

another following the course of the post-oral tentacles and lastly a peri-anal ring.

Thus the ciliated areas practically consist of a pre-oral ring (partial) and two post-oral rings, corresponding to the three segments of the body (pre-oral, collar, and trunk).

It is impossible in a short note to follow up these and other points to their logical conclusion, but it is well to compare *Actinotrocha* with *Tornaria* in their leading characters.

The following features are common to each: —

- 1) A bilaterally symmetrical triploblastic pelagic larva.
- 2) A complete and functional alimentary canal, a ventral mouth, short oesophagus, stomach and hind-gut (intestine), a terminal anus.
- 3) A large pre-oral lobe covering over the mouth.
- 4) Three ciliated bands, more or less sinuous — the first or pre-oral encircling (partially or wholly) the pre-oral lobe — the second or post-oral encircling the area immediately behind the mouth and often following the course of a number of tentacles, into which this region of the body is produced — the third or peri-anal, usually simple and encircling the hind part of the body. (In *Tornaria* the pre-oral ring very nearly meets the post-oral, in the mid-dorsal line.)
- 5) A thickened apical plate on the dorsal surface of the pre-oral lobe, bearing in most cases, a pair of eye spots.
- 6) Mesoblast consisting mostly of an unpaired coelomic sac in the pre-oral lobe and two pairs of post-oral coelomic sacs, the sacs are mostly separated by mesenteries but the dorsal one may be absent.

This list will be quite sufficient to shew the very close agreement in structure between the two larvae.

Some extremely important generalisations follow from the above facts but these must be left to the complete paper which will, I hope, shortly be published. I think *Phoronis* will either have to be placed in the Hemichordata or will have to constitute a group Diplo-chordata having the same relation to *Balanoglossus* as Urochordata to Amphioxus.

United College, St. Andrews N.B., April 6. 1896.

## 5. Diploposthe, eine neue Gattung von Vogeltaenien.

Von Dr. Arnold Jacobi in Leipzig.

eingeg. 13. April 1896.

Diejenigen Formen unter den Cestoden, welche mit doppeltem Geschlechtsapparat versehen sind, haben besonders in neuerer Zeit eine generische Sonderung von ihren Verwandten erfahren; eine



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*<sup>1</sup>

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 Diamare<sup>2</sup> 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-

<sup>1</sup> ἡ πόσθη = penis.

<sup>2</sup> Boll. Soc. di Naturalisti in Napoli. Ser. I. Vol. 7. 1893. Fasc. 1.



Jacobi, Arnold. 1896. "Diploposthe, eine neue Gattung von Vogeltaenien."  
*Zoologischer Anzeiger* 19, 268–269.

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