(6.) The posterior part of the oviduct is not formed until the ovarian sac has become developed, and had not been developed in the oldest larva (11 centims.) the authors have succeeded in obtaining.

The Alimentary Canal and its Appendages.

In this section the authors give a detailed account of the topographical anatomy of the alimentary tract in the adult. They have detected a small pancreas close to the bile-duct, and call special attention to a ventral mesentery passing from the posterior straight section of the intestine to the ventral wall of the body.

In the embryological part of the section a detailed account is given of the development (1) of the pancreas, which is described as arising as a dorsal diverticulum of the duodenum on a level with the opening of the bile-duct; (2) of the yolk sac and vitelline duct; (3) of the spiral valve, which first appears as a hollow fold in the wall of the intestine, taking a slightly spiral course, and eventually becoming converted into a simple spiral ridge.

The so-called hyoid gill, which the authors expected to find well developed in the larva, is shown not to be found even in the oldest larva the head of which was examined (26 millims.)

The last section of the paper is devoted to the consideration of the systematic position of Lepidosteus. The Teleostean affinities of Lepidosteus are brought into prominence, but it is shown that Lepidosteus is nevertheless a true Ganoid.

The arguments used in this portion of the paper do not admit of being summarised.

IV. "On a New Mineral found in the Island of Cyprus." By Paulus F. Reinsch (Erlangen). Communicated by Professor Stokes, Sec. R.S. Received November 3, 1881.

In the western part of the Island of Cyprus I detected, during my journey in June this year, a peculiar mineral, very remarkable not only from its chemical composition but also from the large percentage of extremely well-preserved siliceous shells of microscopic Radiolaria. The locality in this not much known part of Cyprus,* is situated between the village Chynussa and the mountains running in a north-

* In the fine map of Kiepert (Berlin, 1878) this part of the island, in which the locality lies, is marked as "wooded hill country, unexplored." In all the reports of travellers through Cyprus before and after the British occupation I find no notice of this tract, which must have attracted the attention of passing travellers.

western direction, 38 miles N.W.W. in a straight line from the city of Limassol, 4 miles from the nearest point of the shores of Chrysohu Bay. The mineral is found there in enormous quantities, it covers the sides of the top of a hill about 150 meters over the lowest part of the valley beneath. One side of the hill is covered with the pure mineral, partly in a crumbled state, partly as solid rock. On some places are found compact prominent rocks of the pure mineral from 1 to 2 meters height. The locality is destitute of any vegetation. The mineral is soft and chalk-like; in a compact state it has a yellowish colour, in a powdered state an intense sulphur-like colour. The principal part of the mineral is composed of pure basic sulphate of oxide of iron, making 73 per cent.

The striking yellow coloration of the slope attracted my attention, and I thought at first sight that I had before me a large layer of a pure sort of common yellow ochre. In ravines intersecting the slope and running down to the valley, especially on the lower parts, I observed the slopes covered all over with whitish and yellowish crusts of salt from 1 to 2 inches thick. These crusts sometimes cover the soil in the ground of the valley and excavations in the slope with whitish efflorescences, 30 to 50 meters below the yellow deposit. The substance must be partly soluble, it has a peculiar taste, giving the taste of sulphate of protoxide. On all those spots which are covered with the crusts of this salt there grows no vegetation of herbs, only shrubs cover the soil. During the dry season, lasting in this part of the island from June to August, the amount of salt, crystallizing and developed from the surface of the slopes, must constantly be increasing. The upper parts of the soil more and more drying up are filled up in the dry season with the efflorescence of salt, which is previously in a dissolved state below the surface of the soil. This efflorescent salt in the lower parts of the ravines proves to be derived from the higher parts of the yellow deposit itself.

Through the influence of the rain water in the wet season (October to December) quantities of the mineral being dissolved and carried down, quantities of the solution are sucked in from the soil; later in the dry season the salt makes efflorescences on the surface if the soil is drying up. The process of efflorescence of salt in the dry season and carrying away in the wet season is repeated from year to year. The salt seems to me to be a neutral combination, and is in small amount soluble in water.

The mineral contains 1·7 per cent. hygroscopic water, and in the substance soluble in hydrochloric acid a very small amount of sulphate of alumina. The hardness is nearly 2, equal gypsum, specific gravity 1·7.

Heated to redness the mineral* turns from yellow to dark-brown

* I assign to this mineral the name of the island, and to the many names of

and at last to red-brown, the colour of oxide; it loses in average 8 to 9 per cent. sulphuric acid with combined water. When dissolved in boiling hydrochloric acid a snow-white residuum is obtained, which, under the microscope, proves to be composed of extremely well-preserved shells of microscopic Radiolaria, belonging to different genera. The size of those mostly regular globular bodies ranges between 0·045 millim. and 0·1135 millim. The quantity of this residuum amounts in a mean of three trials to 25 per cent. The quantity of soluble substance is therefore 73 per cent., if we take away 2 per cent. hygroscopic water. This soluble substance is pure sulphate of oxide of iron with a very small amount of sulphate of alumina. The quantity of the sulphuric acid in the mineral was directly determined by precipitation of the hydrochloric solution of the mineral with chloride of barium. 2,000 mgrms. of the mineral gave 1,250 mgrms. sulphate of baryta, corresponding to 431 mgrms. sulphuric acid. The amount of this acid in the mineral is therefore 21·5 per cent. The quantity of the oxide with a small amount of alumina is 51·5 per cent., corresponding to 36 per cent. metallic iron.

No traces of copper or any other metal have been found in the mineral; a trace of arsenic, however, is observed, as is shown by means of the copper-arsenic test, by boiling the hydrochloric solution with a clean copper slip, which becomes coated with a thin deposit of metallic arsenic.

Cyprusit is composed as follows:—

Oxide of iron, with a very small amount of alumina	51·5
Sulphuric acid	21·5
Insoluble siliceous substance	25
Hygroscopic water	2
	100·0

V. "On certain points in the Anatomy of Chiton." By Adam Sedgwick, M.A., Fellow of Trinity College, Cambridge. Communicated by F. Maitland Balfour, F.R.S. Received November 5, 1881.

An account of the structure of the kidney of Chiton has long been a want in morphology. Middendorff,* in 1848, described a branched gland lying ventrally on each side of the body cavity which he identified as kidney; but he records no observation on the structure of the

objects belonging to natural history derived from Cyprus I add a new one; the mineral would bear the name "Cyprusit."

* "Mémoires de l'Acad. de St. Pétersbourg," 6th ser., vol. vi.