pedes maxillares, palpi maxillares, applied erroneously to the lower antennæ, 145, 152, 239, 346, 347.