

Short Communication

Devonia perrieri (Malard, 1903) (Bivalvia) found *in situ* on the holothurian *Leptosynapta inhaerens* (Müller, 1776) in Norway

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The ectosymbiotic bivalve, *Devonia perrieri*, has earlier been found non-associated with its host in grab samples in Western Norway, but has never been found on its purported host, *Leptosynapta inhaerens*. Here we show it for the first time on its host, *Leptosynapta inhaerens*, in Norwegian waters. This confirms that the host in Western Norway is same as elsewhere in the bivalve's distribution area.

Keywords: ectosymbiont, bivalve, holothurian

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INTRODUCTION

Devonia perrieri (Malard, 1903) (Heterodonta: Galeommatidea), belongs to a unique group of obligatory ecto-symbiotic bivalves found on holothurians (Lützen et al. 2005). The genus *Devonia* is often placed in the family Montacutidae, but the status of this family is unresolved and familial relationships within the Galeommatidea are unclear.

It was originally described by Malard (1903) as *Synapticola perrieri* from specimens found on *Leptosynapta (Synapta) inhaerens* (Müller, 1776) in French waters. Malard clearly noted that it was an external symbiont of this holothurian. Anthony (1916), while improving on its morphological description, made *Synapticola* a synonym of *Entovalva*, citing the work of Voeltzkow (1890). However, the genus *Entovalva* was created

by Voeltzkow (1890) in describing an internal bivalve parasite of another synaptid holothurian from Zanzibar, East Africa. Winckworth (1930) noting both habitat and morphological differences between *Synapticola* and *Entovalva*, and, pointing out that the name *Synapticola* was preoccupied, proposed the name *Devonia*.

Devonia perrieri is currently one of two species of the genus and the only known species from the North Atlantic (Middelfart & Craig 2004). *Devonia ohsaimai* (Kawahara, 1942) was described from *Patinapta ooplax*, from the Ryukyu Islands of southern Japan. However, Kato (1998) transferred it to the genus *Anisodevonia*. *Entovalva major* (Bruun, 1938), from the Red Sea, was described free from its purported

host, *Holothuria (Mertensiothuria) fuscocineria* (Jaeger, 1833), where it was presumed to inhabit the host's cloaca. It has never been found attached to, or, in this host, and was also transferred by Kato (1998) to *Anisodevonia*. More recently, Middelfart & Craig (2004) described a new montacutid creating the monotypic genus, *Austrodevonia*.

Johannessen & Wikander (1976) reported *Devonia perrieri* free from its host in Western Norwegian waters, and discussed its possible host to be among three synaptids (*Leptosynapta inhaerens*, *L. bergensis* (Östergren, 1905), and, *Labidoplax buskii* (McIntosh, 1866)), while noting that the systematics of the leptosynaptid species was incompletely studied. Johannessen & Stensvold (1986) found it in sediments not attached to any host, while potential leptosynaptids hosts were found in the same sediments, in Lundeågen, Tysnes Kommune, Hordaland, Norway.

MATERIAL AND METHODS

On 13 May 2008 a cruise was arranged specifically to look for *Devonia perrieri*. Using coordinates from Johannessen & Stensvold (1986) sampling was conducted in Lundeågen at c. 60° 03.20' N., 05°38.11' E, on a mud bottom at approximately 12

meters depth. Approximately 30 grabs samples were taken with a 0.1 m² Van Veen grab. The samples were carefully washed and sieved. All holothurians were examined.

The sediment type, as per Johannessen & Wikander (1976), is fine sand and silt. No further details on the sediments at this locality are known.

The example shown herein is in the private collection of the first author. Two *Devonia perrieri*, one from the same site, but found unattached to their host, are found in the Zoological Museum, University of Bergen, Bergen, Norway (ZMUB) under museum numbers 56 880 and 56 881 (Johannesen & Wikander, 1976)

RESULTS AND DISCUSSION

Three *Leptosynapta inhaerens* were found. On one of these a single *Devonia perrieri* was found attached to the host (Figure 1).

Devonia perrieri, was found at Lundeågen in 1986. Heggøy et al. (2004), sampling at the same locality failed to find the bivalve, while five *Leptopentacta elongata* and eight unidentified synaptid potential hosts were found. It has now been found attached to its holothurian host for the first time in Norway,

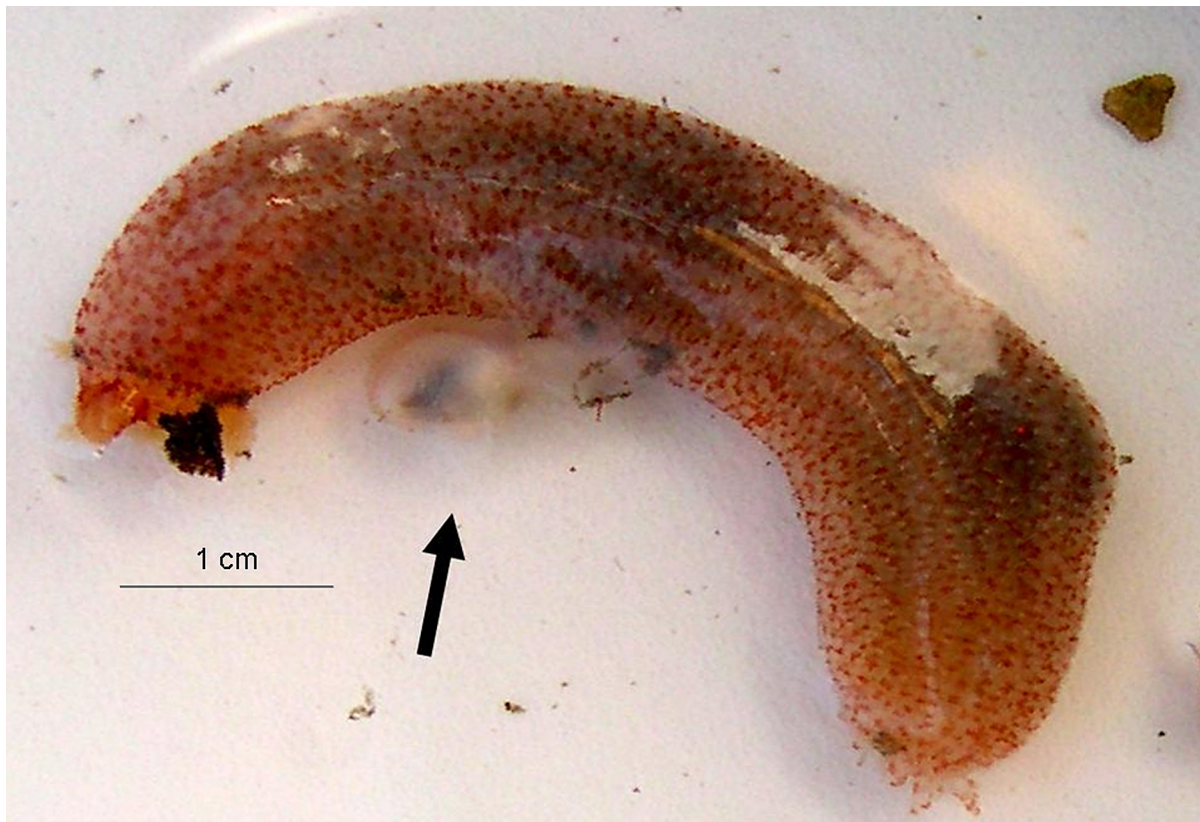


Figure 1. *Devonia perrieri* on it host *Leptosynapta inhaerens*, photograph taken by Glenn A. Bristow, on board the research vessel, Hans Brattstrøm, 13 May 2008, at Lundeågen, Tysnes, Hordaland, Norway (c. 60° 03.20' N., 05°38.11' E).

and is so reported here. Its presence in Lundevågen, attached to *Leptosynapta inhaerens*, confirms both its presence at the locality, and, its use of the same host, known from all other known areas of its distribution.

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