

their burrows. Wishing to ascertain the prey with which these careful females furnished their larvæ, I captured a considerable number of them, and found that they nourish their progeny with beetles belonging to the family *Curculionidæ* and to the genus *Otiorhynchus*. I also ascertained that the *Cerceris* varied in the selection of species, for I counted four belonging to this generic group, namely *Otiorhynchus scabrosus*, *sulcatus*, *raucus*, and *nubilus*; they also furnished me with a *Phytonomus punctatus* and several individuals of *Bromius vitis*. Is it because the species of this latter genus resemble *Otiorhynchi* in their form that this Curculionidical *Cerceris* furnishes its larvæ with them?

It is only the females that are charged with the care of provisioning the larvæ, and it is only the females that devote themselves to the construction of the burrows destined to protect their progeny. As to the males, I fancy they are vagrants, and that their principal functions consist in the propagation of their species.

All day, and as long as the sun is above the horizon, the females are busy in bringing nourishment to their larvæ, and nothing is more curious than to see how great is their activity, and with what earnestness they perform these operations. Their burrows, which are always cylindrical, are not straight, but usually form a more or less distinct curve: this is easily proved; for if a straw be introduced into these burrows, the aperture of which is about 5 millimetres in diameter, it is very difficult to pass it to the bottom, and then it is felt that the straw changes its originally straight direction in a well-marked curve.

If it be curious to observe the maternal zeal with which these females provision their larvæ, it is no less interesting to witness the activity which they display in the construction, and especially in the repair of their habitations.

Into these holes the provident female carries successively from fifteen to twenty *Otiorhynchi*; and when we observe these beetles, they are found to be in a very decidedly lethargic state. The sting applied to these *Otiorhynchi* by the female *Cerceris* no doubt benumbs the vital principle; and although, at the first glance, they do not seem to have more than a few moments to live, they probably remain alive for several months, that is to say, until the larvæ, for whose nourishment they are destined, have devoured their principal organs. What seems to support the opinion which I here put forward is, that on the 22nd of September I had still some living specimens of *Otiorhynchus scabrosus*, the species most sought for by this Fossorial Hymenopterous insect.—*Comptes Rendus*, 22nd February, 1858, p. 414.

On a new species of Hæmatozoon of the genus Filaria, observed in the Heart of a Seal (Phoca vitulina, Linn.). By M. JOLY.

In dissecting the heart of a Seal (*Phoca vitulina*) the author found several female Nematoid worms, 15 to 20 centimetres in length, and 0.80 to 1 millimetre in diameter. Four of them were fixed in the

right, and two in the left auricle. He considers it to be a new species, to which he gives the name of

Filaria cordis Phocæ.

Adult female. Body whitish, filiform, 15 to 20 centimetres in length, attenuated and recurved like a hook at its posterior portion.

Head obtuse, without papillæ; *mouth* none; *anus* none. *Integument* finely striated transversely, presenting under the microscope interlaced fibres like those of the skin of *Mermis*, and covering an internal tube formed of longitudinal fibres or lamellæ.

Male unknown.

The female described was stuffed throughout its length with ova and embryos lodged in a tubular ovary, with very delicate diaphanous walls, without any apparent trace of organization. The ova nearest the tail resembled small, irregularly elliptical or spherical masses. Those of the middle of the body contained an embryo rolled upon itself in the manner of those of *Gordius*, described by Grube. In the anterior third of the body there were innumerable free embryos, 0.60–0.70 mill. in length, and 0.001 mill. in diameter, pressed and interlaced together like a tangled knot of microscopic snakes. The development of the ovary was so enormous, that all the other organs of the body had entirely disappeared, and the animal formed an *oviferous* and *embryoniferous* tube, justifying to a certain extent the singular remark of Jacobson, who asks, whether the Guinea-worm (*Filaria Medinensis*) “may not be only a tube or sheath filled with vermicles.”

The author then remarks upon the number of *Filariae* found in all parts of fishes, which constitute the food of the Seal, and also upon the fact that all the true *Filariae piscium* hitherto observed have been destitute of sexual organs. Hence he concludes, that these *Filariae* are introduced with the prey into the stomach of the Seal, and after the digestion of the prey, find their way into the blood-vessels, and thus into the heart. From the comparatively large size of the embryos, the author does not consider that they could circulate with the blood through the capillary vessels, like the *Filariae* of the blood of the Dog; but he adds, that it might be advisable to examine the entire sanguiferous system of dogs with worms in their blood, in order to see whether similar parent *Filariae* may not also occur in them.—*Comptes Rendus*, February 22, 1858, p. 403.

Osteological Museum in Leyden.

The Dutch Government, with their usual attention to science, have been building a new gallery for their magnificent osteological collection. The entire quadrangle of the older Museum has been heightened another floor and lighted by skylights, which is to be devoted to the osteological collection; the larger specimens, as the Giraffe, Elephant, and Rhinoceros, being placed in erect separate glass cases down the centre of the gallery.—J. E. GRAY.



Joly, N. 1858. "On a new species of Hæmatozoon of the genus Filaria, observed in the heart of a Seal (*Phoca vitulina*, Linn.)." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 399–400.

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