

These different salivary liquids have the properties of not undergoing alteration spontaneously in contact with the air, and of preserving unaltered albuminoid substances immersed in them.

The part played by these acids, which are secreted in such considerable quantities, is still very obscure. The authors remark that, in the mollusca in question, the blood is still alkaline; they promise further investigations of the subject.—*Bibl. Univ.*, February 15, 1868, *Bull. Sci.* p. 170; abstract from *Rendiconto d. R. Accad. Sci. di Napoli*, August and September 1867.

On an Hermaphrodite Nemertian (Borlasia hermaphroditica) from St. Malo. By W. KEFERSTEIN.

Great importance was formerly attributed in zoology to the union of the two sexes in the same individual, or their separation in two distinct individuals; and quite recently a French naturalist has endeavoured to distribute the Invertebrata into classes, chiefly in accordance with this character.

It is, however, now certain that monœciousness and diœciousness have only a secondary value. Thus we know, for example, that both in the Annelida and in the Nematoda, which generally have the sexes separate, a certain number of hemaphrodite species are to be met with; we also know some diœcious Trematoda, in a group otherwise entirely hermaphrodite; and recently, in the group of hermaphrodite *Planariæ*, we have become acquainted with a species in which the sexes are separated (*Planaria dioica* from St. Vaast).

Hence the discovery made by M. Keferstein at St. Malo of an hermaphrodite Nemertian is not particularly surprising; but in any case it is an important fact, since it is the first example of hermaphroditism in this group. In this animal, to which M. Keferstein gives the name of *Borlasia hermaphroditica*, the testes were found full of mature spermatozooids, and the ovaries of ovules in course of formation. The author having studied only a single individual, it might be suspected that the organs designated by him under the name of testes were seminal receptacles filled with semen; nevertheless M. Keferstein believes he has ascertained that this interpretation would be erroneous.

However this may be, the author asks whether the discovery of an hermaphrodite Nemertian would not serve to throw a little light upon the Nemertians in the perivisceral cavity of which well-developed living young have been found by M. Max Schultze, M. Claparède, and M. Keferstein himself.—*Göttinger Nachrichten*, January 15, 1868; abstract by E. Claparède in *Bibl. Univ.* February 15, 1868, *Bull. Sci.* p. 173.

Anatomical Investigation of some Blind Coleoptera.

By M. C. LESPÈS.

Many insects destitute of eyes have been described in the last few years, and among these the Coleoptera especially have attracted

attention. Some of them live in caves, others in the earth, and some are domesticated among the Ants.

The absence of the eye is not the character of a distinct family ; several genera belonging to different families present the same anomaly. None of these insects have hitherto been made the subject of anatomical investigation ; but I have examined the nervous system of five species, the only ones that I have been able to procure in sufficient number. Several of the others are so small that they cannot be dissected. These five species belong to four families of Coleoptera ; three live in caves, namely, *Aphænops Leschenaultii* (Carabidæ), *Adelops pyrenæus*, and *Pholeuon Querilhaci* (Silphales) ; one lives with ants, namely *Claviger Duvalii* (Pselaphidæ) ; and the last is found deep in the earth, this is *Langelandia anophthalma* (Latridiidæ).

In all these insects the eye is entirely wanting. The abortion of this organ induces the disappearance of the optic nerve, and even that of a portion of the nervous centres ; for the cerebroid ganglia, instead of forming a mass placed transversely in the head, have the form of two elongate-oval bodies placed nearly parallel to each other. This form resembles that of the cerebroid ganglia of some blind larvæ the perfect insects of which possess eyes.—*Comptes Rendus*, November 25, 1867, p. 890.

Action of the Induction-current upon Plants.

By C. BLONDEAU.

M. Blondeau has pursued his investigation of the effect of the induction-current upon the vegetable organism (see p. 33) by examining its action upon the fruit and seed.

Acting upon fruits the current hastens their maturity. Apples, pears, and peaches which had been subjected to the action of the current arrived at complete maturity when the other fruits of the same plant, which had not been operated upon, were still far from being ripe.

The most curious results were obtained by electrifying seeds before placing them in the ground. Seeds were rendered conductive by soaking them for some time in water, and then submitted for a few minutes to the action of the current. Peas, French beans, and wheat were experimented on. The electrified seeds always germinated sooner than those which had not been acted on by the current ; the development of the plant was more rapid, and the stalks and leaves greener and more vigorous.

Some of the electrified French beans presented a very curious peculiarity ; they germinated downwards, the gemmule and cotyledons remaining in the ground, and the root rising into the air. The author remarks upon this peculiarity, which he compares to the effect of the current upon the poles of a magnet, and indicates that the embryo may hence be assimilated to a little magnet, having its neutral line, and its two poles each charged with a peculiar fluid tending to cause its organs to grow towards the centre of the earth or towards the sky.—*Comptes Rendus*, November 4, 1867, pp. 762–763.



Lespès, M C. 1868. "Anatomical investigation of some blind Coleoptera." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 229–230.
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