MISCELLANEOUS.

Investigation of Trichina spiralis. By R. Leuckart.

Professor Leuckart has communicated the following results of his investigation of *Trichina spiralis* to the Royal Academy of Sciences of Göttingen:—

1. *Trichina spiralis* is the young state of a hitherto unknown small Nematode worm (of 1·5–2·8 mill. in length), for which the generic name *Trichina* must be retained.

2. It inhabits the intestinal canal of numerous warm-blooded animals, not only Mammalia (dogs, cats, pigs, sheep, rabbits, and mice, —also, undoubtedly, man), but also Birds (the common fowl), and indeed always in large quantity.

3. The intestinal *Trichina* attains its full sexual maturity as early as two days after its immigration.

4. The eggs of the female are developed in the vagina into minute *Filaria*-like embryos, which are extruded without egg-shells (from the sixth day onwards).

5. The new-born young immediately set about their migration. They penetrate the wall of the intestine, and pass through the cavity of the abdomen directly into the muscular envelope of their host.

6. The course upon which they advance is indicated beforehand by the intermuscular masses of cellular tissue.

7. The majority of the migrating embryos remain in the groups of muscles immediately inclosing the cavity of the body (the abdominal and thoracic cavities), especially the smaller ones and those containing most cellular tissue.

8. The embryos penetrate into the interior of the individual muscular fasciculi, and here attain, within fourteen days, the size and organization of the well-known *Trichina spiralis*.

9. The infected muscular fasciculus loses its previous structure immediately after the penetration, the fibrillæ becoming broken up into a finely granular substance, and the muscular corpuscles acquiring the form of oval nucleated cells.

10. Up to the full development of the *Trichina spiralis*, the infected muscular fasciculus still retains its original tubular form; whilst subsequently its sarcolemma thickens and it becomes gradually shrivelled from the extremities.

11. The spot occupied by the parasite persists, in the form of a spindle-shaped enlargement, in which the well-known lemon-shaped or globular calcareous shell is afterwards deposited (although only after a long time).

12. The migration and development of the embryos take place also after the transference of pregnant *Trichinæ* into the intestine of another (suitable) host.

13. The further development of the *Trichina spiralis* into the sexually mature animal is quite independent of the formation of this calcareous shell, and takes place as soon as the young state is fully developed.

14. Male and female individuals are distinguishable even in the young state (*Trichina spiralis*).

15. The immigration of the brood of *Trichina* in large quantities causes very serious symptoms: namely, peritonitis, in consequence of the penetration of the wall of the intestine by the embryos; and lameness, in consequence of the destruction of the infected muscular fasciculi.

16. Feeding upon flesh containing *Trichinæ* is also followed by more or less dangerous symptoms, according to the quantity of the imported parasites; namely, an enteritis, often causing death, accompanied by bloody (*crupöser*) exudations, which are sometimes thrown down in ragged clots and evacuated (rabbit), and sometimes converted into psorospermia (dog), or pus-corpuscles (cat, mouse).—*Göttinger Nachrichten*, April 30, 1860, p. 135.

SERTULARIA TRICUSPIDATA.

To the Editors of the Annals of Natural History.

Gentlemen,—Allow me to thank Prof. Greene for pointing out the pre-occupation of the specific name of the above species by Mr. Alder, which had escaped my notice.

With his permission, I shall alter the name to *Greenei*, in honour of one of such high promise in our favourite science.

I am, Gentlemen, Your obedient Servant,

Andrew Murray.

On the Strobilation of the Scyphistomata.

By P. J. Van Beneden.

Professor Van Beneden has long held, in common with Desor, and in opposition to Sars, that the Medusæ are produced from *Scyphistoma* by the formation of a series of buds in the vicinity of the mouth of the latter; whilst Sars maintained that the Strobile was produced by a transverse segmentation of the body of the *Scyphistoma*. The latter has been the view most generally received amongst naturalists, and Professor Van Beneden now gives in his adherence to it in consequence of some recent observations which he has had the opportunity of making.

The development of *Cyanæa* takes place, according to him, in the following manner:—The *Scyphistoma* produces no buds; but a part of its own substance becomes converted into Medusæ. The terminal segment, bearing the arms, does not detach itself in the form of a *Scyphistoma*, to go and live elsewhere, but it becomes a Medusa like the others, and the arms are absorbed in proportion as the Medusal form makes its appearance. The peduncle of the Strobile exhibits a *fresh* crown of tentacles before the first Medusæ are detached. The terminal Medusa, bearing the tentacles which are absorbed, and retaining the mouth of the *Scyphistoma*, consequently does not pass through the same phænomena of evolution as the other Medusæ.—*Bull. Acad. Roy. Belg.* 2me sér. tome vii.