

derselben, die *Taenia laevis* Dies., verdient nach meinen Untersuchungen, über die ich an anderer Stelle berichten werde, als Typus eines neuen Genus behandelt zu werden, welches ich

*Diploposthe*¹

nenne. Die Diagnose hat zu lauten:

Männliche und weibliche Keimdrüsen, Dotterstock Schalendrüse und Uterus einfach; Leitungswege und Begattungswerkzeuge doppelt. Typus: *Taenia laevis* Dies.

Die von Diamare² für *Taenia lamelligera* Ow. aufgestellte Gattung *Amabilia* ist zu unvollständig beschrieben — angekündigte weitere Angaben blieb der Autor bisher schuldig —, um *T. laevis* auf sie beziehen zu können.

6. Note on the Fate of the Parent Stock of *Autolytus Ornatus* Verrill.

By P. Calvin Mensch, Collegeville, Pa., U.S.A.

eingeg. 19. April 1896.

In a collection of specimens of the parent stock of *Autolytus ornatus* Verrill, made at Woods Holl last summer with a view of studying the mode of budding in this Syllid I found a small number of individuals from which the stolon had quite recently parted. These were composed of 13 setigerous segments and bore at the extremity of their last segments bud-like outgrowths of embryonic tissue in slightly different stages of advancement, having a length corresponding to about the width of the body of the animal. The buds gave evidence of segmentation anteriorly and bore a rather prominent anal segment to which was attached a pair of wellmarked caudal cirri. In several specimens traces of dorsal cirri were present on two or three distinctly developed segments in the anterior part of the bud.

Upon sectioning one of these specimens I found that it contained eggs in the 11th, 12th and 13th setigerous segments. The sectioning of several more such specimens presented a similar condition. One individual entirely like the others showed the presence of a considerable number of spermatocytes in the 11th, 12th and 13th segments. The presence of reproductive products and hence, necessarily, reproductive organs in a parent stock composed of so few segments, and upon which a more anterior development of a second stolon would hardly be likely, should, I think give some indication as to the fate of the so-called asexual individual.

Stolonization in *Autolytus ornatus* consists in the separation of all segments posterior to the 13th or 14th setigerous segment for the for-

¹ ἡ πέσθη = penis.

² Boll. Soc. di Naturalisti in Napoli. Ser. I. Vol. 7. 1893. Fasc. 1.

mation of a single sexual individual; the development of the head of the stolon taking place on the 14th or 15th segment. After the separation of the stolon from the parent stock it is likely that this process may repeat itself by the outgrowth of an embryonic tissue by which the parent stock regains its former length, thus according with the phenomena observed in *Autolytus longicirris* by De St.-Joseph (Ann. des Sciences Nat. 7^e S. I). Whether however such a growth takes place sufficient to form a second stolon I have not been able to ascertain for *Autolytus ornatus*. In this species the embryonic tissue does not become plainly visible until after the separation of the stolon, and in no instance have I observed a chain of stolons such as is found in *Autolytus varians* Verrill, a form quite common on the New England coast, or as has been described for *Autolytus Edwardsi* by De St.-Joseph and Malaquin. The position of the stolon in *A. ornatus* is very constant, the development of the head invariably taking place on the 14th or 15th segment, usually on the 14th or with rare exceptions on the 15th.

The presence of ovules and sperm cells anterior to the 14th segment can therefore be accounted for in but two ways: 1) Either after the separation of the stolon, and subsequently after the parent stock has again regained its length there must be a production of a second stolon taking its origin anterior to the 14th segment so as to include the 12th and 13th segments; or 2) The so-called asexual individual or parent stock must at a certain stage of its existence develop into a sexual individual.

Examples of budding anterior to the primitive budding segment may occasionally be observed in *A. varians* where, for example, after the formation of a primitive budding zone posterior to the 43rd segment from which is developed a chain of stolons, a second zone may make its appearance between the 40th and 41st segments. In this species however the position of the zone of budding is situated not only more posteriorly but the position of the segment upon which is to be developed the head of the oldest individual of the chain of stolons also varies and the position of the stolon cannot be accurately indicated as it can be in *A. ornatus*. In *A. varians* just as in *A. Edwardsi* described by Malaquin (Recherches sur les Syllidiens) the position of the budding zone may vary so as to reduce the length of the parent stock to from 42 to 29 or even as low as 23 segments. Since in *A. ornatus* I have not been able to find parent stocks with fewer than 13 setigerous segments, and as the formation of a stolon is not likely to occur so close to the region occupied by the stomach, which is usually found in segments 6 to 11, it is improbable that the pheno-

mena can be accounted for in this wise, although De St.-Joseph has observed the formation of a stolon anterior to the 14th segment in *A. longicirris*. As, however, one of my specimens bore sperm cells in a stage of development equal to the sperm cells found in recently separated free-swimming individuals, and as there was no external or internal evidence of bud formation, after such a stage of advancement it is not likely that the formation of a stolon would take place later on.

The conversion of a parent stock into a sexual individual (called Epitokie by Ehlers, Epigamie by Claparède and Malaquin) has been observed in *A. longiferius* by Malaquin (Recherches sur les Syllidiens) and has been demonstrated in several other Syllideans by a few investigators. In such cases the parent stock acquires the identical characteristics peculiar to the sexual individual. In my specimens of *A. ornatus* I have been able to observe no well marked changes in their external appearances, and with the exception of a very slight difference in the size of the eyes the ovule or sperm-bearing individuals do not differ externally from those devoid of sexual products. Since, moreover, these phenomena make their appearance in the stolon just prior to its separation from the parent stock, it is likely that my specimens may have been too young to show such changes. With the exception of slight changes of doubtful significance the internal differences I was able to observe were no more than such as would naturally result in the displacement of the alimentary canal by an accumulation of ovules and sperm cells in the body cavity.

While my material would hardly justify the assertion that in this species there is a conversion of a parent stock into a sexual individual, nevertheless, these phenomena, I think, strongly suggest such a condition.

The complete verification of these phenomena in the parent stock of *A. ornatus* would indicate a different aspect to alternate generation at least in this species of *Autolytus*.

Ursinus College, Collegeville, Pa., U.S.A., April 6, 1896.

7. Vorläufige Mittheilung über die Entwicklung des Seesternes *Asterias pallida*¹.

Von Seitaro Gotō, Zoöl. Lab., Mus. Comp. Zoöl., Cambridge, Mass., U.S.A.
eingeg. 23. April 1896.

In dieser vorläufigen Mittheilung beabsichtige ich die Hauptresultate der vergangenen Winters im hiesigen Laboratorium unter

¹ Contributions from the Zoölogical Laboratory of the Museum of Comparative Zoölogy at Harvard College, under the direction of E. L. Mark, No. LXI.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Zoologischer Anzeiger](#)

Jahr/Year: 1896

Band/Volume: [19](#)

Autor(en)/Author(s): Mensch Calvin

Artikel/Article: [6. Note on the Fate of the Parent Stock of Autolytus Ornatus Verrill 269-271](#)