

seems to me contrary to what we know most precisely of the morphology of the circulatory apparatus.

On the other hand, M. Wegmann had previously figured\* and described, in more detail than M. Boutan, a complicated system of capillary vessels in *Haliotis*. Now H. Milne-Edwards long ago announced that the organs of the Gasteropoda (except perhaps the renal organ) always present lacunæ and no capillaries. It was therefore interesting to ascertain whether the branchia formed an exception to this rule.

By injections I have had no difficulty in reproducing the appearances figured by M. Wegmann; but I explain them by the well-known foldings of the lamella and also by the nearly regular arrangement in line of the connective cells or groups of such cells. The supposed vessels of the two margins are only portions of the lacuna in which the connective tissue is sparse and in which, consequently, the injected material circulates easily.

The space within the double basal membrane is therefore nothing but a simple diverticulum of the general lacuna, which extends between the two laminae of the mantle. My investigations thus confirm the views of Milne-Edwards.

I may add that in the *Aplysiidæ* and *Bullidæ* the branchia is formed by the more or less complicated folding of a single lamella, the structure of which is the same as that just described for the pectinate branchiæ.—*Comptes Rendus*, August 8, 1887, p. 316.

*Description of a newly-excluded Young of the Ornithorhynchus paradoxus.* By Sir RICHARD OWEN, K.C.B., F.R.S., &c.

Of this interesting and long-hoped-for discovery the author was informed by his friend and correspondent, the Baron von Müller, F.R.S., of the Botanical Gardens, Melbourne, and shortly received the specimen from the Baron: also further details from Mr. Le Souef, of the Zoological and Acclimatisation Society's Office, Melbourne; and from the Rev. Pastor Hagenauer, Superintendent of the Missionary Station in Gipps-Land, S.E. Victoria, to whose influence with the natives science is indebted for the acquisition, as I am to Baron von Müller for the reception, of the embryo well preserved in alcohol. The specimen is nude, an inch in length, the nostrils well opened, and between them the fleshy conical support of the horny sheath, which has been shed and by which the chorion had been torn open at birth. The mouth is a transverse slit, not produced as a beak, bounded by flexible lips, and sufficiently open to receive nutriment afforded by the group of pores excluding the secretion of the mammary gland of the pouch. The fore limbs, chiefly represented by the paws and pentadactyle, with claws sufficiently developed for adhering to the part of the pouch on which the excretory pores open. The hind limbs are less developed, have

\* *Ibid.* sér. 2, tome ii. pl. xix.



the five digits feebly indicated and clawless. A short conical-pointed tail projects between them. The elongate, flattened, natatory tail of the adult is a later development. There is no trace of navel. The skin of the trunk is uniformly smooth and nude.

If this embryo should be a male, the spur of the femoral gland is a defensive organ of later growth.

The author refrains from dissection in hopes of receiving another specimen; and, after a detailed description of the external characters of the unique specimen, refers to his paper "On the Uterine Ovum of the *Ornithorhynchus*" in the volume of the 'Philosophical Transactions' for 1834, and on the "Mammary Glands" in the volume for 1832.—*Proc. Royal Soc.* vol. xlii. no. 256, p. 391.

*Aulax hypochæridis*, a new Gall-fly. By J. J. KIEFFER.

*Hypochæris radicata*, L., frequently bears elongated or fusiform, or sometimes rounded swellings of the stem, which may attain a length of over an inch and a half and a width of over a quarter of an inch. They have the outer surface smooth and of the same colour and texture as the stem of the plant; internally they are spongy, white, with ten or twelve round or oval, pretty regularly arranged cavities, about one twelfth inch apart, within each of which a larva resides. They are therefore very like the galls of *Aulax hieracii*, Bouch., which occur frequently upon species of *Hieracium*; but the latter are always stouter, and their cells are larger and placed closer together, and form more than one row. These swellings usually occur below the forked branching of the stem; the shoot above them is sometimes normally developed, sometimes aborted. They are found as early as the beginning of June (in Austria), but are not mature until the autumn.

These galls have been obtained by the author in the neighbourhood of Bitsch, but they were first observed near Naples by Prof. Licopoli ('Le galle della flora di alcune province Napolitane,' Naples, 1877). Dr. Vice found them in North Wales, according to Trail ('Scottish Naturalist,' vol. iv. p. 16), and they were referred to by Dr. F. Löw in his "Bemerkungen über Cynipiden" (in *Verhandl. zool.-bot. Gesellsch. in Wien*, 1884, p. 326); Löw received specimens from Prof. Licopoli, and bred from them two females of the Chalcidian *Eurytoma cynipsea*, Boh.

From his specimens the author bred true gall-flies which he regards as forming a new species of the genus *Aulax*; they emerged in the spring (probably in May); in a heated room as early as February.

The species is named *Aulax hypochæridis* by the author, who describes the female, the only sex known, as follows:—"Body black. Antennæ filiform, with fourteen distinctly separated joints, dull black, with adpressed grey hairs; third joint somewhat longer than the fourth, both longer than the following ones, which are cylindrical, and about twice as long as broad; apical joint pointed. Face



Owen, Richard. 1887. "Description of a newly-excluded young of the *Ornithorhynchus paradoxus*." *The Annals and magazine of natural history; zoology, botany, and geology* 20, 249–250.

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