it agrees, omitting the paler colour, so accurately with a still living species, which was found by A. Smith at the Cape of Good Hope and by me near Cape Delgado (hence very near this layer of copal), that I see no reason why it should be separated from it. This species is *Hemidactylus capensis*, described and figured by A. Smith (Illustrations of the Zoology of South Africa : Reptiles, pl. 75. fig. 3), and which Dr. J. E. Gray has lately* described as a distinct genus, *Lygodactylus strigatus*.—*Monatsbericht d. Preuss. Akad.* Aug. 1865.

On the Spawn of the Perch. By W. H. Ransom, M.D.

The spawn of the Perch is well known as a gelatinous band, but it is less generally known to be a flattened tube, composed of cohering ova arranged in a network, not unlike a long bead purse. Some highly interesting observations by the late Johann Müller, on the structure of the covering of the eggs, led me to examine them with especial reference to the micropyle, which had not only escaped the scrutiny of that eminent anatomist, but also the search for it afterwards made by Reichert. After finding it I was induced to observe if it had any special relation to the network which the mass of ova forms, and I ascertained that in all cases it is regularly placed facing towards the cavity of the tube, so that by this regularity of the arrangement of the eggs none of them can have the micropyle occluded by their mutual cohesion. It is a matter of interest, and of some difficulty, to conceive how the sperms find their way along this mass of ova, nearly always to the right spot, for in nature very few of the eggs escape impregnation.—*Transactions of the Midland Scientific Association.*

On the Vital Resistance of Encysted Colpodæ.
By M. Victor Meunier.

When, in July 1864, M. Coste made known his researches upon the development of ciliated Infusoria in an infusion of hay, M. Milne-Edwards expressed the opinion that the property possessed by encysted animalcules of returning to life in contact with water may throw fresh light upon certain cases of supposed spontaneous generation in infusions which had been boiled. Thus, if the cysts were but slightly permeable to water, the animalcules might remain dry in the midst of that liquid, so that, when boiled, they would be exposed to precisely the same test as if subjected to a dry temperature of 212° F. These remarks of M. Milne-Edwards led the author to make some direct experiments bearing on this point, of which he communicates the results in the following words.

He says, "The dust which is given off by hay when shaken furnished

* Proceedings of the Zool. Soc. London, 1864, p. 59. *Homodactylus Turneri*, which is also there described as a new genus and species, is identical with A. Smith's *Pachydactylus Bibronii* (*l.c.* pl. 50. fig. 1), as anyone may easily convince himself by comparing the figures (pl. 9. fig. 2).

the cysts necessary for my researches. This dust examined under the microscope presented,—1. particles of mineral matters (especially silica) and soot; 2. filaments of cotton, fragments of Diatoms, *débris* of vegetable epidermis, of cellular and ligneous tissue, and of simple or septate hairs, glumes and glumellæ of *Agrostis* and *Poa*, pollen-grains (especially of gramineous plants), spores, starch, and yeast; 3. filaments of wool and silk, scales of Lepidopterous insects, *Acari* of various ages and more or less shrivelled, dead individuals of *Anguillula*, large, contracted Rotifera, and, lastly, numerous cysts of ciliated Microzoa, especially *Colpodæ*, some shrivelled and dead, others capable of resuming active life in contact with water, although at the period when I observed them I had already kept the hay which furnished me with them for fourteen months.

"My plan of investigation consisting in subjecting the specimens of the dust at my disposal to the action of various temperatures, I had a previous question to solve, namely, whether the cysts were so uniformly diffused through the dust that, when the latter was divided into portions of the same weight, it might be regarded as certain that every one of these portions would contain encysted Microzoa. To ascertain this, having divided the dust into portions of 50 centigrammes, I put thirteen of these portions, taken at hazard, into the same number of test-glasses, each of which then received 40 cubic centimetres of filtered water. In less than two hours these thirteen macerations were populated with *Colpodæ*. It seemed to me that this trial authorized me to assume that all the portions still in my possession, if placed in the same conditions as the preceding, would, like them, have furnished revivified *Colpodæ*; and I held it as certain that if the dust was barren under changed conditions, its sterility must be attributed to the conditions in which I should have placed it.

"In all the following experiments there were used, as in the preceding trial, 50 centigrammes of dust, and 40 cubic centimetres of water. The dust and water having been placed in a mattrass for the experiments at 212° F., and in a test-tube suspended in a vessel full of water for those below 212° F., the mattrass or the tube, containing a mercurial thermometer, was immediately subjected to the action of heat. As soon as the desired calorific effect was produced, the tube was removed from the bath, or the mattrass from the fire, and, after cooling, the maceration was poured into a test-glass.

"My experiments were forty-one in number, and in fourteen of them the portions of dust were boiled. In the latter, two mattrasses were kept at 212° F. for ten minutes, eight were kept at 212° F. for five minutes, two were kept at 212° F. for two minutes; lastly, two mattrasses were removed from the fire the moment that temperature was attained. All these experiments prove that the encysted *Colpodæ* are killed by boiling."—*Comptes Rendus*, December 4, 1865, p. 991.