



NMQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

**Bibliography and taxonomic discrimination discussion notes
for North East Atlantic marine and brackish water biota.
Completed examples: Solenogastres**

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1. Benthic invertebrate identification literature (by taxonomic group)

1.1 Mollusca

1.1.1 Solenogastres



Solenogastres are maintained as a class by most current authors, with differing opinions on their relationships with other classes. They had been divided into three orders (retained in the TDP spreadsheet) but these have been abandoned on WoRMS, following recent phylogeny studies (Kocot et al., 2019).

Importance. Solenogastres are most common in offshore waters; *Neomenia carinata* is the most widely recorded in shallow water. None are yet listed as of conservation value but the importance of most species is not yet known.

Identification. The standard guide to British Solenogastres was within Jones & Baxter (1987), which includes six species that appeared to be identifiable using external features. They omitted some species likely for the area (e.g. Leloup, 1949; Salvini-Plawen, 1967; 1997). Other species have since been described or recorded from Europe (Salvini-Plawen, 1988, Scheltema, 1999; Scheltema & Schander, 2000), specifically: Iceland (Todt & Kocot, 2014), Norway (Handl & Büchiger, 1996; Handl & Salvini-Plawen, 2001; 2002), Atlantic France/Spain (Arnofsky, 2000; García-Álvarez *et al.*, 2000; 2001; García-Álvarez & Urgorri, 2001; García-Álvarez & Salvini-Plawen, 2001; Handl, 2002; Salvini-Plawen, 2006; 2008; Zamarro et al., 2013), British Isles (Caudwell et al., 1995; Eisenhut & Salvini-Plawen, 2006; Salvini-Plawen, 2009); however, Handl & Salvini-Plawen (2001) synonymized one of the species described by Caudwell et al. (1995). Many, but not all, of the new species were described from below shelf depths. García-Álvarez & Salvini-Plawen (2007) provided keys and diagnoses for all families, with notes on all species known at the time, globally. Iberian species were reviewed by García-Álvarez et al. (2014) but others have been described since (Zamarro et al., 2015; 2019; Pedrouzo et al., 2014; 2022) and from nearby areas (Cobo & Kocot, 2020).

Recording history: Many laboratories have left Solenogastres at class. APEM identify certain easily recognisable species and leave the remainder at class. Salvini-Plawen (1997) stated that identification of most Solenogastres requires serial sections (impractical for most labs). Scheltema & Schander (2000) gave greater emphasis to external morphology and hard parts but also relied on dissection for many identifications. No Solenogastres have yet been found in quantities to allow a species to be circulated in any NMBAQC ring test.

TDP. As there are many species that can only be distinguished by dissection and it is likely that there are many new records and undescribed species to be found in British waters, it is reasonable that most are left at Class. The draft TDP has selected three relatively distinctive genera for species level discrimination: *Neomenia*, *Nematomenia* and *Eleutheromenia*. It is likely that this will be revised if the

taxonomy of the local species settles enough to allow external morphology to become reliable for greater discrimination of more taxa. None grow large enough for juvenile separation to be needed.

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