This page intentionally left blank.
neck and of the foot which becomes developed and lodges the organs. The connexions of the nerves show the mantle reduced to that inferior part which covers the shell.

These examples suffice to prove the utility of this principle, which will lead us to a single scheme, the true theoretical and ideal archetype of the Gasteropod.—Comptes Rendus, December 27, 1869, tome lxix. p. 1344.

A new British Land-Shell. By J. Gwyn Jeffreys, F.R.S.

My correspondent, Mr. Thomas Rogers of Manchester, has added another species to this well-worked department of our fauna. Specimens of a Zonites which he has now sent me, collected by him under stones at Marple Wood, in Cheshire, prove to be the Helix glabra of Studer, Fér. Prodr. No. 215. Z. glaber has a wide range on the Continent, from Normandy (where I have taken it), through France, Savoy, Switzerland, Germany, and Dalmatia, to Epirus in Greece. I also found the same species in 1846 at Grassmere, and in 1857 at Barmouth, but had overlooked it. Mr. Rogers's specimens being alive, I subjoin a description of the animal.

Body dark bluish grey, striped like a zebra on each side in front, and irregularly mottled behind; in one of the specimens the hinder part of the foot is minutely speckled with yellowish-brown dots; two narrow and slight parallel grooves run along the neck from the head to the upper lip of the shell; the surface is more or less wrinkled, and has a few large but indistinct lozenge-shaped markings: mantle very thick and dark at the mouth of the shell, over which its edges are folded: tentacles, upper pair rather long, and finely granulated; lower pair very short: eyes small, placed on the upper part, but not at the tips, of the tentacular bulbs: respiratory orifice round, occupying the centre of the pallial fold: foot very long and slender; the sole appears as if separated from the upper part of the foot, being defined by a darker line: slime thin and nearly transparent. I could not detect any smell of garlic (so peculiar to Z. alliarius), although I frequently irritated the animals.

The shell is three times the size of that of its nearest congener, Z. alliarius, and is of a reddish-brown or waxy colour; the whorls are re convex or swollen, the lower part of the shell is not so much arched, the mouth is larger, the umbilicus is smaller and narrower, and the colour underneath is sometimes whitish.

27 April, 1870.


Having ascertained, in a large species (Cephaloptera Kuhlii) from the Indian Ocean, which is wanting in the Neapolitan Museum, the presence of the prebranchial appendages which Prof. P. Panceri, of Naples, was the first to see in one of the Mediterranean species (C.
giorna), I call attention to this anatomical peculiarity, of which he has given a detailed description in a memoir published in conjunction with M. L. de Sanctis.

On examining at the bottom of the mouth the pharyngeal apertures of the branchial chambers, or separating the walls of their external apertures, we see, in front of each of the respiratory surfaces, a very regular series of organs which do not occur in any other fish, whether bony or cartilaginous. I have ascertained that they are wanting in two species belonging to genera nearly allied to Cephaloptera (namely Rhinoptera marginalis and Aetobatis marinari). Thus their presence appears to me, as to M. Panceri, to constitute one of the essential characters of the genus Cephaloptera.

These organs are elongated lamellae, the aspect of which somewhat reminds us of that of the stems of ferns, but with the leaflets turned back towards the branchiae. Each being formed of a fold of mucous membrane supported by a cartilage, these lamellae are attached to the anterior surface of the branchial arches, in front of the membranous and vascular folds of the respiratory organs; and it is their position that has suggested the name of prebranchial appendages, by which they are designated by the Italian anatomist.

They do not serve for respiration. By means of injections, M. Panceri has ascertained that they receive arterial vessels, like the other organs, and not branches of the branchial artery. According to him, they are destined, on account of the remarkable size of the apertures of the branchial chambers, the orifices of which are much smaller in the other Rays, to retain the water and prevent it from traversing these cavities with a rapidity which would be injurious to the perfect accomplishment of the act of hematosis.—Comptes Rendus, March 7, 1870, tome lxx. pp. 491, 492.

**Observations on the Turning of Fungi.**

By M. P. Duchartre.

The author remarks that whilst the researches of modern botanists have accounted for a great number of the vital phenomena of plants, there are still some whose causes remain in obscurity, although the phenomena themselves may be manifested daily to observation. Among these are the phenomena of direction, the tendencies of certain organs to hold themselves always in a particular position, and to return to that position when designedly displaced from it. The favourite hypotheses upon this subject, especially in Germany, tend to give the phenomena a purely mechanical character; but the author contends that such generalizations have been made too hastily, and cites the following curious instance of the growth of a fungus under very peculiar circumstances in support of his opinion.

In a garden at Meudon (Seine-et-Oise) a cask had been placed to serve as a reservoir for watering the garden; it was a cask of 225 litres, having its bottom covered with a thick layer of plaster; it
Miscellaneous. 385

neck and of the foot which becomes developed and lodges the organs.
The connexions of the nerves show the mantle reduced to that inferior part which covers the shell.

These examples suffice to prove the utility of this principle, which will lead us to a single scheme, the true theoretical and ideal archetype of the Gasteropod. — Gomptes Heiidas, December 27, 1869, tome lxix. p. 1344.

A new British Land-Shell. By J. Gwyn Jeffreys, F.R.S.

My correspondent, Mr. Thomas Rogers of Manchester, has added another species to this well-worked department of our fauna. Specimens of a Zonites which he has now sent me, collected by him under stones at Marple AVood, in Cheshire, prove to be the Helix glabra of Studer, Fer. Prodr. No. 215. Z. glaher has a wide range on the Continent, from Normandy (where I have taken it), through France, Savoy, Switzerland, Germany, and Dalmatia, to Epirus in Greece. I also found the same species in 1846 at Grassmere, and in 1857 at Barmouth, but had overlooked it. Mr. Rogers's specimens being alive, I subjoin a description of the animal.

Body dark bluish grey, striped like a zebra on each side in front,
and irregularly mottled behind; in one of the specimens the hinder part of the foot is minutely speckled with yellowish-brown dots; two narrow and slight parallel grooves run along the neck from the head to the upper lip of the shell; the surface is more or less wrinkled, and has a few large but indistinct lozenge-shaped markings: mantle very thick and dark at the mouth of the shell, over which its edges are folded: tentacles, upper pair rather long, and finely granulated; lower pair very short: oïjes small, placed on the upper part, but not at the tips, of the tentacular bulbs: respiratory orifice round, occupying the centre of the pallial fold: foot very long and slender: the sole appears as if separated from the upper part of the foot, being defined by a darker line: slime thin and nearly transparent. I could not detect any smell of garlic (so peculiar to Z. alliarius), although I frequently irritated the animals.

The shell is three times the size of that of its nearest congener, Z. alliarius, and is of a reddish-brown or waxy colour; the whorls are re convex or swollen, the lower part of the shell is not so much arched, the mouth is larger, the umbilicus is smaller and narrower, and the colour underneath is sometimes whitish.

27 April, 1870.


Having ascertained, in a large species (Cephaloptera Kuhlii) from the Indian Ocean, which is wanting in the Neapolitan Museum, the
presence of the prehranchial appendages which Prof. P. Panceri, of Naples, was the first to see in one of the Mediterranean species (C. jilorna), I call attention to this anatomical peculiarity, of which he has given a detailed description in a memoir published in conjunction with M. L. de Sanctis.

On examining at the bottom of the mouth the pharyngeal apertures of the branchial chambers, or separating the walls of their external apertures, we see, in front of each of the respiratory surfaces, a very regular series of organs which do not occur in any other fish, whether bony or cartilaginous. I have ascertained that they are wanting in two species belonging to genera nearly allied to Cephaloptera (nameh^ Ithinoptera man/inalis and ^tobatis narhiari). Thus their presence appears to me, as to M. Pauceri, to constitute one of the essential characters of the genus CephaJopteni.

These organs are elongated lamellae, the aspect of which somewhat reminds us of that of the stems of ferns, but with the leaflets turned back towards the branchiee. Each being formed of a fold of mucous membrane supported by a cartilage, these lamellae are attached to the anterior surface of the branchial arches, in front of the membranous and vascular folds of the respiratory organs; and it is their
position that has suggested the name of prehranchiaJ appendages, by which they are designated by the Italian anatomist.

They do not serve for respiration. By means of injections, M. Panceri has ascertained that they receive arterial vessels, like the other organs, and not branches of the branchial artery. According to him, they are destined, on account of the remarkable size of the apertures of the branchial chambers, the orifices of which are much smaller in the other Rays, to retain the water and prevent it from traversing these cavities with a rapidity which would be injurious to the perfect accomplishment of the act of haematosis, — Comptes Rendus, March 7, 1870, tome Ixx. pp. 491, 492.

Observations on the Turning of Fungi.

By M. P. DUCHARTRE.

The author remarks that whilst the researches of modern botanists have accounted for a great number of the vital phenomena of plants, there are still some whose causes remain in obscurity, although the phenomena themselves may be manifested daily to observation. Among these are the phenomena of direction, the tendencies of certain organs to hold themselves always in a particular position, and to return to that position when designedly displaced from it. The favourite hypotheses upon this subject, especially in Germany, tend to give the phenomena a purely mechanical character; but the author contends that such generalizations have been made too hastily, and cites the following curious instance of the growth of a fungus under very peculiar circumstances in support
of his opinion.

In a garden at Meudon (Seine-et-Oise) a cask had been placed to serve as a reservoir for watering the garden; it was a cask of 225 litres, having its bottom covered with a thick layer of plaster; it