furnished with nucleoli. The hexagonal epithelial cells from various parts are figured by Claus, Der Org. der Phronimiden, 1879. In some Amphipoda these cells are very clearly visible in the pellucid skin. 464, 489, 562.

Epizoaires (ἐπί, upon, ζῶα, living creatures), 94.

Erioftalmi, 145, 152.

Euryhaline (εὐρύς, wide, ἅλς, salt), 421.

Eurytherm (εὐρύς, wide, θέρμη, heat), 421.

Exappendiculate, applied to the upper antennæ when without a secondary flagellum.

Exochnata (ἔξω, without, and γνάθος, a jaw), **64**. Latreille, Hist. Nat., t. v. p. 151, says "the Kleistagnatha have the palps broad and short, while the Exochnata have them narrow, elongated, in form of arms or true palps. The former have more resemblance to maxillæ. Fabricius in applying two denominations to like objects, of slightly different form, has been able to establish two Orders, but the distinction is little tenable, not being founded in nature."

Exopodite (ἔξω, without, πούς, a foot). See Endopodite.

Exuviation (exuviæ, what is stripped from the body, a cast skin), also called Ecdysis, the periodical process of casting the skin, which is essential to growth in the Amphipoda as in other Crustacea, 67, 153, **195**, 290, 333, 474. See Cuticle, and compare also Brit. Sess. Crust., vol. i. p. xxv.

Eyes, 139, 154, 201, 260, 270, 327, 372, 383, 386, 423, 449, 461, 471, 474, 475, 480, 481, 486, 490, 495, 509, 553, 559, 597, 1638, 1651.

Facetted, an expression applied to the transparent cuticle or cornea over a compound eye, when the cornea is divided, by a slight modification of its substance along the dividing lines, into square or hexagonal spaces. The cornea in the Amphipoda is said as a rule to be externally smooth, not facetted, 154, 260, 471, 474, 480, 481, 516, 597, 1638.

Fangorgane, grasping instruments, 274, 477.

Fausses pattes, or pates, 95, 139, 186, 189. See Pleopods and Uropods.

Femur (in Latin, the thigh), 34, 49, 149. See Coxopodite and Basipodite.

Ferment-cells. In the epithelium of the liver-tubes in the Gammaridæ Max Weber distinguishes ferment-cells and liver-cells. The former have in their plasma a pellucid secretion in form of a large vesicle. The liver-cells are full of little drops of secretion which are not affected by water, though they are by ether. In the opinion of P. Mayer, from whom these statements are taken, one and the same cell in its passage in the liver-tube from behind forwards probably performs different functions, at one time secreting fat-drops, then differentiating itself to a ferment-cell, after this being dispersed, or, on being pressed further forwards, resuming the production of fat (Die Caprelliden, pp. 150–156). 489.

Fibres musculaires, 1647.

Filament (filum, a thread), a term sometimes applied to the antennary flagellum, sometimes to the so-called olfactory tubes or cylinders.

Flagellum, also called terminal filament, fouet, funiculus, lash, seta, Geissel; in the Amphipoda generally used only of the more or less whiplike series of joints attached to the peduncle in the upper and lower antennæ. The shorter lash (? the exopodite) often found on the *inner* side of the upper antennæ is known as accessory seta, 105, secondary or accessory flagellum, secondary appendage, Nebengeissel, flagellum appendiculare. For a more extended use of the word flagellum, see p. 153.

Flohkrebse, 170, 480.

Foot-jaws. See Maxillipeds.

Frontal organ, 477.

Gammarus (κάμμαρος, κάμαρος, κάμμυρος, cammarus, gammarus, a kind of crab, lobster or shrimp, according to Martial turning red when cooked), 5, 12, 40, 53, 1620.

Gancetto, a subchelate hand, 1622.

Ganglion (γάγγλιον, a tumour under the skin), a collection of nerve-cells from which nerve-fibres are given off. For the Caprellidæ Mayer distinguishes a hind-brain with the ganglionic knots in connection with it, namely, the optic ganglion and the ganglia for the two pairs of antennæ; the subœsophageal ganglion consisting of several coalesced ganglia; the supra-œsophageal ganglion connected with the frontal organ; and a small unpaired ganglion lying medio-dorsally, from which runs an unpaired nerve, probably to the constrictores pharyngis. The ganglion of the first perœon-segment is in most genera in contact with the subœsophageal ganglion, in *Proto* actually coalesced with it. Each perœon-segment, from the second to the sixth, is provided with a ganglion; for the seventh segment and the rudimentary abdomen there is a ganglion-complex, bearing traces of the same arrangement as prevails in the Gammaridæ. In *Gammarus neglectus* G. O. Sars describes fourteen ganglia, of which the three first belong to the head, the following seven to the seven segments of the perœon, and the succeeding four to the pleon, three corresponding to the three first pleon-segments, and the fourth and largest to the three remaining segments, being itself probably compounded of three originally distinct ganglia. The first or cerebral ganglion is much larger than the rest. It has an upper and a lower division. The lower, almost on a level with the rest of the ganglionic chain, and situated at the lower corner of the head, ends in four large conical processes which supply nerves to the antennæ. The upper division, placed vertically, much larger than the lower, and of rounded square form, has above two obtusely rounded lobes, separated by a median groove. Each of these shoots forward a fine nerve, which ends in a little ganglionic swelling at the root of the rudimentary rostrum. From the hinder outer part of each lobe runs the optic nerve. On the border of the two divisions of the central ganglion are a pair of little rounded lateral lobes. Two ganglia in close contact, separated from the cerebral ganglion by the œsophageal commissures, supply nerves to the mouth-organs. For the Phronimidæ Claus states that the subœsophageal ganglion mass is derived from the coalescence of six or seven ganglia, those of the two first perœon-segments being included in the complexus. The five following segments have each a ganglion, but that of the seventh segment lies immediately under its predecessor in the sixth segment instead of its own.