

**Lachmannella recurva (Ciliata Astomida, Haptophryidae),
a parasite of Limapontia capitata (Mollusca, Gastropoda)**

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In 1965 Corliss, De Puytorac & Lom published a paper on the persistent taxonomic and nomenclatural problems involving ciliate Protozoa assignable to the astome family Haptophryidae Cépède, 1923. They bring the genera *Lachmannella*, *Annelophrya* and *Steinella* together in the subfamily Lachmannellinae. This subfamily is characterized by a suture line near the apex of the body, which line marks the anterior border of a restricted, somewhat shallow, thigmotactic area provided with a variable number of well-developed skeletal hooks.

Lachmannella recurva (Claparède & Lachmann, 1859) is the only species of the genus *Lachmannella* Cépède, 1910. The species was described by Claparède & Lachmann (1859) from the marine host *Planaria limacina* O. Fabricius, 1826, under the name *Opalina recurva*. They write that the host was very common on the borders of the Christianiafjord (Norway); often 30 or 40 individuals of the parasite per host were found. The parasite has been figured on (V) Pl. XXI fig. 9. This single published figure is also given by Corliss et al. (1965) and is considered by them as a "type specimen" (cf. Article 74b, International Code of Zoological Nomenclature, 1961).

According to Claparède & Lachmann (1859: 373-375) the parasite has a length of about 200 μm . The body of the animal is tapered, and is also anteriorly curved to the right. A single hook is present which greatly resembles the large hook of *Steinella uncinata* (M. Schultze, 1851). A contractile vacuole is present over the whole body length and extends from rostrally to caudally, from the left to the right side of the body. The contractile vacuole, when closed, is not narrowed totally but closed by constrictions along its length and in this manner a row of circular vesicles is formed resembling a string of pearls (see also Van der Velde, 1975: fig. 2A, for the same appearance in *Steinella*). The macronucleus is oval and situated caudally. It is unfortunate that the type species of the genus *Lachmannella* has never been seen again since its discovery in 1859. Therefore, the question arises: what is the identity of *Planaria limacina*? Kenk (1974), in his survey of the freshwater triclads of the world, suggests that *Planaria limacina* is a mollusc, but gives no further comments. For that reason I studied the original description and figures

of this species by Fabricius (1826). His figures in Table II, 1-6b, show animals not belonging to the Turbellaria but with characteristics of the Opisthobranchia (Mollusca, Gastropoda). In fact the animals figured can easily be recognized as belonging to the sea slug species *Limapontia capitata* (O.F. Müller, 1774) (see also Engel, Geerts & Van Regteren Altena, 1940). This species, indeed, resembles a planarian, because it lacks distinct tentacles and gills and has eyes in eye-areas. Fabricius noticed, however, the characteristics of the Opisthobranchia, as he writes that the animals closely resemble *Akera bullata* O.F. Müller, 1776. Moreover he has given his animals the name *Planaria limacina* ("Snegle Fladormer" in Danish) or, translated into English, sluglike flatworms.

Thus the record of *Lachmannella recurva* represents the first of an astome ciliate of the family Haptophryidae in an opisthobranch snail. Astome ciliates of this family are already known from the digestive tracts of triclad flatworms and amphibians and from the body cavities of certain land snails, although it is questioned whether the parasites of the latter group really belong to this family (Corliss et al., 1965). The known parasites belonging to the subfamily Lachmannellinae and hosts are summarized in the following table.

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Subfamily Lachmannellinae

SPECIES	HOST (GASTROPODA OPISTHOBRANCHIA)
<i>Lachmannella recurva</i> (Claparède & Lachmann, 1859)	<i>Limapontia capitata</i> (O.F. Müller, 1774) (Syn. <i>Planaria limacina</i> O. Fabricius, 1826)
	HOST (TURBELLARIA TRICLADIDA)
<i>Steinella uncinata</i> (M. Schultze, 1851)	<i>Procerodes littoralis</i> (Ström, 1768) (syn. <i>Procerodes ulvae</i> Oersted, 1844) <i>Procerodes lobata</i> (O. Schmidt, 1862) (syn. <i>Gunda segmentata</i> Lang, 1882) <i>Uteriporus vulgaris</i> Bergendal, 1890
<i>Annelophrya sphaeronucleata</i> (Georgévitch, 1950)	All littoral triclads or Lake Ohrid, Jugoslavia

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SAMENVATTING

Lachmannella recurva is de enige bekende soort van het geslacht *Lachmannella*, type genus van de subfamilie Lachmannellinae (eencelligen of Protista: Ciliata, Astomida, Haptophryidae). De vertegenwoordigers van deze subfamilie werden tot nog toe beschouwd als parasieten van platwormen. *Lachmannella recurva*, beschreven van de gastheer *Planaria limacina*, werd sinds haar ontdekking in 1859 niet meer gevonden. *Planaria limacina* blijkt nu een synoniem van *Limapontia capitata*, een ook in Nederland voorkomende zeenaaktslak, te zijn. Dat betekent dat ten minste één soort van de Lachmannellinae parasiteert op een opisthobranchiaat in plaats van een platworm.