NMBAQC

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Ring Test Bulletin – RTB#51

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October 2016

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RING TEST DETAILS

Ring Test #51

Type/Contents – General

Circulated – 25/5/16

Results deadline – 29/7/16

Final results received date – 7/8/16

Number of Subscribing Laboratories – 23

Number of Participating Laboratories – 20

Number of Results Received – 22*

***multiple data entries per laboratory permitted**

Summary of differences

Specimen	Genus	Species	Total differences for 22 returns	
			Genus	Species
RT5101	*Abra*	*alba*	1	2
RT5102	*Edwardsia*	*claparedii*	2	2
RT5103	*Sternaspis*	*scutata*	0	0
RT5104	*Pharus*	*legumen*	19	19
RT5105	*Echinocardium*	*cordatum*	0	0
RT5106	*Melinna*	*palmata*	3	10
RT5107	*Magelona*	*filiformis*	0	1
RT5108	*Nucula*	*nucleus*	0	11
RT5109	*Tanaissus*	*danica*	7	14
RT5110	*Crassicorophium*	*crassicorne*	3	3
RT5111	*Ophelia*	*borealis*	1	6
RT5112	*Saccocirrus*	*pappilosus*	4	4
RT5113	*Chaetozone*	*setosa*	1	5
RT5114	*Terebellides*	*shetlandica*	1	16
RT5115	*Paramphitrite*	*birulai*	14	14
RT5116	*Monocorophium*	*insidiosum*	2	5
RT5117	*Melinna*	*palmata*	1	5
RT5118	*Sabellaria*	*alveolata*	0	5
RT5119	*Aricidea*	*minuta*	1	6
RT5120	*Pseudocuma*	*longicorne*	4	4
RT5121	*Pholoe*	*assimilis*	0	8
RT5122	*Nematostella*	*vectensis*	16	16
RT5123	*Ecrobia*	*ventrosa*	8	8
RT5124	*Nymphon*	*brevirostre*	0	0
RT5125	*Vitreolina*	*antiflexa*	1	20
		Total differences	89	184
		Average differences /lab.	4.0	8.4

Figure 1. The number of differences from the AQC identification of specimens distributed in RT51 for each of the participating laboratories. Arranged in order of increasing number of differences (by specific followed by generic errors).

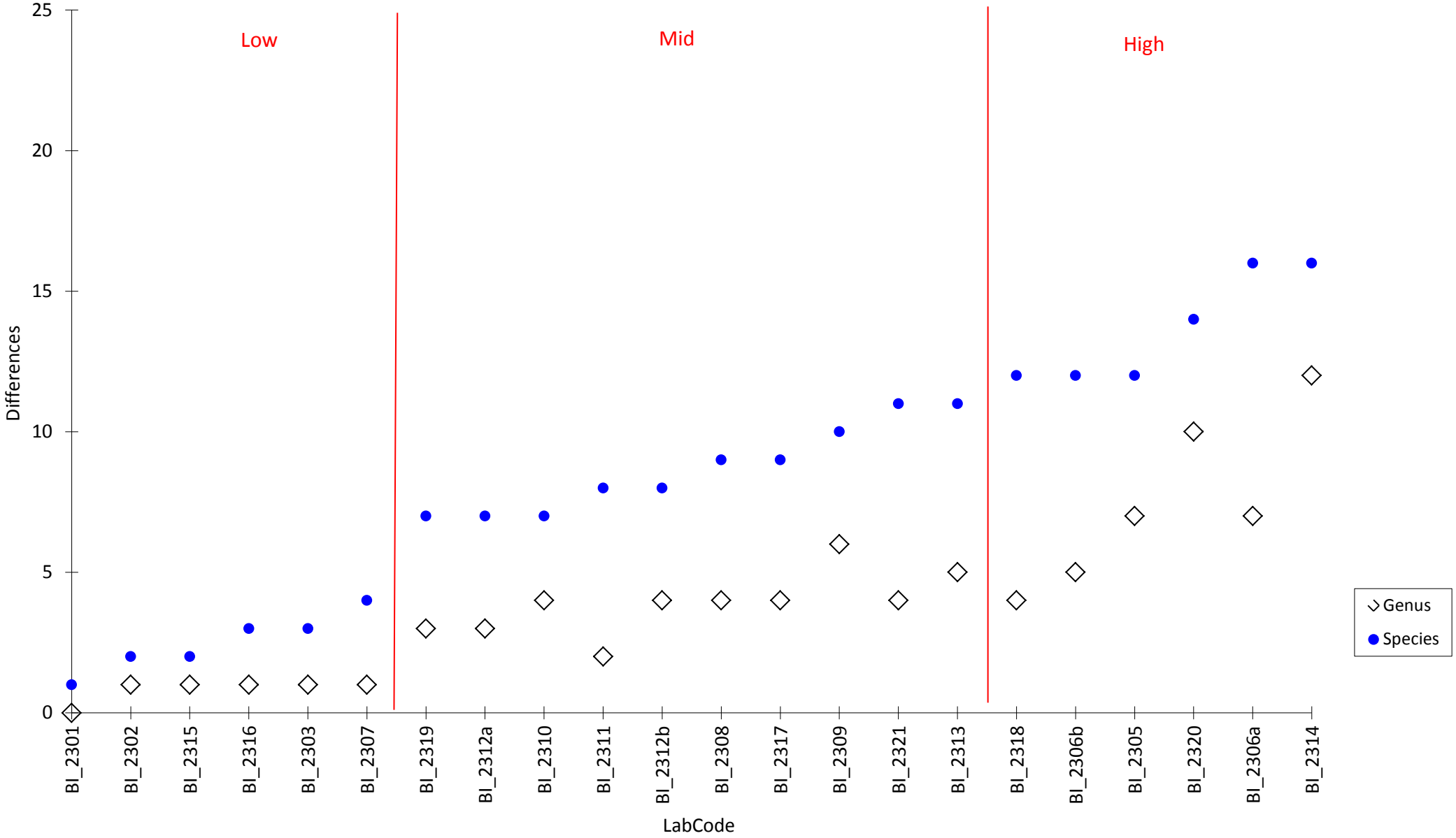

Table 1. The identification of fauna made by participating laboratories for RT51 (arranged by specimen). Names are given only where different from the AQC identification.

	RT5101	RT5102	RT5103	RT5104	RT5105	RT5106
Taxon	*Abra alba*	*Edwardsia claparedii*	*Sternaspis scutata*	*Pharus legumen*	*Echinocardium cordatum*	*Melinna palmata*
BI_2301	- -	- -	- -	- -	- -	- -
BI_2302	- -	- -	- -	Phaxas pellucidus	- -	- -
BI_2303	- -	- -	- -	Phaxas pellucidus	- -	- -
BI_2305	- -	- -	- -	Phaxas pellucidus	- -	Lysippe labiata
BI_2306a	- -	- -	- -	Phaxas pellucidus	- -	- cristata
BI_2306b	- -	- -	- -	Phaxas pellucidus	- -	- cristata
BI_2307	- -	- -	- -	- -	- -	- -
BI_2308	Macomangulus tenuis	- -	- -	Phaxas pellucidus	- -	- albicincta
BI_2309	- -	- -	- -	Phaxas pellucidus	- -	- cristata
BI_2310	- -	- -	- -	Phaxas pellucidus	- -	- -
BI_2311	- -	- [claparedi]	- -	Phaxas pellucidus	- -	- -
BI_2312a	- -	- -	[Sternapis] -	Phaxas pellucidus	- -	- -
BI_2312b	- -	- -	[Sternapis] -	Phaxas pellucidus	- -	- -
BI_2313	- -	- -	- -	Phaxas pellucidus	- -	- elisabethae
BI_2314	- nitida	Golfingia elongata	- -	Phaxas pellucidus	- -	Alkmaria romijni
BI_2315	- -	- -	- -	Phaxas pellucidus	- -	- -
BI_2316	- -	- -	- -	- -	- -	- -
BI_2317	- -	- -	- -	Phaxas pellucidus	- -	- -
BI_2318	- -	- -	- -	Phaxas pellucidus	- -	- elisabethae
BI_2319	- -	- -	- -	Phaxas pellucidus	- -	- cristata
BI_2320	- -	Thyone fusus	- -	Phaxas pellucidus	- -	Ampharete lindstroemi
BI_2321	- -	- -	- -	Phaxas pellucidus	- -	- -

Table 1. The identification of fauna made by participating laboratories for RT51 (arranged by specimen). Names are given only where different from the AQC identification.

	RT5107	RT5108	RT5109	RT5110	RT5111	RT5112
Taxon	*Magelona filiformis*	*Nucula nucleus*	*Tanaissus danica*	*Crassicorophium crassicorne*	*Ophelia borealis*	*Saccocirrus papillocercus*
BI_2301	- -	- -	- -	- -	- -	- -
BI_2302	- -	- -	- -	- -	- -	- -
BI_2303	- -	- -	- -	- -	- neglecta	- -
BI_2305	- [filicornis]	- sulcata	Leptochelia savignyi	- -	- limacina	Spionidae 0
BI_2306a	- -	- nitidosa	- lilljeborgi	Monocorophium acherusicum	- -	- -
BI_2306b	- -	- nitidosa	- lilljeborgi	- -	- -	- -
BI_2307	- -	- -	- -	- -	- -	- -
BI_2308	- -	- -	- -	- -	- -	- -
BI_2309	- -	- hanleyi	Tanaopsis graciloides	- -	- -	- -
BI_2310	- -	- -	Akanthophoreus gracilis	- -	- -	- -
BI_2311	- -	- nitidosa	- -	- -	- -	- -
BI_2312a	- -	- hanleyi	- lilljeborgi	- -	- -	- -
BI_2312b	- -	- hanleyi	Tanaiopis graciloides	- -	- -	- -
BI_2313	- -	- nitidosa	Akanthophoreus gracilis	- -	- -	Protodrilus rubropharyngeus
BI_2314	- -	- -	Araphura brevimana	Monocorophium sextonae	- -	Protodriloides chaetifer
BI_2315	- -	- -	- -	- -	- -	- -
BI_2316	- -	- -	- -	- -	- -	- [papillocerus]
BI_2317	- -	- nitidosa	- lilljeborgi	[Corophium] -	- roscoffensis	- -
BI_2318	- mirabilis	- -	- lilljeborgi	- -	- limacina	- -
BI_2319	- -	- -	- lilljeborgi	- -	- -	Dorvillea rubrovittata
BI_2320	- -	- nitidosa	Akanthophoreus gracilis	Leptocheirus pectinatus	Chaetozone caputesocis	- -
BI_2321	- -	- hanleyi	- lilljeborgi	- -	- roscoffensis	- -

Table 1. The identification of fauna made by participating laboratories for RT51 (arranged by specimen). Names are given only where different from the AQC identification.

	RT5113	RT5114	RT5115	RT5116	RT5117	RT5118
Taxon	*Chaetozone setosa*	*Terebellides shetlandica*	*Paramphitrite birulai*	*Monocorophium insidiosum*	*Melinna palmata*	*Sabellaria alveolata*
BI_2301	- -	- -	- -	- -	- -	- -
BI_2302	- -	- -	- -	- -	- -	- -
BI_2303	- -	- -	- -	- -	- -	- -
BI_2305	Aphelochaeta marioni	- stroemi	Lanassa venusta	- -	- elisabethae	- -
BI_2306a	- gibber	- stroemii	Lanassa venusta	- acherusicum	- cristata	- -
BI_2306b	- gibber	- stroemii	Lanassa venusta	- -	- -	- -
BI_2307	- -	- stroemii	- [tetrabranchia]	- -	- -	- -
BI_2308	- -	- -	- -	- -	- elisabethae	- spinulosa
BI_2309	- -	- stroemii	Lanassa venusta	Apocorophium lacustre	- -	- -
BI_2310	- -	- stroemi	Proclea graffii	- -	- -	- spinulosa
BI_2311	- -	- stroemi	- -	- acherusicum	- -	- spinulosa
BI_2312a	- -	- stroemii	Lanassa venusta	- -	- -	- -
BI_2312b	- -	- stroemii	Lanassa venusta	- -	- -	- -
BI_2313	- -	- stroemii	Proclea graffii	- -	- elisabethae	- -
BI_2314	- -	Loimia medusa	Lanassa venusta	- -	Ampharete goesi	- spinulosa
BI_2315	- -	- -	- -	- -	- -	- -
BI_2316	- -	- stroemi	- -	- -	- -	- -
BI_2317	- -	- -	Streblosoma intestinalis	[Corophium] -	- -	- -
BI_2318	- christiei	- stroemii	Amphitritides gracilis	- acherusicum	- -	- -
BI_2319	- -	- stroemii	Lanassa venusta	- -	- -	- -
BI_2320	- D	- stroemii	Phisidia aurea	Apocorophium lacustre	- -	- -
BI_2321	- -	- stroemii	Polycirrus norvegicus	- -	- -	- spinulosa

Table 1. The identification of fauna made by participating laboratories for RT51 (arranged by specimen). Names are given only where different from the AQC identification.

	RT5119	RT5120	RT5121	RT5122
Taxon	*Aricidea minuta*	*Pseudocuma longicorne*	*Pholoe assimilis*	*Nematostella vectensis*
BI_2301	- -	- -	- -	- -
BI_2302	- -	- -	- -	- -
BI_2303	[Aricidea (Aricidea)] -	[Pseudocuma (Pseudocuma)] [longicornis]	- -	- -
BI_2305	[Aricidae] -	[Pseudocuma (Pseudocuma)] -	- baltica	- -
BI_2306a	Cirrophorus branchiatus	Campylaspis undata	- baltica	Edwardsia claparedii
BI_2306b	[Aricidea (Aricidea)] -	Campylaspis undata	- baltica	Edwardsia claparedii
BI_2307	[Aricidea (Aricidea)] -	[Pseudocuma (Pseudocuma)] -	- inornata	Scolanthus callimorphus
BI_2308	- suecica	- [longicornis]	- baltica	Leptosynapta minuta
BI_2309	[Aricidea (Aricidea)] -	[Pseudocuma (Pseudocuma)] -	- -	Cerianthus lloydii
BI_2310	- -	- -	- inornata	Peachia cylindrica
BI_2311	- catherinae	- -	- [assimilis (sensu Petersen)]	Edwardsia claparedi
BI_2312a	- -	- -	- -	Edwardsia ivelli
BI_2312b	- -	- -	- inornata	Scolanthus calliomorphus
BI_2313	- -	- -	- baltica	Rhabdomolgus ruber
BI_2314	- suecica	Cumopsis goodsir	- -	Labidoplax buskii
BI_2315	[Aricidea (Aricidea)] -	[Pseudocuma (Pseudocuma)] [longicone]	- -	- -
BI_2316	- -	- -	- -	Halcampa chrysanthellum
BI_2317	- wassi	- -	- -	Cerianthus lloydii
BI_2318	[Aricidea (Aricidea)] -	Cumopsis goodsir	- -	Cereus pedunculatus
BI_2319	- -	- -	- -	- -
BI_2320	- -	- -	- -	Edwardsia claparedii
BI_2321	[Aricidea (Acmira)] catherinae	[Pseudocuma (Pseudocuma)] -	- -	Leptosynapta minuta

Table 1. The identification of fauna made by participating laboratories for RT51 (arranged by specimen). Names are given only where different from the AQC identification.

	RT5123	RT5124	RT5125
Taxon	*Ecrobia ventrosa*	*Nymphon brevirostre*	*Vitreolina antiflexa*
BI_2301	- -	- -	- philippi
BI_2302	- -	- -	- philippi
BI_2303	- -	- -	- philippi
BI_2305	[Hydrobia] -	- -	Melanella alba
BI_2306a	Peringia ulvae	- -	- philippi
BI_2306b	Peringia ulvae	- -	- philippi
BI_2307	- -	- -	- philippi
BI_2308	Peringia ulvae	- -	- -
BI_2309	Hydrobia acuta neglecta	- -	- philippi
BI_2310	- -	- -	- -
BI_2311	- -	- -	- philippi
BI_2312a	- -	- -	- phillippi
BI_2312b	- -	- -	- phillippi
BI_2313	- -	- [rubrum]	- philippi
BI_2314	Hyala vitrea	- -	- philippi
BI_2315	- -	- -	- philippi
BI_2316	- -	- -	- philippi
BI_2317	Hydrobia neglecta	- -	- philippi
BI_2318	- -	- [brevisrostre]	- philippi
BI_2319	- -	- -	- philippi
BI_2320	Peringia ulvae	- -	- philippi
BI_2321	Ondina divisa	- -	- philippi

Table 2. The identification of fauna made by participating laboratories for RT51 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2301	BI_2302	BI_2303	BI_2305	BI_2306a
RT5101	*Abra alba*	- -	- -	- -	- -	- -
RT5102	*Edwardsia claparedii*	- -	- -	- -	- -	- -
RT5103	*Sternaspis scutata*	- -	- -	- -	- -	- -
RT5104	*Pharus legumen*	- -	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus
RT5105	*Echinocardium cordatum*	- -	- -	- -	- -	- -
RT5106	*Melinna palmata*	- -	- -	- -	Lysippe labiata	- cristata
RT5107	*Magelona filiformis*	- -	- -	- -	- [filicornis]	- -
RT5108	*Nucula nucleus*	- -	- -	- -	- sulcata	- nitidosa
RT5109	*Tanaissus danica*	- -	- -	- -	Leptochelia savignyi	- lilljeborgi
RT5110	*Crassicorophium crassicorne*	- -	- -	- -	- -	Monocorophium acherusicum
RT5111	*Ophelia borealis*	- -	- -	- neglecta	- limacina	- -
RT5112	*Saccocirrus papillocercus*	- -	- -	- -	Spionidae 0	- -
RT5113	*Chaetozone setosa*	- -	- -	- -	Aphelochaeta marioni	- gibber
RT5114	*Terebellides shetlandica*	- -	- -	- -	- stroemi	- stroemii
RT5115	*Paramphitrite birulai*	- -	- -	- -	Lanassa venusta	Lanassa venusta
RT5116	*Monocorophium insidiosum*	- -	- -	- -	- -	- acherusicum
RT5117	*Melinna palmata*	- -	- -	- -	- elisabethae	- cristata
RT5118	*Sabellaria alveolata*	- -	- -	- -	- -	- -
RT5119	*Aricidea minuta*	- -	- -	[Aricidea (Aricidea)] -	[Aricidae] -	Cirrophorus branchiatus
RT5120	*Pseudocuma longicorne*	- -	- -	[Pseudocuma (Pseudocuma)] [longicornis]	[Pseudocuma (Pseudocuma)] -	Campylaspis undata
RT5121	*Pholoe assimilis*	- -	- -	- -	- baltica	- baltica
RT5122	*Nematostella vectensis*	- -	- -	- -	- -	Edwardsia claparedii
RT5123	*Ecrobia ventrosa*	- -	- -	- -	[Hydrobia] -	Peringia ulvae
RT5124	*Nymphon brevirostre*	- -	- -	- -	- -	- -
RT5125	*Vitreolina antiflexa*	- philippi	- philippi	- philippi	Melanella alba	- philippi

Table 2. The identification of fauna made by participating laboratories for RT51 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2306b	BI_2307	BI_2308	BI_2309	BI_2310
RT5101	*Abra alba*	- -	- -	Macomangulus tenuis	- -	- -
RT5102	*Edwardsia claparedii*	- -	- -	- -	- -	- -
RT5103	*Sternaspis scutata*	- -	- -	- -	- -	- -
RT5104	*Pharus legumen*	Phaxas pellucidus	- -	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus
RT5105	*Echinocardium cordatum*	- -	- -	- -	- -	- -
RT5106	*Melinna palmata*	- cristata	- -	- albicincta	- cristata	- -
RT5107	*Magelona filiformis*	- -	- -	- -	- -	- -
RT5108	*Nucula nucleus*	- nitidosa	- -	- -	- hanleyi	- -
RT5109	*Tanaissus danica*	- lilljeborgi	- -	- -	Tanaopsis graciloides	Akanthophoreus gracilis
RT5110	*Crassicorophium crassicorne*	- -	- -	- -	- -	- -
RT5111	*Ophelia borealis*	- -	- -	- -	- -	- -
RT5112	*Saccocirrus papillocercus*	- -	- -	- -	- -	- -
RT5113	*Chaetozone setosa*	- gibber	- -	- -	- -	- -
RT5114	*Terebellides shetlandica*	- stroemii	- stroemii	- -	- stroemii	- stroemi
RT5115	*Paramphitrite birulai*	Lanassa venusta	- [tetrabranchia]	- -	Lanassa venusta	Proclea graffii
RT5116	*Monocorophium insidiosum*	- -	- -	- -	Apocorophium lacustre	- -
RT5117	*Melinna palmata*	- -	- -	- elisabethae	- -	- -
RT5118	*Sabellaria alveolata*	- -	- -	- spinulosa	- -	- spinulosa
RT5119	*Aricidea minuta*	[Aricidea (Aricidea)] -	[Aricidea (Aricidea)] -	- suecica	[Aricidea (Aricidea)] -	- -
RT5120	*Pseudocuma longicorne*	Campylaspis undata	[Pseudocuma (Pseudocuma)] -	- [longicornis]	[Pseudocuma (Pseudocuma)] -	- -
RT5121	*Pholoe assimilis*	- baltica	- inornata	- baltica	- -	- inornata
RT5122	*Nematostella vectensis*	Edwardsia claparedii	Scolanthus callimorphus	Leptosynapta minuta	Cerianthus lloydii	Peachia cylindrica
RT5123	*Ecrobia ventrosa*	Peringia ulvae	- -	Peringia ulvae	Hydrobia acuta neglecta	- -
RT5124	*Nymphon brevirostre*	- -	- -	- -	- -	- -
RT5125	*Vitreolina antiflexa*	- philippi	- philippi	- -	- philippi	- -

Table 2. The identification of fauna made by participating laboratories for RT51 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2311	BI_2312a	BI_2312b	BI_2313	BI_2314
RT5101	*Abra alba*	- -	- -	- -	- -	- nitida
RT5102	*Edwardsia claparedii*	- [claparedi]	- -	- -	- -	Golfingia elongata
RT5103	*Sternaspis scutata*	- -	[Sternapis] -	[Sternapis] -	- -	- -
RT5104	*Pharus legumen*	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus
RT5105	*Echinocardium cordatum*	- -	- -	- -	- -	- -
RT5106	*Melinna palmata*	- -	- -	- -	- elisabethae	Alkmaria romijni
RT5107	*Magelona filiformis*	- -	- -	- -	- -	- -
RT5108	*Nucula nucleus*	- nitidosa	- hanleyi	- hanleyi	- nitidosa	- -
RT5109	*Tanaissus danica*	- -	- lilljeborgi	Tanaiopis graciloides	Akanthophoreus gracilis	Araphura brevimana
RT5110	*Crassicorophium crassicorne*	- -	- -	- -	- -	Monocorophium sextonae
RT5111	*Ophelia borealis*	- -	- -	- -	- -	- -
RT5112	*Saccocirrus papillocercus*	- -	- -	- -	Protodrilus rubropharyngeus	Protodriloides chaetifer
RT5113	*Chaetozone setosa*	- -	- -	- -	- -	- -
RT5114	*Terebellides shetlandica*	- stroemi	- stroemii	- stroemii	- stroemii	Loimia medusa
RT5115	*Paramphitrite birulai*	- -	Lanassa venusta	Lanassa venusta	Proclea graffii	Lanassa venusta
RT5116	*Monocorophium insidiosum*	- acherusicum	- -	- -	- -	- -
RT5117	*Melinna palmata*	- -	- -	- -	- elisabethae	Ampharete goesi
RT5118	*Sabellaria alveolata*	- spinulosa	- -	- -	- -	- spinulosa
RT5119	*Aricidea minuta*	- catherinae	- -	- -	- -	- suecica
RT5120	*Pseudocuma longicorne*	- -	- -	- -	- -	Cumopsis goodsir
RT5121	*Pholoe assimilis*	- [assimilis (sensu Petersen)]	- -	- inornata	- baltica	- -
RT5122	*Nematostella vectensis*	Edwardsia claparedi	Edwardsia ivelli	Scolanthus calliomorphus	Rhabdomolgus ruber	Labidoplax buskii
RT5123	*Ecrobia ventrosa*	- -	- -	- -	- -	Hyala vitrea
RT5124	*Nymphon brevirostre*	- -	- -	- -	- [rubrum]	- -
RT5125	*Vitreolina antiflexa*	- philippi	- phillippi	- phillippi	- philippi	- philippi

Table 2. The identification of fauna made by participating laboratories for RT51 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2315	BI_2316	BI_2317	BI_2318	BI_2319
RT5101	*Abra alba*	- -	- -	- -	- -	- -
RT5102	*Edwardsia claparedii*	- -	- -	- -	- -	- -
RT5103	*Sternaspis scutata*	- -	- -	- -	- -	- -
RT5104	*Pharus legumen*	Phaxas pellucidus	- -	Phaxas pellucidus	Phaxas pellucidus	Phaxas pellucidus
RT5105	*Echinocardium cordatum*	- -	- -	- -	- -	- -
RT5106	*Melinna palmata*	- -	- -	- -	- elisabethae	- cristata
RT5107	*Magelona filiformis*	- -	- -	- -	- mirabilis	- -
RT5108	*Nucula nucleus*	- -	- -	- nitidosa	- -	- -
RT5109	*Tanaissus danica*	- -	- -	- lilljeborgi	- lilljeborgi	- lilljeborgi
RT5110	*Crassicorophium crassicorne*	- -	- -	[Corophium] -	- -	- -
RT5111	*Ophelia borealis*	- -	- -	- roscoffensis	- limacina	- -
RT5112	*Saccocirrus papillocercus*	- -	- [papillocerus]	- -	- -	Dorvillea rubrovittata
RT5113	*Chaetozone setosa*	- -	- -	- -	- christiei	- -
RT5114	*Terebellides shetlandica*	- -	- stroemi	- -	- stroemii	- stroemii
RT5115	*Paramphitrite birulai*	- -	- -	Streblosoma intestinalis	Amphitritides gracilis	Lanassa venusta
RT5116	*Monocorophium insidiosum*	- -	- -	[Corophium] -	- acherusicum	- -
RT5117	*Melinna palmata*	- -	- -	- -	- -	- -
RT5118	*Sabellaria alveolata*	- -	- -	- -	- -	- -
RT5119	*Aricidea minuta*	[Aricidea (Aricidea)] -	- -	- wassi	[Aricidea (Aricidea)] -	- -
RT5120	*Pseudocuma longicorne*	[Pseudocuma (Pseudocuma)] [longicone]	- -	- -	Cumopsis goodsir	- -
RT5121	*Pholoe assimilis*	- -	- -	- -	- -	- -
RT5122	*Nematostella vectensis*	- -	Halcampa chrysanthellum	Cerianthus lloydii	Cereus pedunculatus	- -
RT5123	*Ecrobia ventrosa*	- -	- -	Hydrobia neglecta	- -	- -
RT5124	*Nymphon brevirostre*	- -	- -	- -	- [brevisrostre]	- -
RT5125	*Vitreolina antiflexa*	- philippi	- philippi	- philippi	- philippi	- philippi

Table 2. The identification of fauna made by participating laboratories for RT51 (arranged by participant). Names are given only where different from the AQC identification.

	Taxon	BI_2320	BI_2321
RT5101	*Abra alba*	- -	- -
RT5102	*Edwardsia claparedii*	Thyone fusus	- -
RT5103	*Sternaspis scutata*	- -	- -
RT5104	*Pharus legumen*	Phaxas pellucidus	Phaxas pellucidus
RT5105	*Echinocardium cordatum*	- -	- -
RT5106	*Melinna palmata*	Ampharete lindstroemi	- -
RT5107	*Magelona filiformis*	- -	- -
RT5108	*Nucula nucleus*	- nitidosa	- hanleyi
RT5109	*Tanaissus danica*	Akanthophoreus gracilis	- lilljeborgi
RT5110	*Crassicorophium crassicorne*	Leptocheirus pectinatus	- -
RT5111	*Ophelia borealis*	Chaetozone caputesocis	- roscoffensis
RT5112	*Saccocirrus papillocercus*	- -	- -
RT5113	*Chaetozone setosa*	- D	- -
RT5114	*Terebellides shetlandica*	- stroemii	- stroemii
RT5115	*Paramphitrite birulai*	Phisidia aurea	Polycirrus norvegicus
RT5116	*Monocorophium insidiosum*	Apocorophium lacustre	- -
RT5117	*Melinna palmata*	- -	- -
RT5118	*Sabellaria alveolata*	- -	- spinulosa
RT5119	*Aricidea minuta*	- -	[Aricidea (Acmira)] catherinae
RT5120	*Pseudocuma longicorne*	- -	[Pseudocuma (Pseudocuma)] -
RT5121	*Pholoe assimilis*	- -	- -
RT5122	*Nematostella vectensis*	Edwardsia claparedii	Leptosynapta minuta
RT5123	*Ecrobia ventrosa*	Peringia ulvae	Ondina divisa
RT5124	*Nymphon brevirostre*	- -	- -
RT5125	*Vitreolina antiflexa*	- philippi	- philippi

Specimen Images and Detailed Breakdown of Identifications

LabCodes are abbreviated in this report to exclude the Scheme year, *i.e.* BI_2301 = Lab 01. 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)

RT5101 – *Abra alba* (Figure 1a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southwest England. Condition: Good, medium (5-7mm).

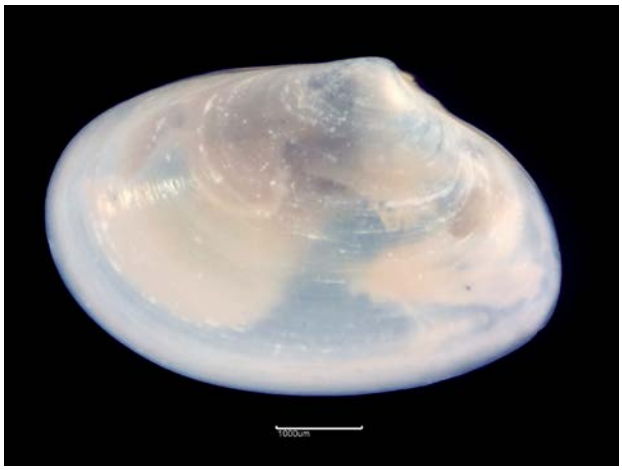

Fig. 1a. *Abra alba* (RT5101) – L

One generic and two specific errors: Lab 08 identified as *Macomangulus tenuis* (Figure 1b) (which has more regular, distinct growth lines and a more prominent ligament); Lab 14 identified as *Abra nitida* (Figure 1c) (which has a more elongated, glossier shell, with more central umbones).

Fig. 1b. *Macomangulus tenuis* (412877) – L

Fig. 1c. *Abra nitida* (RT4719) – L

RT5102 – *Edwardsia claparedii* (Figure 2a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Fair, good, variable (10-30mm).

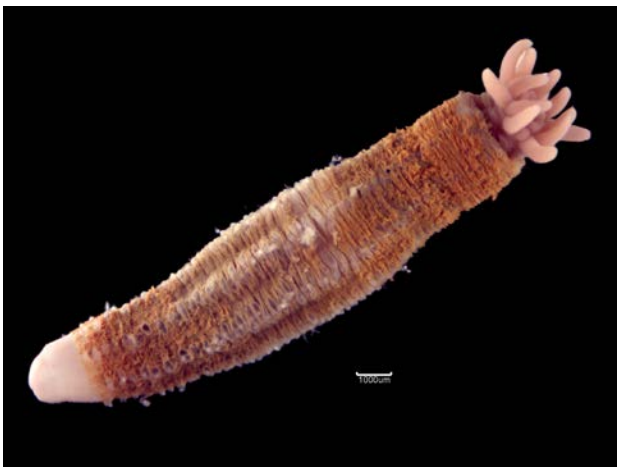

Fig. 2a. *Edwardsia claparedii* (RT5102) – L

Two generic and two specific errors: Lab 14 identified as *Golfingia elongata* (Figure 2b) (which has an introvert, lacks tentacles and has a relatively smooth skin); Lab 20 identified as *Thyone fusus* (Figure 2c) (which has spicules in the skin).

Lab 11 incorrectly spelled the species.

Fig. 2b. *Golfingia elongata* (9591) – L

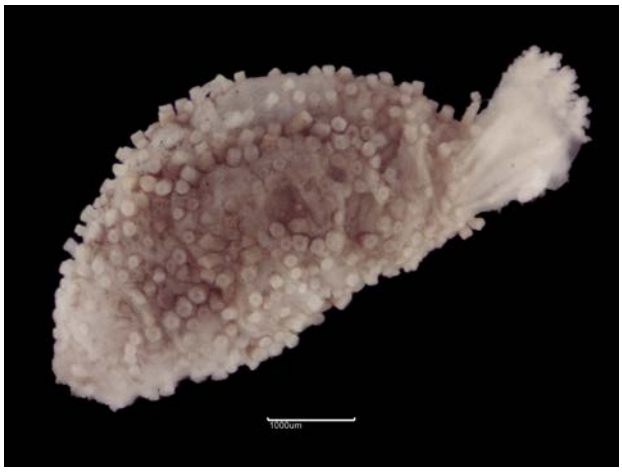

Fig. 2c. *Thyone fusus* (55124) – L

RT5103 – *Sternaspis scutata* (Figure 3a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, medium, extended specimens (7-12mm).

Fig. 3a. *Sternaspis scutata* (RT5103) - V

No generic and no specific differences.

Labs 12a and 12b incorrectly spelled the genus.

RT5104 – *Pharus legumen* (Figure 4a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Northwest England/Isle of Man. Condition: Fair, small (5-6mm).

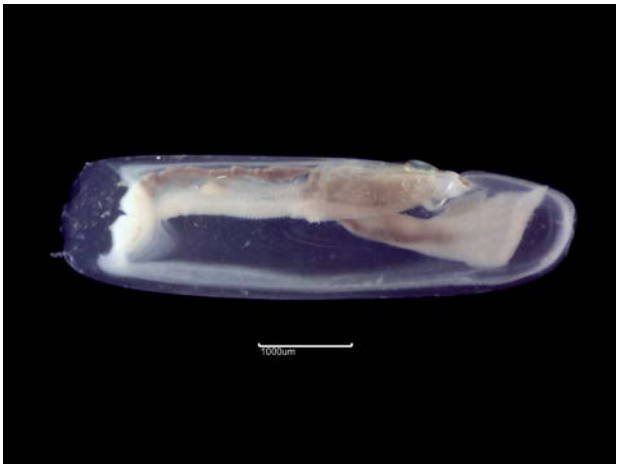

Fig. 4a. *Pharus legumen* (RT5104) - L

Nineteen generic and nineteen specific differences: Labs 02, 03, 05, 06a, 06b, 08, 09, 10, 11, 12a, 12b, 13, 14, 15, 17, 18, 19, 20 and 21 identified as *Phaxus pellucidus* (Figure 4c) (which has the umbones much closer to the anterior end).

Images 4b-4i show a growth series of *Pharus legumen* and *Phaxus pellucidus* for comparison.

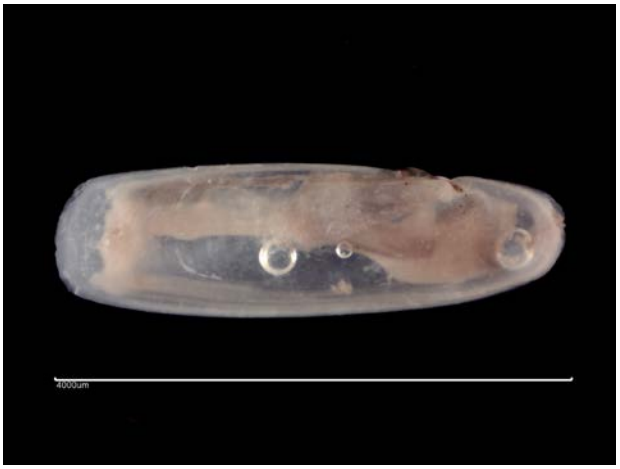

Fig. 4b. *Pharus legumen* (6mm) (RT5104) - L

Fig. 4c. *Phaxus pellucidus* (6mm) (57033) - L

Fig. 4d. *Pharus legumen* (9mm) (57031) – L

Fig. 4e. *Phaxus pellucidus* (9mm) (57035) – L

Fig. 4f. *Pharus legumen* (12mm) (RT5104) – L

Fig. 4g. *Phaxus pellucidus* (12mm) (9540) – L

Fig. 4h. *Pharus legumen* (15mm) (55649) – L

Fig. 4i. *Phaxus pellucidus* (14mm) (4774) - L

RT5105 – *Echinocardium cordatum* (Figure 5a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, small/medium (14-16mm).

Fig. 5a. *Echinocardium cordatum* (RT5105) – D

No generic and no specific differences.

RT5106 – *Melinna palmata* (Figure 6a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Fair, small (4-6mm), stained.

Fig. 6a. *Melinna palmata* (RT5106) – D

Three generic and ten specific differences: Lab 05 identified as *Lysippe labiata* (no material available), Lab 14 identified as *Alkmaria romijni* (Figure 6b) and Lab 20 identified as *Ampharete lindstroemi* (Figure 6c) (all of which lack minute acicular chaetae on the anterior segments); Labs 06a, 06b, 09 and 19 identified as *M. cristata* (no material available); Lab 08 identified as *M. albicincta* (no material available); Labs 13 and 18 identified as *M. elisabethae* (Figure 6d) (all of which have strongly curved dorsal hooks and four anterior segments with minute acicular chaetae).

Fig. 6b. *Alkmaria romijni* (9421) - D

Fig. 6c. *Ampharete lindstroemi* (9726) - D

Fig. 6d. *Melinna elisabethae* (RT4722) – D

RT5107 – *Magelona filiformis* (Figure 7a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Northeast England. Condition: Fair, small (6-9mm), no palps and incomplete.

Fig. 7a. *Magelona filiformis* (RT5107) – D

No generic and one specific difference. Lab 18 identified as *M. mirabilis* (Figure 7b) (which has subdistally expanded chaetae on segment 9).

Lab 05 incorrectly spelled the species.

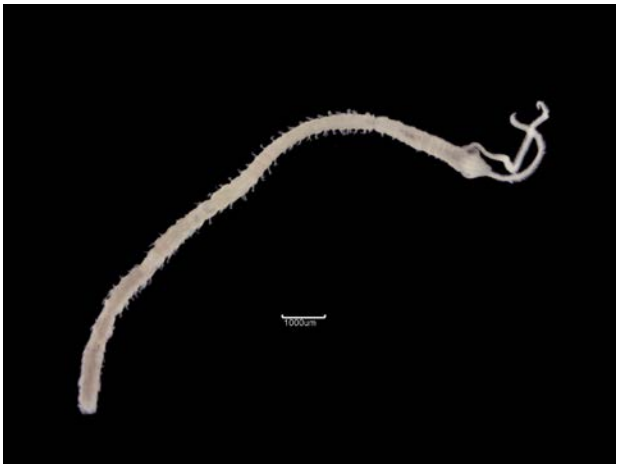

Fig. 7b. *Magelona mirabilis* (7022) - D

RT5108 – *Nucula nucleus* (Figure 8a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Good, small (2-3mm).

Fig. 8a. *Nucula nucleus* (RT5108) – L

No generic and eleven specific differences: Lab 05 identified as *N. sulcata* (Figure 8b) (which has stronger concentric sculpture); Labs 06a, 06b, 11, 13, 17 and 20 identified as *N. nitidosa* (Figure 8c) (which is more glossy and triangular, with the lunule and escutcheon more straight); Labs 09, 12a, 12b and 21 identified as *N. hanleyi* (Figure 8d) (which is more elongated and glossy, often with more colour).

Fig. 8b. *Nucula sulcata* (55952) – L

Fig. 8c. *Nucula nitidosa* (54946) – L

Fig. 8d. *Nucula hanleyi* (9804) – L

RT5109 – *Tanaissus danica* (Figure 9a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: North Sea. Condition: Good, small (2-3mm), female.

Fig. 9a. *Tanaissus danica* (RT5109) – L

Seven generic and fourteen specific differences: Lab 05 identified as *Leptochelia savignyi* (Figure 9b) (which has eyes); Labs 06a, 06b, 12a, 17, 18, 19 and 21 identified as *T. lilljeborgi* (Figure 9c) (which has a proportionally longer urosome and prominent dorsal propodal spurs and two sets of teeth on the fixed finger of the gnathopod between which the dactylus is inserted); Labs 09 and 12b identified as *Tanaopsis graciloides* (Figure 9d) (which has two prominent teeth between which the dactylus fits); Labs 10, 13 and 20 identified as *Akanthophoreus gracilis* (Figure 9e) and Lab 14 identified as *Araphura brevimanus* (Figure 9f) (both of which have four articles on the antennule.

Fig. 9b. *Leptochelia savignyi* (9588) – D

Fig. 9c. *Tanaissus lilljeborgi* (RT473d) – L

Fig. 9d. *Tanaopsis graciloides* (10022) – D

Fig. 9e. *Akanthophoreus gracilis* (OS53207121) – D

Fig. 9f. *Araphura brevimanus* (OS54207120) – D

RT5110 – *Crassicorophium crassicorne* (Figure 10a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Good, medium (3-4mm), stained, female.

Fig. 10a. *Crassicorophium crassicorne* (RT5110) – L

Three generic and three specific differences: Lab 06a identified as *Monocorophium acherusicum* (Figure 10b); Lab 14 identified as *Monocorophium sextonae* (Figure 10c) (both of which lack setae on the peduncle of uropod 1 and have 2-3 posterior marginal teeth on the dactylus of gnathopod 2); Lab 20 identified as *Leptocheirus pectinatus* (Figure 10d) (which lacks a dorso-ventrally flattened urosome).

Lab 17 used the old genus nomenclature of *Corophium*.

Fig. 10b. *Monocorophium acherusicum* (11324) – L

Fig. 10c. *Monocorophium sextonae* (6052) – L

Fig. 10d. *Leptocheirus pectinatus* (5964) – L

RT5111 – *Ophelia borealis* (Figure 11a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southeast England. Condition: Fair, medium (7-9mm).

Fig. 11a. *Ophelia borealis* (RT5111) – L

One generic and six specific differences: Lab 03 identified as *O. neglecta* (no image available) (which has 18 branchiate chaetigers); Labs 05 and 18 identified as *O. limacina* (no image available) (which has 22 branchiate chaetigers); Labs 17 and 21 identified as *O. roscoffensis* (Figure 11b) (which has 2 large and 12 much smaller anal papillae); Lab 20 identified as *Chaetozone caputesocis* (Figure 13a shows *C. setosa*) (which has palps).

Fig. 11b. *Ophelia roscoffensis* (9787) – L

RT5112 – *Saccocirrus pappilosus* (Figure 12a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southwest England. Condition: Good, small/medium (11-25mm, with palps).

Fig. 12a. *Saccocirrus pappilosus* (RT5112) – D

Four generic and four specific differences: Lab 05 identified as *Spionidae* (Figure 12b shows *Pseudopolydora* cf. *paucibranchiata*) and Lab 19 identified as *Dorvillea rubrovittata* (Figure 12c) (both of which have large parapodial lobes); Lab 14 identified as *Protodriloides chaetifer* (Figure 12d) (which lacks eyes and parapodia); Lab 13 identified as *Protodrilus rubropharyngeus* (Figure 12e shows *Protodrilus* sp.) (which lacks chaetae).

Lab 16 incorrectly spelled the species.

Fig. 12b. *Pseudopolydora paucibranchiata* (RT4913c) – D

Fig. 12c. *Dorvillea rubrovittata* (56649) – D

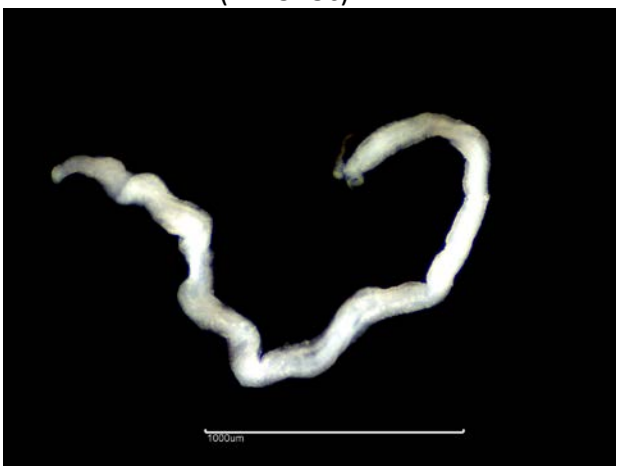

Fig. 12d. *Protodriloides chaetifer* (RT4711) – D

Fig. 12e. *Protodrilus* sp. (9089) – D

RT5113 – *Chaetozone setosa* (Figure 13a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Fair, small (5-8mm), complete.

Fig. 13a. *Chaetozone setosa* (RT5113) – L

One generic and five specific differences: Lab 05 identified as *Aphelochaeta marioni* (Figure 13b shows *A. marioni sensu* Hartmann-Schröder) (which has a shorter prostomium and lacks acicular chaetae); Labs 06a and 06b identified as *Chaetozone gibber* (Figure 13c) (which has fine, irregularly directed anterior capillary chaetae); Lab 18 identified as *Chaetozone christei* (Figure 13d) (which has palps on last achaetous segment alongside the first pair of gills); Lab 20 identified as *Chaetozone* D (Figure 13e) (which has anterior chaetae as long as width of body and an elongate abdomen).

Fig. 13b. *Aphelochaeta marioni sensu* Hartmann-Schröder (56608) – L

Fig. 13c. *Chaetozone gibber* (9732) – L

Fig. 13d. *Chaetozone christiei* (5842) – L

Fig. 13e. *Chaetozone D* (8530) – L

RT5114 – *Terebellides shetlandica* (Figure 14a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Fair, Small (4-8mm).

Fig. 14a. *Terebellides shetlandica* (RT5114) – L

One generic and 16 specific differences: Labs 05, 06a, 06b, 07, 09, 10, 11, 12a, 12b, 13, 16, 18, 19, 20, and 21 identified as *Terebellides stroemii* (Figure 14b) (which has free branchial lobes); Lab 14 identified as *Loimia medusa* (Figure 14c) (which has double rows of uncini and three pairs of branchiae with separate origins).

Fig. 14b. *Terebellides stroemi* (6774) – L

Fig. 14c. *Loimia medusa* (RT4701) – L

RT5115 – *Paramphitrite birulai* (Figure 15a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Poor, large (21-51mm), some with no tail, no branchiae.

Fig. 15a. *Paramphitrite birulai* (RT5115) – L

14 generic and 15 specific differences: Labs 05, 06a, 06b, 09, 12a, 12b, 14, 19 identified as *Lanassa venusta* (Figure 15b); Labs 10 and 13 identified as *Proclea graffii* (Figure 15c); Lab 17 identified as *Streblosoma intestinale* (Figure 15d); and Lab 20 identified as *Phisidia aurea* (Figure 15g) (which all lack branchiae); Lab 18 identified as *Amphitritides gracilis* (Figure 15e) (which has uncini in double rows almost to end of body); Lab 21 identified as *Polycirrus norvegicus* (Figure 15g) (which has a tri-lobed upper lip).

Lab 07 identified as *Paramphitrite tetrabranchia* which Jirkov (2001) considered likely to be a junior synonym of *P. birulai*.

Fig. 15b. *Lanassa venusta* (8382) – L

Fig. 15c. *Proclea graffii* (2414) – L

Fig. 15d. *Streblosoma intestinale* (8707) – D

Fig. 15e. *Amphitritides gracilis* (7123) – L

Fig. 15f. *Phisidia aurea* (8366) – L

Fig. 15g. *Polycirrus norvegicus* (1911) – D

RT5116 – *Monocorphium insidiosum* (Figure 16a)

Substratum: Diamicton. Salinity: Reduced (Mesohaline). Depth: Infralittoral. Geography: Southeast England. Condition: Fair, small (4-5mm), male.

Fig. 16a. *Monocorophium insidiosum* (RT5116) – L

Two generic and five specific differences: Labs 06a, 11 and 18 identified as *M. acherusicum* (Figure 10b) (which has a curved spine on antenna 1 peduncle); Labs 09 and 20 identified as *Apocorophium lacustre* (Figure 16b) (which has weak lateral notches on the urosome).

Lab 17 used the old genus nomenclature of *Corophium*.

Fig. 16b. *Apocorophium lacustre* (702) – L

RT5117 – *Melinna palmata* (Figure 17a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Fair, large (15-25mm), stained.

Fig. 17a. *Melinna palmata* (RT5117) – L

One generic and five specific differences: Labs 05, 08 and 13 identified as *M. elisabethae* (Figure 6d); Lab 06a identified as *M. cristata* (no material available) (both of which have strongly curved dorsal hooks and four anterior segments with minute acicular chaetae); Lab 14 identified as *Ampharete goesi* (no material available, Figure 6c shows *A. lindstroemi*) (which has palae and lacks minute acicular chaetae on the anterior segments).

RT5118 – *Sabellaria alveolata* (Figure 18a)

Substratum: Faunal turf. Salinity: Full (Euhaline). Depth: Intertidal. Geography: Southwest England. Condition: Good, small (2-3mm), complete crown.

Fig. 18a. *Sabellaria alveolata* (RT5118) – L

Fig. 18b. *Sabellaria spinulosa* (RT4908) – L

No generic and five specific differences: Labs 08, 10, 11, 14 and 21 identified as *S. spinulosa* (Figure 18b) (which has asymmetrical angular spines pointing distally and transversely on the opercular chaetae).

RT5119 – *Aricidea minuta* (Figure 19a)

Substratum: Sand. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Southeast England. Condition: Fair, small (4-5mm), no tail.

Fig. 19a. *Aricidea minuta* (RT5119) – L

One generic and six specific differences: Lab 06a identified as *Cirrophorus branchiatus* (Figure 19b) and Labs 11 and 21 identified as *A. catherinae* (Figure 19c) (which both lack articulation of the antenna); Labs 08 and 14 identified as *A. suecica* (Figure 19d shows a possible *A. suecica*) (which has conspicuous neuropodial postchaetal lobes); Lab 17 identified as *A. wassi* (Figure 19e) (which has multiple articulations of the antenna).

Labs 03, 06b, 07, 09, 15 and 18 included the subgenus in the nomenclature: *Aricidea* (*Aricidea*).

Lab 05 incorrectly spelled the genus.

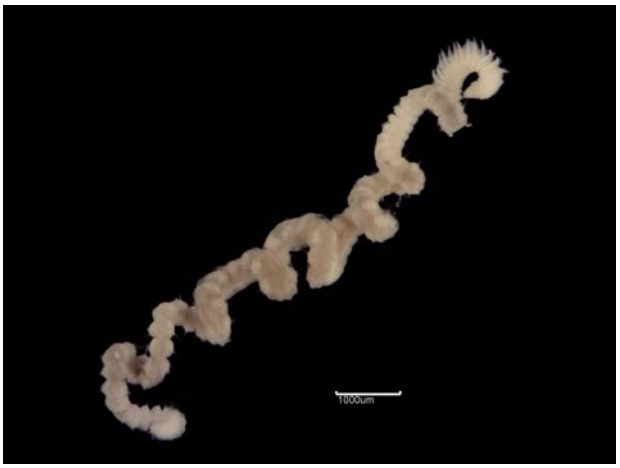

Fig. 19b. *Cirrophorus branchiatus* (55938) – L

Fig. 19c. *Aricidea catherinae* (55089) – L

Fig. 19d. *Aricidea suecica* ? (8089) – L

Fig. 19e. *Aricidea wassi* (RT4924) – L

RT5120 – *Pseudocuma longicorne* (Figure 20a)

Substratum: Sand. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Southeast England. Condition: Good, small (2-3mm), females.

Fig. 20a. *Pseudocuma longicorne* (RT5120) – L

Four generic and four specific differences: Labs 06a and 06b identified as *Campylaspis undata* (Figure 20b) and Labs 14 and 18 identified as *Cumopsis goodsir* (Figure 20c) (both of which lack a freely articulated telson).

Labs 03, 05, 07, 09, 15 and 21 included the subgenus in the nomenclature: nomenclature *Pseudocuma (Pseudocuma)*.

Labs 03 and 08 used the synonym *P. longicornis*.

Lab 15 mis-spelled the species name.

Fig. 20b. *Campylaspis undata* (58267) - L

Fig. 20c. *Cumopsis goodsir* (55604) - L

RT5121 – *Pholoe assimilis* (Figure 21a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Fair, small (2-3mm).

Fig. 21a. *Pholoe assimilis* (RT5121) – D

No generic and eight specific differences: Labs 05, 06a, 06b, 08 and 13 identified as *Pholoe baltica* (Figure 21b) (which has a prominent facial tubercle); Labs 07, 10 and 12b identified as *P. inornata* (Figure 21c) (which has dark pigment between the eyes).

Fig. 21b. *Pholoe baltica* (11437) - D

Fig. 21c. *Pholoe inornata* (12096) – D

RT5122 – *Nematostella vectensis* (Figure 22a)

Substratum: Mud. Salinity: Reduced (Mesohaline). Depth: Infralittoral. Geography: Southeast England. Condition: Poor, small (1-3mm), tentacles out.

Fig. 22a. *Nematostella vectensis* (RT5122) – L

16 generic and 16 specific differences: Labs 06a, 06b, 11, and 20 identified as *Edwardsia claparedii* (Figure 2a), Labs 07 and 12b identified as *Scolanthus callimorphus* (no image available), Lab 12a identified as *Edwardsia ivelli* (no image available), Lab 10 identified as *Peachia cylindrica* (Figure 22b) and Lab 16 identified as *Halcampa chrysanthellum* (no image available) (all of which have a periderm); Labs 08 and 21 identified as *Leptosynapta minuta* (Figure 22c) and Lab 14 identified as *Labidoplax buskii* (Figure 22d) (which both have spicules in the skin); Labs 09 and 17 identified as *Cerianthus lloydii* (Figure 22e) (which has tentacles of two distinct sizes); Lab 13 identified as *Rhabdomolgus ruber* (no image available) (which has only 10 tentacles); Lab 18 identified as *Cereus pedunculatus* (no image available) (which has a suction disc at the base and suckers on the column).

Fig. 22b. *Peachia cylindrica* (4803) – L

Fig. 22c. *Leptosynapta minuta* (9595) – L

Fig. 22d. *Labidoplax buskii* (RT4925) – L

Fig. 22e. *Cerinathus lloydii* (56911) – L

RT5123 – *Ecrobia ventrosa* (Figure 23a)

Substratum: Diamicton. Salinity: Reduced (Mesohaline). Depth: Infralittoral. Geography: Southeast England. Condition: Fair, medium (3-4mm).

Fig. 23a. *Ecrobia ventrosa* (RT5123) – V

Eight generic and eight specific differences: Labs 06a, 06b, 08 and 20 identified as *Peringia ulvae* (Figure 23b) (which has flat sided whorls); Labs 09 and 17 identified as *Hydrobia acuta neglecta* (Figure 23c) (which has a cyrtoconoid spire); Lab 14 identified as *Hyala vitrea* (Figure 23d) (which has a more cylindrical shell and is found in fully marine conditions); Lab 21 identified as *Ondina divisa* (Figure 23e) (which has spiral sculpture and is found in fully marine conditions).

Lab 05 used the previous genus nomenclature *Hydrobia*.

Fig. 23b. *Peringia ulvae* (9591) – V

Fig. 23c. *Hydrobia acuta neglecta* (P842_13a) – V

Fig. 23d. *Hyala vitrea* (9585) – V

Fig. 23e. *Ondina divisa (9694)* – V

RT5124 – *Nymphon brevirostre* (Figure 24a)

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Southeast England. Condition: Fair, medium (2-3mm).

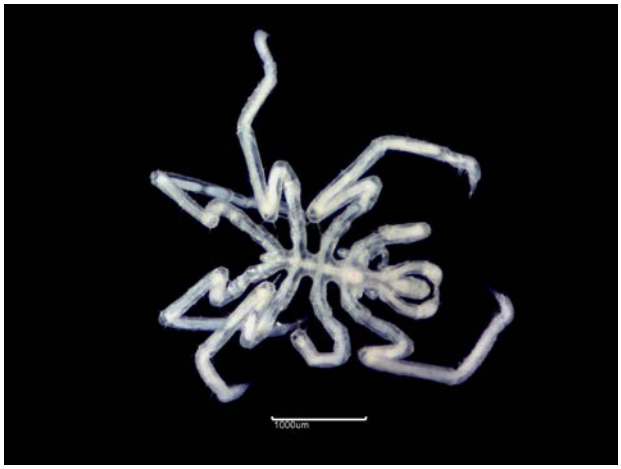

Fig. 24a. *Nymphon brevirostre* (RT5124) – L

No generic and no specific differences.

Lab 13 used the synonym *N. rubrum.*

Lab 18 mis-spelled the species name.

RT5125 – *Vitreolina antiflexa* (Figure 25a)

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Good, small (2mm).

Fig. 25a. *Vitreolina antiflexa* (RT5125) – V

One generic and 20 specific differences: Labs 01, 02, 03, 06a, 06b, 07, 09, 11, 12a, 12b, 13, 14, 15, 16, 17, 18, 19, 20 and 21 identified as *V. phillippi* (Figures 25b-c) (which has a wider shell); comparative figures in van der Linden (2000), NB: *V. phillippi* from RT49 were also *V. antiflexa*); Lab 05 identified as *Melanella alba* (Figure 25c) (which has an angular base and slightly concave outline to the spire).

Fig. 25b. *Vitreolina phillippi* (AbersochTW) – V

Fig. 25c. *Vitreolina phillippi* (DevonTW) – V

Fig. 25d. *Melanella alba* (57942) – V

Acknowledgements

We would like to thank Grant Rowe at Fugro Emu for donating specimen 14 for this ring test.

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Ring Test Specimen Return Instructions

Please return all ring test specimens by 23rd December 2016. 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**