



NMQC
The National Marine Biological Analytical Quality Control Scheme

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Ring Test Bulletin – RTB#47

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RING TEST DETAILS

Ring Test #47

Type/Contents – General

Circulated – 16/09/2014

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Number of Subscribing Laboratories – 21

Number of Participating Laboratories – 20

Number of Results Received – 20*

*including any multiple data entries per laboratory

Summary of differences

Specimen	Genus	Species	Total differences for 20 returns	
			Genus	Species
RT4701	<i>Loimia</i>	<i>medusa</i>	13	13
RT4702	<i>Nucula</i>	<i>nucleus</i>	0	5
RT4703	<i>Tanaissus</i>	<i>danica</i>	9	15
RT4704	<i>Cymodoce</i>	<i>truncata</i>	9	10
RT4705	<i>Urothoe</i>	<i>elegans</i>	0	5
RT4706	<i>Nephtys</i>	<i>homborgii</i>	0	3
RT4707	<i>Turritella</i>	<i>communis</i>	0	0
RT4708	<i>Ophiocten</i>	<i>affinis</i>	12	12
RT4709	<i>Gibbomodiola</i>	<i>adriatica</i>	3	3
RT4710	<i>Spirobranchus</i>	<i>lamarcki</i>	0	1
RT4711	<i>Protodriloides</i>	<i>chaetifer</i>	5	5
RT4712	<i>Sabellaria</i>	<i>alveolata</i>	0	0
RT4713	<i>Goodallia</i>	<i>triangularis</i>	0	0
RT4714	<i>Apseudopsis</i>	<i>latreillii</i>	1	1
RT4715	<i>Pista</i>	<i>mediterranea</i>	2	14
RT4716	<i>Kurtiella</i>	<i>bidentata</i>	2	2
RT4717	<i>Pontocrates</i>	<i>arenarius</i>	2	4
RT4718	<i>Phyllodoce</i>	<i>groenlandica</i>	0	10
RT4719	<i>Abra</i>	<i>nitida</i>	0	11
RT4720	<i>Lumbrineris</i>	<i>aniara/cingulata</i>	5	6
RT4721	<i>Glycera</i>	<i>lapidum</i>	4	6
RT4722	<i>Melinna</i>	<i>elisabethae</i>	0	5
RT4723	<i>Photis</i>	<i>longicaudata</i>	0	0
RT4724	<i>Paramphinome</i>	<i>jeffreysii</i>	0	0
RT4725	<i>Musculus</i>	<i>subpictus</i>	0	2
Total differences			67	133
Average differences /lab.			3.4	6.7

Table 1. The identification of fauna made by participating laboratories for RT47 (arranged by specimen). Names are given only where different from the AQC identification.

	RT4701	RT4702	RT4703	RT4704	RT4705	RT4706
Taxon	<i>Loimia medusa</i>	<i>Nucula nucleus</i>	<i>Tanaissus danica</i>	<i>Cymodoce truncata</i>	<i>Urothoe elegans</i>	<i>Nephtys hombergii</i>
BI_2101	--	--	--	--	--	--
BI_2102	Lanice conchilega	- sulcata	Tanaopsis graciloides	Lekanesphaera rugicauda	- brevicornis	--
BI_2103	Lanice conchilega	--	Akanthophoreus gracilis	--	--	[Turritella] [communis]
BI_2104	Lanice conchilega	- nitidosa	- lilljeborgi	--	--	--
BI_2105	[Loima] -	--	Typhlotanais microcheles	Dynamene bidentata	--	--
BI_2107	--	--	- lilljeborgi	--	--	--
BI_2108	--	--	--	--	--	--
BI_2109	--	--	Typhlotanais brevicornis	--	--	--
BI_2110	Terebellida spp.	--	Pseudoparatanais batei	Lekanesphaera rugicauda	--	--
BI_2111	Eupolymnia nesidensis	--	- lilljeborgi	Dynamene bidentata	- brevicornis	--
BI_2112	--	--	--	--	--	- [hombergi]
BI_2113	Axionice maculata	--	Tanaopsis graciloides	Sphaeroma serratum	- marina	--
BI_2114	Nicolea venustula	Ondina diaphana	--	--	--	--
BI_2115	Lanice conchilega	--	- lilljeborgi	Dynamene bidentata	--	- kersivalensis
BI_2116	Pista cristata	- hanleyi	Tanaopsis graciloides	--	--	--
BI_2117	--	--	- lilljeborgi	- tattersalli	--	--
BI_2118	Pista elongata	--	--	Dynamene bidentata	--	- cirrosa
BI_2119	Paramphitrite birulai	--	- lilljeborgi	Lekanesphaera hookeri	- brevicornis	--
BI_2120	Pista elongata	- hanleyi	Heterotanais oerstedii	Lekanesphaera weilli	--	- kersivalensis
BI_2129	Eupolymnia nesidensis	--	--	--	--	--

Table 1. The identification of fauna made by participating laboratories for RT47 (arranged by specimen). Names are given only where different from the AQC identification.

	RT4707	RT4708	RT4709	RT4710	RT4711
Taxon	<i>Turritella communis</i>	<i>Ophiocten affinis</i>	<i>Gibbomodiola adriatica</i>	<i>Spirobranchus lamarcki</i>	<i>Protodriloides chaetifer</i>
BI_2101	--	--	--	--	--
BI_2102	--	Amphiuridae -	[Modiolus] [adriaticus]	--	Tubificid -
BI_2103	[Nephtys] [hombergii]	Ophiura robusta	--	--	--
BI_2104	--	Ophiocomina nigra	--	--	--
BI_2105	--	Amphipholis squamata	Modiolus modiolus	--	--
BI_2107	--	--	--	--	--
BI_2108	--	--	--	--	--
BI_2109	--	- [affinus]	--	--	--
BI_2110	--	--	Modiolus modiolus	- [lamarckii]	Polygordius spp.
BI_2111	--	Ophiura albida	Modiolus modiolus	--	--
BI_2112	--	--	--	--	--
BI_2113	--	Amphipholis squamata	[Modiolus] [adriaticus]	--	Clitellio arenarius
BI_2114	--	Malacoceros fuliginosus	--	[Modiolarca] [tumida]	--
BI_2115	--	Ophiocomina nigra	[Modiolus] [adriaticus]	[Pomatoceros] triquetter	Protodrilus sp.
BI_2116	--	Ophiocomina nigra	--	--	--
BI_2117	--	--	--	[Pomatoceros] [lamarckii]	Limnodriloides sp.
BI_2118	--	Amphipholis squamata	--	--	--
BI_2119	--	Ophiura albida	--	--	--
BI_2120	--	Amphiuridae species (juvenile)	--	--	--
BI_2129	--	- [affinis] juv.]	- [adriaticus]	--	--

Table 1. The identification of fauna made by participating laboratories for RT47 (arranged by specimen). Names are given only where different from the AQC identification.

	RT4712	RT4713	RT4714	RT4715	RT4716
Taxon	<i>Sabellaria alveolata</i>	<i>Goodallia triangularis</i>	<i>Apseudopsis latreillii</i>	<i>Pista mediterranea</i>	<i>Kurtiella bidentata</i>
BI_2101	--	--	--	--	--
BI_2102	--	--	--	Terebellinae -	Tellimya ferruginosa
BI_2103	--	--	--	- cristata	--
BI_2104	--	--	--	Pistella lornensis	--
BI_2105	--	--	--	- [malmgreni]	--
BI_2107	--	--	--	- cristata	--
BI_2108	--	--	--	- cristata	--
BI_2109	--	--	--	- cristata	--
BI_2110	[Sabbellaria] -	--	--	- [cristata]	--
BI_2111	--	--	--	- lornensis	--
BI_2112	--	--	--	--	--
BI_2113	--	[Goodiallia] -	--	- cristata	--
BI_2114	--	- hanleyi	--	--	--
BI_2115	--	[Goodalia] -	--	- lornensis	Ennucula tenuis
BI_2116	--	--	--	- cristata	--
BI_2117	--	--	--	--	--
BI_2118	--	--	- [latreilii]	- lornensis	--
BI_2119	--	--	--	- cristata	--
BI_2120	--	--	--	- elongata	- [bidentata (juvenile)]
BI_2129	--	--	--	--	--

Table 1. The identification of fauna made by participating laboratories for RT47 (arranged by specimen). Names are given only where different from the AQC identification.

	RT4717	RT4718	RT4719	RT4720	RT4721
Taxon	<i>Pontocrates arenarius</i>	<i>Phyllodoce groenlandica</i>	<i>Abra nitida</i>	<i>Lumbrineris aniara/cingulata</i>	<i>Glycera lapidum</i>
BI_2101	--	--	- alba	- [cingulata]	--
BI_2102	Phoxocephalus holbolli	- rosea	- alba	Scoletoma funchalensis	Glycerid -
BI_2103	- altamarinus	--	--	- [aniara]	--
BI_2104	--	- rosea	--	Abyssoninoe hibernica	Goniadella bobretzkii
BI_2105	- arcticus	--	--	- [nr. cingulata]	--
BI_2107	--	--	- alba	- [nr. cingulata]	--
BI_2108	--	--	- alba	- [near cingulata]	- [lapidum agg.]
BI_2109	--	--	- alba	- [near cingulata]	--
BI_2110	--	- rosea	- alba	- [cingulata]	Glycinde nordmanni
BI_2111	--	- rosea	- alba	--	- [lapidum (agg.)]
BI_2112	--	--	--	- [cingulata]	--
BI_2113	--	- rosea	- alba	- [cingulata / aniara complex]	- [lapidum complex]
BI_2114	--	- laubieri	- chevreuxi	--	--
BI_2115	--	- rosea	--	Hilbigneris gracilis	Glycinde nordmanni
BI_2116	--	--	--	- [aniara]	--
BI_2117	--	--	- tenuis	- [aniara]	--
BI_2118	--	- mucosa	--	Cenogenus brevipes	- alba
BI_2119	--	- rosea	- alba	- [near cingulata]	--
BI_2120	Urothoe marina	- longipes	- alba	- latreilli	- oxycephala
BI_2129	--	--	--	- [cingulata]	--

Table 1. The identification of fauna made by participating laboratories for RT47 (arranged by specimen). Names are given only where different from the AQC identification.

	RT4722	RT4723	RT4724	RT4725
Taxon	<i>Melinna elisabethae</i>	<i>Photis longicaudata</i>	<i>Paramphinome jeffreysii</i>	<i>Musculus subpictus</i>
BI_2101	--	--	--	--
BI_2102	--	--	--	[Modiolarca] [tumida]
BI_2103	--	--	--	--
BI_2104	--	--	--	--
BI_2105	- cristata	--	--	--
BI_2107	--	--	--	--
BI_2108	--	--	--	--
BI_2109	--	--	--	--
BI_2110	--	--	--	- discors
BI_2111	- cristata	--	--	--
BI_2112	--	--	--	--
BI_2113	--	--	--	[Modiolarca] [tumida]
BI_2114	Psamathe fusca	--	--	--
BI_2115	--	--	--	--
BI_2116	--	--	--	--
BI_2117	--	--	--	--
BI_2118	--	--	--	--
BI_2119	- palmata	--	--	- discors
BI_2120	- palmata	--	--	--
BI_2129	--	--	--	--

Table 2. The identification of fauna made by participating laboratories for RT47 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2101	BI_2102	BI_2103	BI_2104	BI_2105	BI_2107
RT4101	<i>Loimia medusa</i>	--	Lanice conchilega	Lanice conchilega	Lanice conchilega	[Loima] -	--
RT4102	<i>Nucula nucleus</i>	--	- sulcata	--	- nitidosa	--	--
RT4103	<i>Tanaissus danica</i>	--	Tanaopsis graciloides	Akanthophoreus gracilis	- lilljeborgi	Typhlotanais microcheles	- lilljeborgi
RT4104	<i>Cymodoce truncata</i>	--	Lekanesphaera rugicauda	--	--	Dynamene bidentata	--
RT4105	<i>Urothoe elegans</i>	--	- brevicornis	--	--	--	--
RT4106	<i>Nephtys hombergii</i>	--	--	[Turritella] [communis]	--	--	--
RT4107	<i>Turritella communis</i>	--	--	[Nephtys] [hombergii]	--	--	--
RT4108	<i>Ophiocten affinis</i>	--	Amphiuridae -	Ophiura robusta	Ophiocomina nigra	Amphipholis squamata	--
RT4109	<i>Gibbomodiola adriatica</i>	--	[Modiolus] [adriaticus]	--	--	Modiolus modiolus	--
RT4110	<i>Spirobranchus lamarcki</i>	--	--	--	--	--	--
RT4111	<i>Protodriloides chaetifer</i>	--	Tubificid -	--	--	--	--
RT4112	<i>Sabellaria alveolata</i>	--	--	--	--	--	--
RT4113	<i>Goodallia triangularis</i>	--	--	--	--	--	--
RT4114	<i>Apseudopsis latreillii</i>	--	--	--	--	--	--
RT4115	<i>Pista mediterranea</i>	--	Terebellinae -	- cristata	Pistella lornensis	- [malmgreni]	- cristata
RT4116	<i>Kurtiella bidentata</i>	--	Tellimya ferruginosa	--	--	--	--
RT4117	<i>Pontocrates arenarius</i>	--	Phoxocephalus holbolli	- altamarinus	--	- arcticus	--
RT4118	<i>Phyllococe groenlandica</i>	--	- rosea	--	- rosea	--	--
RT4119	<i>Abra nitida</i>	- alba	- alba	--	--	--	- alba
RT4120	<i>Lumbrineris aniara/cingulata</i>	- [cingulata]	Scoletoma funchalensis	- [aniara]	Abyssoninoe hibernica	- [nr. cingulata]	- [nr. cingulata]
RT4121	<i>Glycera lapidum</i>	--	Glycerid -	--	Goniadella bobretzkii	--	--
RT4122	<i>Melinna elisabethae</i>	--	--	--	--	- cristata	--
RT4123	<i>Photis longicaudata</i>	--	--	--	--	--	--
RT4124	<i>Paramphinome jeffreysii</i>	--	--	--	--	--	--
RT4125	<i>Musculus subpictus</i>	--	[Modiolarca] [tumida]	--	--	--	--

Table 2. The identification of fauna made by participating laboratories for RT47 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2108	BI_2109	BI_2110	BI_2111	BI_2112
RT4101	<i>Loimia medusa</i>	--	--	Terebellida spp.	Eupolymnia nesidensis	--
RT4102	<i>Nucula nucleus</i>	--	--	--	--	--
RT4103	<i>Tanaissus danica</i>	--	Typhlotanais brevicornis	Pseudoparatanais batei	- lilljeborgi	--
RT4104	<i>Cymodoce truncata</i>	--	--	Lekanesphaera rugicauda	Dynamene bidentata	--
RT4105	<i>Urothoe elegans</i>	--	--	--	- brevicornis	--
RT4106	<i>Nephtys hombergii</i>	--	--	--	--	- [hombergi]
RT4107	<i>Turritella communis</i>	--	--	--	--	--
RT4108	<i>Ophiocten affinis</i>	--	- [affinus]	--	Ophiura albida	--
RT4109	<i>Gibbomodiola adriatica</i>	--	--	Modiolus modiolus	Modiolus modiolus	--
RT4110	<i>Spirobranchus lamarcki</i>	--	--	- [lamarckii]	--	--
RT4111	<i>Protodriloides chaetifer</i>	--	--	Polygordius spp.	--	--
RT4112	<i>Sabellaria alveolata</i>	--	--	[Sabellaria] -	--	--
RT4113	<i>Goodallia triangularis</i>	--	--	--	--	--
RT4114	<i>Apseudopsis latreillii</i>	--	--	--	--	--
RT4115	<i>Pista mediterranea</i>	- cristata	- cristata	- [cristata]	- lornensis	--
RT4116	<i>Kurtiella bidentata</i>	--	--	--	--	--
RT4117	<i>Pontocrates arenarius</i>	--	--	--	--	--
RT4118	<i>Phyllococe groenlandica</i>	--	--	- rosea	- rosea	--
RT4119	<i>Abra nitida</i>	- alba	- alba	- alba	- alba	--
RT4120	<i>Lumbrineris aniana/cingulata</i>	- [near cingulata]	- [near cingulata]	- [cingulata]	--	- [cingulata]
RT4121	<i>Glycera lapidum</i>	- [lapidum agg.]	--	Glycinde nordmanni	- [lapidum (agg.)]	--
RT4122	<i>Melinna elisabethae</i>	--	--	--	- cristata	--
RT4123	<i>Photis longicaudata</i>	--	--	--	--	--
RT4124	<i>Paramphinome jeffreysii</i>	--	--	--	--	--
RT4125	<i>Musculus subpictus</i>	--	--	- discors	--	--

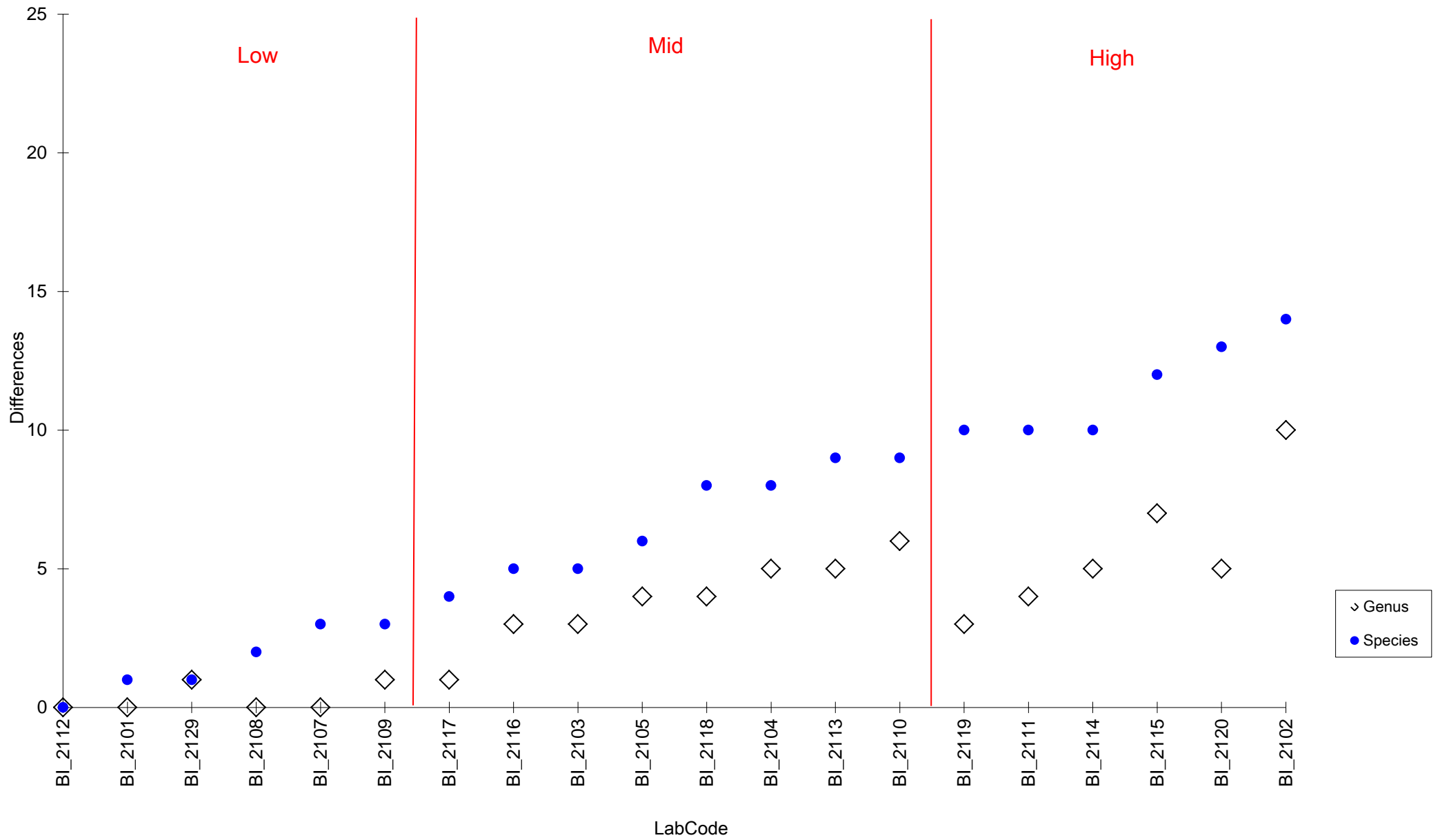
Table 2. The identification of fauna made by participating laboratories for RT47 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2113	BI_2114	BI_2115	BI_2116	BI_2117	BI_2118
RT4101	<i>Loimia medusa</i>	Axionice maculata	Nicolea venustula	Lanice conchilega	Pista cristata	--	Pista elongata
RT4102	<i>Nucula nucleus</i>	--	Ondina diaphana	--	- hanleyi	--	--
RT4103	<i>Tanaissus danica</i>	Tanaopsis graciloides	--	- lilljeborgi	Tanaopsis graciloides	- lilljeborgi	--
RT4104	<i>Cymodoce truncata</i>	Sphaeroma serratum	--	Dynamene bidentata	--	- tattersalli	Dynamene bidentata
RT4105	<i>Urothoe elegans</i>	- marina	--	--	--	--	--
RT4106	<i>Nephtys hombergii</i>	--	--	- kersivalensis	--	--	- cirrosa
RT4107	<i>Turritella communis</i>	--	--	--	--	--	--
RT4108	<i>Ophiocten affinis</i>	Amphipholis squamata	Malacoceros fuliginosus	Ophiocomina nigra	Ophiocomina nigra	--	Amphipholis squamata
RT4109	<i>Gibbomodiola adriatica</i>	[Modiolus] [adriaticus]	--	[Modiolus] [adriaticus]	--	--	--
RT4110	<i>Spirobranchus lamarcki</i>	--	[Modiolarca] [tumida]	[Pomatoceros] triqueter	--	[Pomatoceros] [lamarckii]	--
RT4111	<i>Protodriloides chaetifer</i>	Clitellio arenarius	--	Protodrilus sp.	--	Limnodriloides sp.	--
RT4112	<i>Sabellaria alveolata</i>	--	--	--	--	--	--
RT4113	<i>Goodallia triangularis</i>	[Goodallia] -	- hanleyi	[Goodalia] -	--	--	--
RT4114	<i>Apseudopsis latreillii</i>	--	--	--	--	--	- [latreilii]
RT4115	<i>Pista mediterranea</i>	- cristata	--	- lornensis	- cristata	--	- lornensis
RT4116	<i>Kurtiella bidentata</i>	--	--	Ennucula tenuis	--	--	--
RT4117	<i>Pontocrates arenarius</i>	--	--	--	--	--	--
RT4118	<i>Phyllococe groenlandica</i>	- rosea	- laubieri	- rosea	--	--	- mucosa
RT4119	<i>Abra nitida</i>	- alba	- chevreuxi	--	--	- tenuis	--
RT4120	<i>Lumbrineris aniara/cingulata</i>	- [cingulata / aniara complex]	--	Hilbigneris gracilis	- [aniara]	- [aniara]	Cenogenus brevipes
RT4121	<i>Glycera lapidum</i>	- [lapidum complex]	--	Glycinde nordmanni	--	--	- alba
RT4122	<i>Melinna elisabethae</i>	--	Psamathe fusca	--	--	--	--
RT4123	<i>Photis longicaudata</i>	--	--	--	--	--	--
RT4124	<i>Paramphinome jeffreysii</i>	--	--	--	--	--	--
RT4125	<i>Musculus subpictus</i>	[Modiolarca] [tumida]	--	--	--	--	--

Table 2. The identification of fauna made by participating laboratories for RT47 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2119	BI_2120	BI_2129
RT4101	<i>Loimia medusa</i>	Paramphitrite birulai	Pista elongata	Eupolymnia nesidensis
RT4102	<i>Nucula nucleus</i>	--	- hanleyi	--
RT4103	<i>Tanaissus danica</i>	- lilljeborgi	Heterotanis oerstedii	--
RT4104	<i>Cymodoce truncata</i>	Lekanesphaera hookeri	Lekanesphaera weilli	--
RT4105	<i>Urothoe elegans</i>	- brevicornis	--	--
RT4106	<i>Nephtys hombergii</i>	--	- kersivalensis	--
RT4107	<i>Turritella communis</i>	--	--	--
RT4108	<i>Ophiocten affinis</i>	Ophiura albida	Amphiuridae species (juvenile)	- [affinis juv.]
RT4109	<i>Gibbomodiola adriatica</i>	--	--	- [adriaticus]
RT4110	<i>Spirobranchus lamarcki</i>	--	--	--
RT4111	<i>Protodriloides chaetifer</i>	--	--	--
RT4112	<i>Sabellaria alveolata</i>	--	--	--
RT4113	<i>Goodallia triangularis</i>	--	--	--
RT4114	<i>Apseudopsis latreilli</i>	--	--	--
RT4115	<i>Pista mediterranea</i>	- cristata	- elongata	--
RT4116	<i>Kurtiella bidentata</i>	--	- [bidentata (juvenile)]	--
RT4117	<i>Pontocrates arenarius</i>	--	Urothoe marina	--
RT4118	<i>Phyllococe groenlandica</i>	- rosea	- longipes	--
RT4119	<i>Abra nitida</i>	- alba	- alba	--
RT4120	<i>Lumbrineris aniana/cingulata</i>	- [near cingulata]	- latreilli	- [cingulata]
RT4121	<i>Glycera lapidum</i>	--	- oxycephala	--
RT4122	<i>Melinna elisabethae</i>	- palmata	- palmata	--
RT4123	<i>Photis longicaudata</i>	--	--	--
RT4124	<i>Paramphinome jeffreysii</i>	--	--	--
RT4125	<i>Musculus subpictus</i>	- discors	--	--

Figure 1. The number of differences from the AQC identification of specimens distributed in RT47 for each of the participating laboratories. Arranged in order of increasing number of differences.



Specimen Images and Detailed Breakdown of Identifications

LabCodes are abbreviated in this report to exclude the Scheme year, *i.e.* BI_2101a = Lab 01a. An additional terminal character has been added within each LabCode (small case sequential letters) to permit multiple data entries from each laboratory, *i.e.* two participants from laboratory 01 would be coded as Lab 01a & Lab 01b. For details of your LabCode please contact your Scheme representative or APEM Ltd.

(Figure codes: A=anterior; P=posterior; L=lateral; D=dorsal; V=ventral)

RT4701 – *Loimia medusa* (Figure 1a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: Western Approaches. Condition: Fair, Small.



Fig. 1a. *Loimia medusa* (RT4701) – L



Fig. 1b. *Lanice conchilega* – DL

Thirteen generic and thirteen specific errors: Labs 02, 03, 04 and 15 identified as *Lanice conchilega* (Figure 1b) (which has avicular unicini); Labs 11 and 29 identified as *Eupolymnia nesidensis* (Figure 1c) (which has short lateral lobes); Lab 13 identified as *Axionice maculata* and Labs 18 and 20 identified as *Pista elongata*, both synonyms of *Pista maculata* (Figure 1d) used in Jirkov & Leontovich 2013 and both accepted by WORMS (which has one or two pairs of branchiae); Lab 14 identified as *Nicolea venustula* (Figure 1e) (which lacks lateral lobes and has only two pairs of branchiae); Lab 16 identified as *Pista cristata* (Figures 1f and 1g) (which has only one pair of branchiae); Lab 19 identified as *Paramphitrite birulai* (Figure 1h) (which has short lateral lobes and only two pairs of branchiae); Lab 10 identified as Terebellida spp. (identification to species is required for RT exercises; “spp.” indicates the presence of a mixture of species, only one specimen was provided).

Lab 05 incorrectly spelt the genus.



Fig. 1c. *Eupolymnia nesidensis* - L



Fig. 1d. *Pista maculata* - L



Fig. 1e. *Nicolea venustula* - L



Fig. 1f. *Pista cristata* - D



Fig. 1g. *Pista cristata* - L



Fig. 1h. *Paramphitrite birulai* - L

RT4702 – *Nucula nucleus* (Figure 2a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittotal (Upper Shelf). Geography: North of Ireland. Condition: Good, Small/Medium.

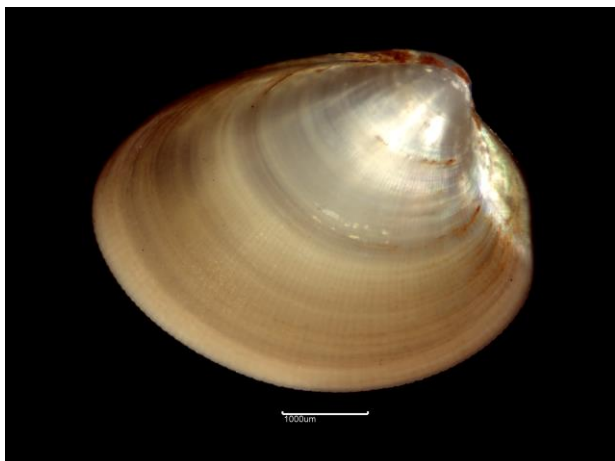


Fig. 2a. *Nucula nucleus* (RT4702) – L

No generic and five specific differences: Labs 04 and 14 identified as *Nucula nitidosa* (Figure 2b) (which is more triangular in shape and has a glossy texture); Labs 16 and 20 identified as *Nucula hanleyi* (which is more elongated in shape and often has radiating orange lines); Lab 02 identified as *Nucula sulcata* (Figure 2d) (which has strong concentric sculpture).



Fig. 2b. *Nucula nitidosa* – L



Fig. 2c. *Nucula hanleyi* – L



Fig. 2d. *Nucula sulcata* – L

RT4703 – *Tanaissus danica* (Figure 3a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: North Sea. Condition: Good, Medium (Female).



Fig. 3a. *Tanaissus danica* (RT4703) – L

Nine generic and fifteen specific differences: Labs 02, 13 and 16 identified as *Tanaopsis graciloides* (Figure 3b) (which has very short uropods); Labs 03 and 14 identified as *Akanthophoreus gracilis* (Figure 3c) (which has no bifid teeth on the fixed finger of the cheliped); Labs 04, 07, 11, 15, 17 and 19 identified as *Tanaissus lilljeborgi* (Figure 3d) (which has a longer pleon and lacks a bifid tooth on the fixed finger of the cheliped); Lab 05 identified as *Typhlotanais microcheles* (no material available), Lab 09 identified as *Typhlotanais brevicornis* (no image available) (in both of which the females have antennules with only three articles); Lab 10 identified as *Pseudoparatanais batei* (Figure 3e), Lab 20 identified as *Heterotanaiss oerstedii* (no material available) (both of which have eyes).



Fig. 3b. *Tanaopsis graciloides* - L



Fig. 3c. *Akanthophoreus gracilis* – L

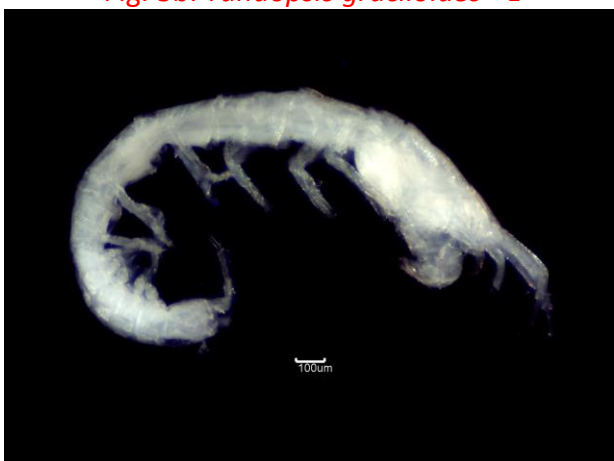


Fig. 3d. *Tanaissus lilljeborgi* – L



Fig. 3e. *Pseudoparatanais batei* – L

RT4704 – *Cymodoce truncata* (Figures 4a, 4b)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittotal (Upper Shelf). Geography: North of Ireland. Condition: Fair/Good, Small/Large.



Fig. 4a. *Cymodoce truncata* (RT4704) - L

Nine generic and ten specific differences: Labs 05, 11, 15 and 18 identified as *Dynamene bidentata* (Figure 4c) (which has a distinct semi-circular indentation on the posterior margin of the pleotelson); Labs 02 and 10 identified as *Lekanesphaera rugicauda* (Figures 4d, 4e), Lab 19 identified as *Lekanesphaera hookeri* (Figure 4f, 4g), Lab 13 identified as *Sphaeroma serratum* (Figure 4h) and Lab 20 identified as *Lekanesphaera weilli* (no material available) (all of which have an evenly rounded posterior border to the pleotelson); Lab 17 identified as *Cymodoce tattersalli* (no material available) (which has a smoothly convex pleotelson).



Fig. 4b. *Cymodoce truncata* (RT4704) - D



Fig. 4c. *Dynamene bidentata* - D



Fig. 4d. *Lekanospaera rugicauda* - L



Fig. 4e. *Lekanospaera rugicauda* - D



Fig. 4f. *Lekanospaera hookeri* - L



Fig. 4g. *Lekanospaera hookeri* - D



Fig. 4h. *Sphaeroma serratum* - D

RT4705 – *Urothoe elegans* (Figure 5a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Intertidal. Geography: Southwest England. Condition: Fair, Small.



Fig. 5a. *Urothoe elegans* (RT4705) – L

No generic and five specific differences: Labs 02, 11, 14 and 19 identified as *Urothoe brevicornis* (Figure 5b) (which has a longer accessory flagellum and the carpus of pereopod 5 is broader than long); Lab 13 identified as *U. marina* (Figure 5c) (which has strongly curved rami on uropod 1).



Fig. 5b. *Urothoe brevicornis* – L



Fig. 5c. *Urothoe marina* – L

RT4706 – *Nephtys hombergii* (Figure 6a)

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Good, Medium.



Fig. 6a. *Nephtys hombergii* (RT4706) – L

No generic and three specific differences: Labs 15 and 20 identified as *Nephtys kersivalensis* (Figure 6b) (which has a conical acicular lobe); Lab 18 identified as *N. cirrosa* (Figure 6c) (which has posterior segments with gills and interramal cirri of equal length and rounded acicular lobes).

Lab 12 incorrectly spelt the species.



Fig. 6b. *Nephtys kersivalensis* – AL



Fig. 6c. *Nephtys cirrosa* – AL

RT4707 – *Turritella communis* (Figure 7)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Fair, Medium.



Fig. 7. *Turritella communis* (RT4707) – L

No generic and no specific differences.

RT4708 – *Ophiocten affinis* (Figure 8a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: North Sea. Condition: Fair, Small (Juvenile).

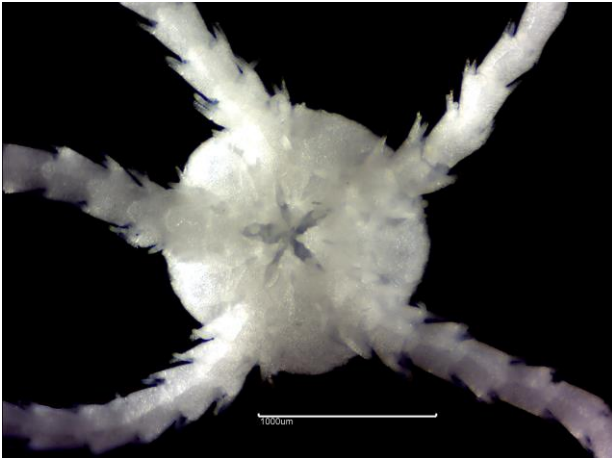


Fig. 8a. *Ophiocten affinis* (RT4708) – V

Twelve generic and twelve specific differences: Lab 03 identified as *Ophiura robusta* (no material available), Labs 11 and 19 identified as *Ophiura albida* (Figure 8b) (both of which have the second tentacle pore opening into the corner of the mouth slit); Labs 04, 15 and 16 identified as *Ophiocomina nigra* (Figure 8c) and labs 05, 13, 14 and 18 identified as *Amphipholis squamata* (Figure 8e) (both of which lack arm combs). Labs 02 and 20 identified as Amphiuridae species (identification to species is required for RT exercises).

Lab 09 incorrectly spelt the species.

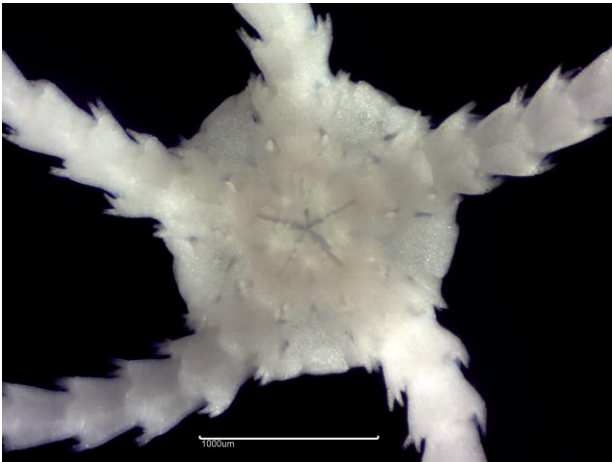


Fig. 8b. *Ophiura albida* – V

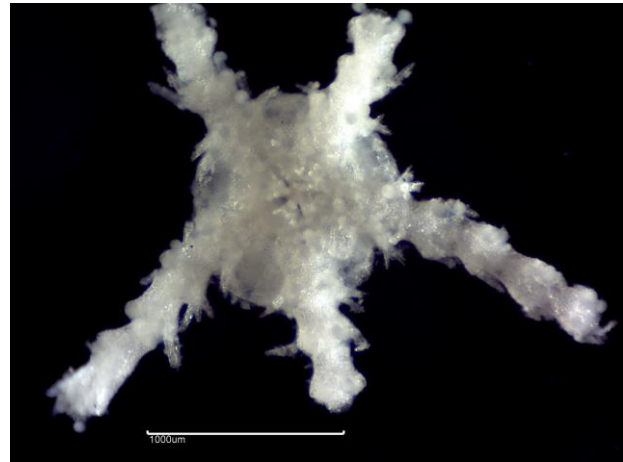


Fig. 8c. *Ophiocomina nigra* – V



Fig. 8d. *Amphipholis squamata* – V

RT4709 – *Gibbomodiola adriatica* (Figure 9a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southwest England. Condition: Good, Medium.



Fig. 9a. *Gibbomodiola adriatica* (RT4709) – L



Fig. 9b. *Modiolus modiolus* – L

Three generic and three specific differences: Labs 05, 10 and 11 identified as *Modiolus modiolus* (Figure 9b) (which has periostracal spines at the size given and lacks colour pattern).

Labs 02, 13 and 15 recorded the synonym *Modiolus adriaticus* and lab 29 used the synonym *Gibbomodiola adriaticus*.

RT4710 – *Spirobranchus lamarcki* (Figure 10a)

Substratum: Hard. Salinity: Full (Euhaline). Depth: Intertidal. Geography: Southwest England. Condition: Good, Small.



Fig. 10a. *Spirobranchus lamarcki* (RT4710) – L

No generic and one specific difference: Lab 15 identified as *Spirobranchus triqueter* (Figure 10b) (which has a shallow opercular ampulla).

Lab 10 incorrectly spelt the species.

Lab 15 recorded the synonym *Pomatoceros* for *Spirobranchus triqueter* and Lab 17 recorded the synonym *Pomatoceros lamarckii*.

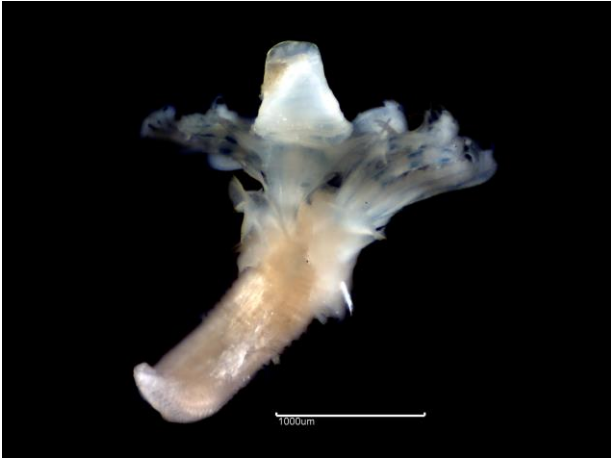


Fig. 10b. *Spirobranchus triqueter* – L

RT4711 – Protodriloides chaetifer (Figure 11a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, Medium.



Fig. 11a. *Protodriloides chaetifer* (RT4711) – L

Five generic and five specific differences: Lab 10 identified as *Polygorgius* spp. (Figure 11b) (which lacks chaetae and has an iridescent body surface; “spp.” indicates the presence of a mixture of species, only one specimen was provided); Lab 13 identified as the oligochaete *Clitellio arenarius* (Figure 11c) (which lacks prostomial appendages/tentacles); Lab 15 identified as *Protodrilus* sp. (Figure 11d) (which lacks chaetae); Lab 17 identified as the oligochaete *Limnodriloides* sp. (Figure 11e), Lab 02 identified as the oligochaete family Tubificidae (Figures 11c and 11e show members of Tubificidae) (both of which lack prostomial appendages/tentacles; identification to species is required for RT exercises).



Fig. 11b. *Polygorgius* sp. – L



Fig. 11c. *Clitellio arenarius* – L



Fig. 11d. *Protodrilus* sp. – L



Fig. 11e. *Limnodriloides* sp. – L

RT4712 – Sabellaria alveolata (Figure 12)

Substratum: Hard. Salinity: Full (Euhaline). Depth: Intertidal. Geography: Southwest England. Condition: Good, Medium (male).



Fig. 12. *Sabellaria alveolata* (RT4712) – D

No generic and no specific differences.

Lab 10 incorrectly spelt the genus.

RT4713 – Goodallia triangularis (Figure 13)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Western France. Condition: Good, Small/Medium.



Fig. 13. *Goodallia triangularis* (RT4713) – L

No generic and no specific differences.

Labs 13 and 15 incorrectly spelt the genus.

RT4714 – *Apseudopsis latreillii* (Figure 14a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, Medium (Female).



Fig. 14a. *Apseudopsis latreillii* (RT4714) – L



Fig. 14b. *Apseudes talpa* – DL

One generic and one specific difference: Lab 14 identified as *Apseudes talpa* (Figure 14b) (which has a broadly triangular rostrum).

Lab 18 incorrectly spelt the species.

RT4715 – *Pista mediterranea* (Figure 15a & 15b)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Fair, Large.



Fig. 15a. *Pista mediterranea* (RT4715) – L

Two generic and fifteen specific differences: Labs 03, 07, 08, 09, 13, 14, 16 and 19 identified as *Pista cristata* (Figure 1f and 1g) (with no literature, or Jirkov & Leontovich 2013 cited), Lab 04 identified as *Pistella lornensis* and labs 11, 15, 18 identified as *Pista lornensis*, both synonyms of *P. cristata*. *Pista lornensis*, *Pistella lornensis* and *Pista cristata* are all valid names on WoRMS but, according to Jirkov & Leontovich (2013), *P. cristata* is the correct name for the species with only 1 pair of branchiae); Lab 20 identified as *P. elongata*, a



Fig. 15b. *Pista mediterranea* (RT4715) – AL

synonym of *P. maculata* (Figure 1d) (which has dichotomous branchiae); Lab 02 identified as Terebellinae (identification to species is required for RT exercises).

Lab 05 recorded the synonym *P. malmgreni*.

Lab 10 identified as *Pista cristata*, stating that they used was a combination of Holthe (1986) and the Marine Species Identification Portal (in which the descriptions given for *P. cristata* referable to *P. mediterranea* of Jirkov & Leontovich, 2013); for the purpose of this exercise they have been marked as correct.

RT4716 – Kurtiella bidentata (Figure 16a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Good, Small.



Fig. 16a. *Kurtiella bidentata* (RT4716) – L

Two generic and two specific differences: Lab 15 identified as *Ennucula tenuis* (Figure 16b) (which is tumid and glossy, with a more rounded outline); Lab 02 identified as *Tellimya ferruginosa* (Figure 16c) (which is more elongate anteriorly).



Fig. 16b. *Ennucula tenuis* – L

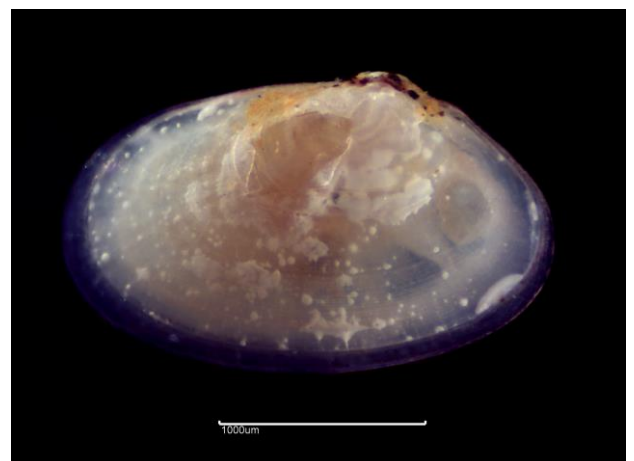


Fig. 16c. *Tellimya ferruginosa* – L

RT4717 – *Pontocrates arenarius* (Figure 17a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Intertidal. Geography: Southwest England. Condition: Good, Small/Large (Female).



Fig. 17a. *Pontocrates arenarius* (RT4717) – L

Two generic and four specific differences: Lab 02 identified as *Phoxocephalus holbolli* (no material available) (which has a large rostral hood); Lab 03 identified as *P. altamarinus* (Figure 17b) (which has a strongly oblique palm on gnathopod 1); Lab 05 identified as *P. arcticus* (Figure 17c) (which has an elongated, downturned rostrum); Lab 20 identified as *Urothoe marina* (Figure 5c) (which has a very small rostrum and distinct curved rami on uropod 1).



Fig. 17b. *Pontocrates altamarinus* – L



Fig. 17c. *Pontocrates arcticus* – L

RT4718 – *Phyllodoce groenlandica* (Figure 18a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: North Sea. Condition: Good, Small.



Fig. 18a. *Phyllodoce groenlandica* (RT4718) – D

No generic and ten specific differences: Labs 02, 04, 10, 11, 13, 14, 15 and 19 identified as *Phyllodoce rosea* (Figure 18b) (which has slender, elongated ventral cirri); Lab 18 identified as *P. mucosa* (Figure 18c) (which has rounded ventral cirri); Lab 20 identified as *P. longipes* (Figure 18d) (which has asymmetric parapodia).



Fig. 18b. *Phyllodoce rosea* – D



Fig. 18c. *Phyllodoce mucosa* – D



Fig. 18d. *Phyllodoce longipes* – D

RT4719 – *Abra nitida* (Figure 19a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Poor, Medium.

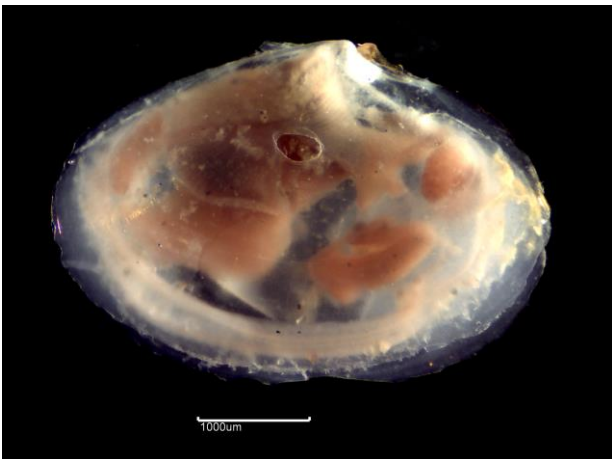


Fig. 19a. *Abra nitida* (RT4719) – L

No generic and eleven specific differences: Labs 01, 02, 07, 08, 09, 10, 11, 13, 19 and 20 identified as *Abra alba* (Figure 19b) (which is less elongated in shape and has more posteriorly placed umbones); Lab 17 identified as *A. tenuis* (Figure 19c) (which has a triangular shape, with a truncated posterior margin).



Fig. 19b. *Abra alba* – L



Fig. 19c. *Abra tenuis* – L

RT4720 – *Lumbrineris aniara* / *cingulata* (Figure 20a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Northeast England. Condition: Fair, Medium.



Fig. 20a. *Lumbrineris aniara* / *cingulata* (RT4720) – DL

Five generic and six specific differences: Lab 02 identified as *Scoletoma funchalensis* (no material available), Lab 04 identified as *Abyssoninoe hibernica* (Figure 20b), Lab 18 identified as *Cenogenus brevipes* (Figure 20c) (all of which have only simple unjointed hooded hooks); Labs 14 and 15 identified as *Hilbigneris gracilis* (no material available) (which is a Mediterranean species, with a wide connecting ligament between maxilla 1 and 2); Lab 20 identified as *Lumbrineris latreilli* (Figure 20d) (which has more elongate blades to the compound hooded hooks and bidentate maxillae 3).



Fig. 20b. *Abyssoninoe hibernica* – DL

Any variation of *Lumbrineris aniara*, *L. cingulata*, or *L. aniara/cingulata* was accepted as correct.



Fig. 20c. *Cenogenus* sp. – D



Fig. 20d. *Lumbrineris latreilli* – D

RT4721 – *Glycera lapidum* (Figure 21a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, Small.

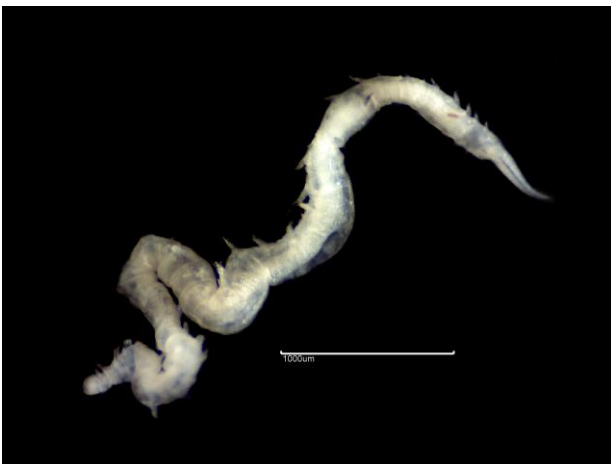


Fig. 21a. *Glycera lapidum* (RT4721) – L

Four generic and six specific differences: Labs 10 and 15 identified as *Glycinde nordmanni* (Figure 21b) (which has spinigerous blades on the neurochaete); Lab 18 identified as *Glycera alba* (Figure 21c) (which has two postchaetal lamellae); Lab 20 identified as *G. oxycephala* (Figure 21d) (which has a longer prostomium and the noto- and neuropodial lamellae rounded and of the same length in most specimens); Lab 04 identified as *Goniadella bobretzkii* (no material available; *G. gracilis* shown in Figure 21e) (which has proboscideal chevrons); Lab 02 identified as Glyceridae (identification to species is required for RT exercises).



Fig. 21b. *Glycinde nordmanni* – L



Fig. 21c. *Glycera alba* – L



Fig. 21d. *Glycera oxycephala* – L



Fig. 21e. *Goniadella gracilis* – L

RT4722 – *Melinna elisabethae* (Figure 22a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: Irish Sea. Condition: Fair, Medium.



Fig. 22a. *Melinna elisabethae* (RT4722) – L



Fig. 22b. *Melinna palmata* – L

No generic and five specific differences: Lab 05, 11 and 14 identified as *Melinna cristata* (no material available) (which has weakly curved dorsal hooks); Labs 19 and 20 identified as *M. palmata* (Figure 22b) (which has weakly curved dorsal hooks and only three anterior segments with minute acicular chaetae).

RT4723 – *Photis longicaudata* (Figure 23)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Fair/Good, Large.



Fig. 23. *Photis longicaudata* (RT4723) – L

No generic and no specific differences.

RT4724 – *Paramphinome jeffreysii* (Figure 24)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: North Sea. Condition: Good, Small.



Fig. 24. *Paramphinome jeffreysii* (RT4724) – L

No generic and no specific differences.

RT4725 – *Musculus subpictus* (Figure 25a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Good, Medium.



No generic and two specific differences; Labs 10 and 19 identified as *Musculus discors* (Figure 25b) (which is ovoid, rather than rhomboidal, in shape).

Labs 02 and 13 recorded the synonym *Modiolarca tumida*.

Fig. 25a. *Musculus subpictus* (RT4725) – L



Fig. 25b. *Musculus discors* – L

References

Bird, G.J., 2002. A re-evaluation of the genus *Tanaissus* (Crustacea, Tanaidacea) in British and adjacent waters. *Sarsia*, 87, 152-166.

Boxshall, G.A. et al., 2015. *World Register of Marine Species*. [online]. Available at <<http://www.marinespecies.org>> [Accessed 6 January 2015].

Dnestrovskaya, N. Yu. & Jirkov, I.A., 2012. Identification key for Nephtyidae (Polychaeta) of the Eastern Atlantic and the North Polar Basin. *Invertebrate Zoology* 9(2), 143-150.

Dumay, D., 1972a. Révision systématique du genre *Cymodoce* (Isopoda Flabellifera). I. Introduction et description de deux espèces: *Cymodoce truncata* (Montagu) et *C. (truncata) pilosa* Milne Edwards. *Tethys*, 3(3), 638-654.

Dumay, D., 1972) Révision systématique du genre *Cymodoce* (Isopoda Flabellifera). IV. Description de *C. tattersalli* Torelli, *C. rubropunctata* (Grube), *C. tuberculata* Costa. Clef systématique et conclusion générale. *Tethys*, 4(2), 457-480.

Holdich, D.M. & Jones, J.A., 1983. *Synopses of the British Fauna (New Series) No. 27. Tanaids*. Cambridge: Cambridge University Press.

Holthe, T., 1986. *Marine Invertebrates of Scandinavia. Number 7. Polychaeta Terebellomorpha*. Norway: Norwegian University Press.

Jirkov I.A. & Leontovich, M.K., 2013. Identification keys for Terebellomorpha (Polychaeta) of the eastern Atlantic and the North Polar Basin. *Invertebrate Zoology*, 10(2), 217-243.

Khalaji-Pirbalouty, V., Bruce, N.L. & Wägele, J.-W., 2013. The genus *Cymodoce* Leach, 1814 (Crustacea: Isopoda: Sphaeromatidae) in the Persian Gulf with description of a new species. *Zootaxa*, 3686, 501-533.

Lincoln, R.J., 1979. *British Marine Amphipoda: Gammaridea*. London: British Museum (Natural History).

Moore, P.G. & Beare, D.J., 1993. 'Taxonomic confusion in the genus *Pontocrates* (Crustacea: Amphipoda) and the presence of *P. arcticus* in Britain.' *Journal of the Marine Biological Association*, 73, 609-615.

Naylor, E., 1972. *Synopses of the British Fauna (New Series) No. 3. British Marine Isopods*. London: Academic Press.

O'Connor, B., 2006. Key to the Glyceridae and Goniadidae. Prepared for: *NMBAQC Workshop 2006, Dove Marine Laboratory, Cullercoats, Tynemouth*.

Oliver, P.G., Holmes, A.M., Killeen, I.J. & Turner, J.A., 2010. *Marine Bivalve Shells of the British Isles* (Mollusca: Bivalvia). *Amgueddfa Cymru - National Museum Wales*. [online]. Available at <<http://naturalhistory.museumwales.ac.uk/britishbivalves/home.php?>> [Accessed 6 January 2015].

Omer-Cooper, J. & Rawson, J.H., 1934. Notes on the British Sphaeromatidae (Crustacea Isopoda). *Dove Marine Laboratory Report, Cullercoats (series 3)*, 2, 22-58.

Oug, E., 2012. Guide to identification of Lumbrineridae (Polychaeta) in north east Atlantic waters. Version 3.1. Prepared for: *NMBAQC Workshop 2010, Dove Marine Laboratory, Cullercoats, Tynemouth*.

Pleijel, F. & Dales, R.P., 1991. *Synopses of the British Fauna (New Series) No. 45 Polychaetes: British Phyllodochoideans, Typhloscolecoideans and Tomopteroideans*. The Netherlands: Universal Book Service/ Dr. W. Backhuys.

Southward, E.C. & Campbell, A.C., 2006. *Synopses of the British Fauna (New Series) No. 56. Echinoderms*. Shrewsbury: Field Studies Council.

Tattersall, W.M., 1905. The marine fauna of the coast of Ireland. Part 5. Isopoda. *Scientific Investigations for 1904, Fisheries Branch, Ireland*, 2, 1-90.

Torelli, B., 1930. Sferomidi del Golfo di Napoli. *Pubblicazioni della Stazione Zoologica di Napoli*, 10, 297-343.

Westheide, W., 2008. *Synopses of the British Fauna (New Series) No. 44. Polychaetes: Interstitial Families*. 2nd Ed. Shrewsbury: Field Studies Council.

Worsfold, T.M., 2007. Identification guides for the NMBAQC Scheme: 2. Goniadidae, with notes on Glyceridae (Polychaeta) from shallow seas around the British Isles. *Porcupine Marine Natural History Society Newsletter*, 22, 19-23.

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<i>Abyssoninoe hibernica</i>	20b
<i>Akanthophoreus gracilis</i>	3c
<i>Amphipholis squamata</i>	8d
<i>Apseudes talpa</i>	14b
<i>Apseudopsis latreillii</i>	14a
<i>Cenogenus sp.</i>	20c
<i>Clitellio arenarius</i>	11c
<i>Cymodoce truncata</i>	4a, 4b
<i>Dynamene bidentata</i>	4c
<i>Ennucula tenuis</i>	16b
<i>Eupolymnia nesidensis</i>	1c
<i>Gibbomodiola adriatica</i>	9a
<i>Glycera alba</i>	21c
<i>Glycera lapidum</i>	21a
<i>Glycera oxycephala</i>	21d
<i>Glycinde normanni</i>	21b
<i>Glycinde normanni</i>	21b
<i>Goniadella gracilis</i>	21e
<i>Kurtiella bidentata</i>	16a
<i>Lanice conchilega</i>	1b
<i>Lekanesphaera hookeri</i>	4f, 4g

<i>Lekanesphaera rugicauda</i>	4d, 4e
<i>Limnodriloides</i> sp.....	11e
<i>Loimia medusa</i>	1a
<i>Lumbrineris aniara / cingulata</i>	20a
<i>Lumbrineris latreilli</i>	20d
<i>Melinna elisabethae</i>	22a
<i>Melinna palmata</i>	22b
<i>Modiolus modiolus</i>	9b
<i>Musculus discors</i>	25b
<i>Musculus subpictus</i>	25a
<i>Nephtys cirrosa</i>	6c
<i>Nephtys hombergii</i>	6a
<i>Nephtys kersivalensis</i>	6b
<i>Nicolea venustula</i>	1e
<i>Nucula hanleyi</i>	2c
<i>Nucula nitidosa</i>	2b
<i>Nucula nucleus</i>	2a
<i>Nucula sulcata</i>	2d
<i>Ophiocomina nigra</i>	8c
<i>Ophiocten affinis</i>	8a
<i>Ophiura albida</i>	8b
<i>Paramphinome jeffreysii</i>	24
<i>Paramphitrite birulai</i>	1h
<i>Photis longicaudata</i>	23
<i>Phyllodoce groenlandica</i>	18a
<i>Phyllodoce longipes</i>	18d
<i>Phyllodoce mucosa</i>	18c
<i>Phyllodoce rosea</i>	18b
<i>Pista cristata</i>	1f & 1g
<i>Pista maculata</i>	1d
<i>Pista mediterranea</i>	15a & 15b
<i>Polygordius</i> sp.	11b
<i>Pontocrates altamarinus</i>	17b
<i>Pontocrates arcticus</i>	17c
<i>Pontocrates arenarius</i>	17a
<i>Protodriloides chaetifer</i>	11a

<i>Protodrilus sp.</i>	11d
<i>Pseudoparatanais batei</i>	3e
<i>Sabellaria alveolata</i>	12
<i>Sphaeroma serratum</i>	4h
<i>Spirobranchus lamarcki</i>	10a
<i>Spirobranchus triqueter</i>	10b
<i>Tanaissus danica</i>	3a
<i>Tanaissus lilljeborgi</i>	3d
<i>Tanaopsis graciloides</i>	3b
<i>Tellimya ferruginosa</i>	16c
<i>Turritella communis</i>	7
<i>Urothoe brevicornis</i>	5b
<i>Urothoe elegans</i>	5a
<i>Urothoe marina</i>	5c

Ring Test Specimen Return Instructions

Please return all ring test specimens by end February 2015. These are reference collection specimens and must be returned to our museum. Your laboratory will be ineligible for future ring tests if specimens are not returned.

Return address: **David Hall, APEM Ltd., 7a Diamond Centre,
Works Road, Letchworth, Hertfordshire SG6 1LW, UK**