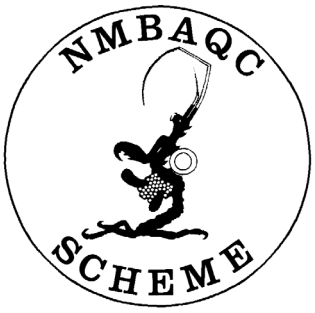

The National Marine Biological Analytical Quality Control Scheme

Ring Test Bulletin – RTB#29

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December 2006
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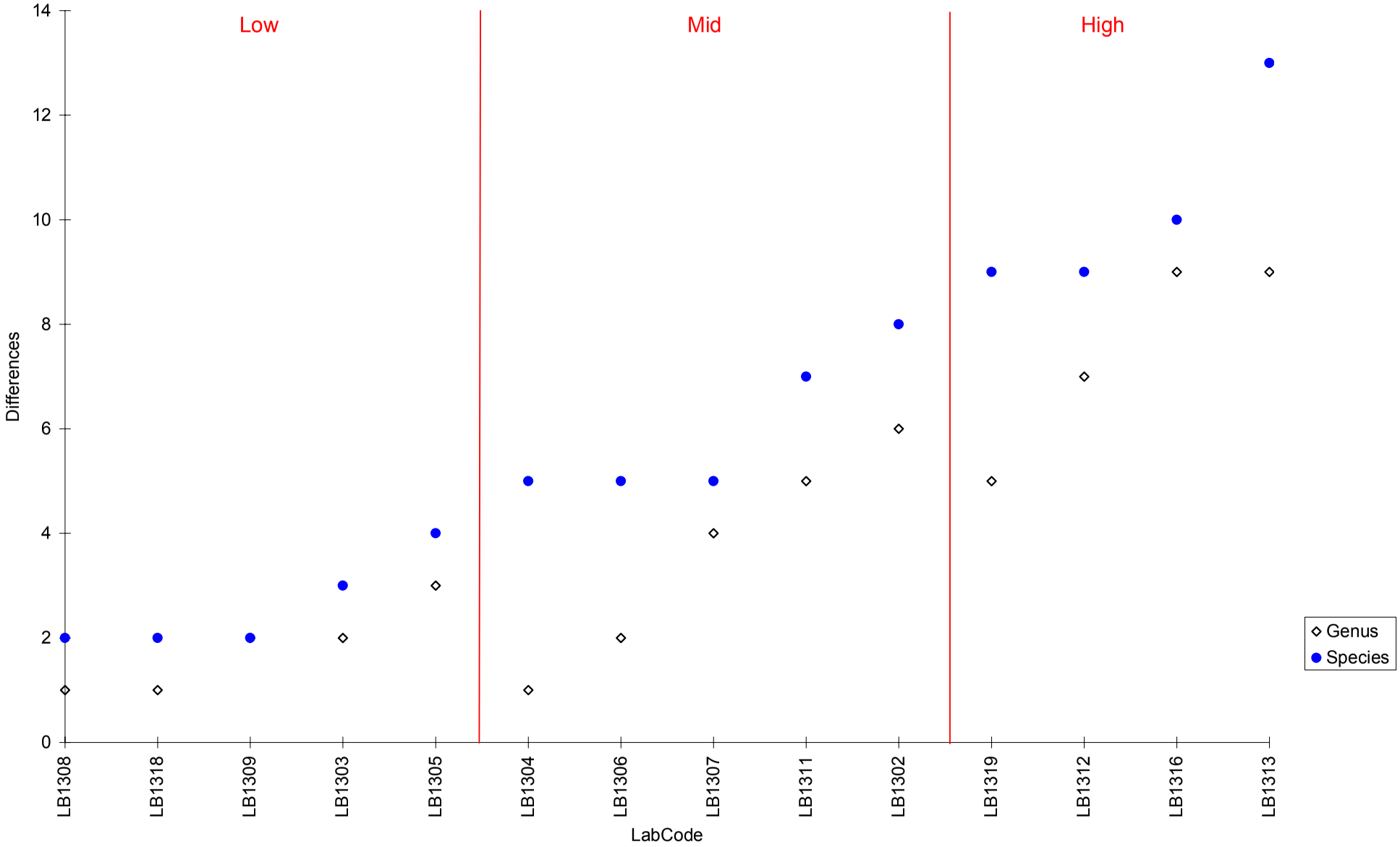
unicomarine

RING TEST DETAILS
Ring Test #29
Type/Contents – General/Mixed
Circulated – 02/09/2006
Completion Date – 27/10/2006
Number of Participating Laboratories - 18
Number of Results Received – 14

Summary of differences

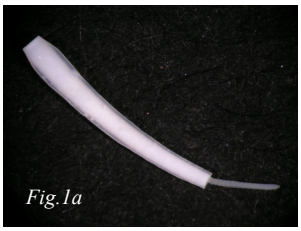
Specimen	Genus	Species	Total differences for (14) laboratories	
			Genus	Species
RT2901	Ditrupa	arietina	2	2
RT2902	Leucon	nasica	1	1
RT2903	Facelina	annulicornis	6	11
RT2904	Corophium	multisetosum	0	0
RT2905	Polyphysia	crassa	10	10
RT2906	Bittium	reticulatum	1	1
RT2907	Paraonis	fulgens	5	5
RT2908	Pariambus	typicus	1	1
RT2909	Lumbrineris	gracilis	2	5
RT2910	Echinogammarus	marinus	1	1
RT2911	Littorina	obtusata	0	1
RT2912	Abra	tenuis	2	2
RT2913	Chelura	terebrans	0	0
RT2914	Prionospio	dubia	1	4
RT2915	Rissoa	guerinii	0	1
RT2916	Abyssoninoe	hibernica	5	5
RT2917	Leptocheirus	pilosus	0	1
RT2918	Fabulina	fabula	6	6
RT2919	Armandia	cirrhosa	3	4
RT2920	Emarginula	rosea	0	3
RT2921	Gari	tellinella	6	7
RT2922	Aonides	paucibranchiata	2	2
RT2923	Lumbrineriopsis	paradoxa	3	3
RT2924	Limatula	subauriculata	0	7
RT2925	Dexamine	thea	0	1
		Total differences	57	84
		Average differences /lab.	4.1	6.0

Figure 1. The number of differences from the AQC identification of specimens distributed in RT29 for each of the participating laboratories. Arranged in order of increasing number of differences.



Specimen Images and Detailed Breakdown of Identifications

RT2901 – *Diptrupa arietina* (Figure 1a)



Substratum: Muddy Sand. Salinity: Full. Depth: Circalittoral. Geography: N. Ireland. Condition: Good (tube end removed), Large.

Two generic and two specific differences: Lab 16 identified as *Antalis entalis* (Figure 1b); Lab 11 identified as *Pulsellum lofotense* (no material available; Figure 1c shows a related species) (both of the above lack chaetae and constricted anterior shell apertures).

RT2902 – *Leucon nasica* (Figure 2a)

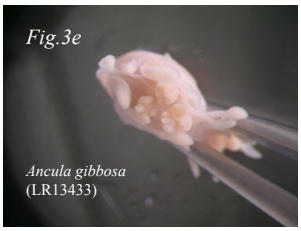
Substratum: Mud / Fine Sand. Salinity: Full. Depth: Offshore. Geography: Celtic Sea. Condition: Good, Large.

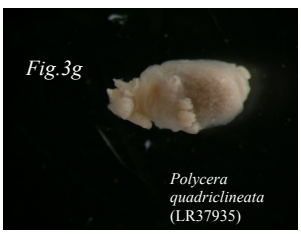
One generic and one specific difference: Lab 02 identified as *Iphinoe serrata* (Figure 2b) (which lacks well developed exopodites).

RT2903 – *Facelina annulicornis* (Figure 3a)

Substratum: Gravel / Sand. Salinity: Full. Depth: Circalittoral. Geography: Bristol Channel. Condition: Fair (few cerrata present), Large. Note: Specimens have lost pink pigment in alcohol.

Six generic and eleven specific differences: Labs 04, 08 and 19 identified as *Facelina bostoniensis* (Figure 3b) (which lacks pink colouring); Labs 03 and 13 identified as *Facelina auriculata* or the synonym *F. coronata* (Figure 3c) (which has blue iridescence on cerata when live and has coarser lamellae on the rhinophores); Lab 11 identified as *Flabellina pedata* (Figure 3d) (which lacks strongly lamellate rhinophore sculpture); Labs 02 and 06 identified as *Ancula* sp. and *A. gibbosa* (Figure 3e); Lab 07 identified as *Okenia elegans* (Figure 3f shows *Okenia* sp.); Lab 12 identified as *Polycera quadrilobata* (Figure 3g) (all of which have a dorsal gill circlet); Lab 16 did not identify this specimen.



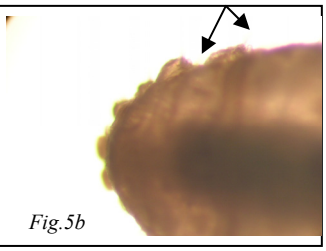


RT2904 – *Corophium multisetosum* (Figure 4a)

Substratum: Mixed. Salinity: Reduced. Depth: Shallow Subtidal. Geography: S. England. Condition: Good, Medium, Female.

No differences recorded.

RT2905 – *Polyphysia crassa* (Figures 5a & b)



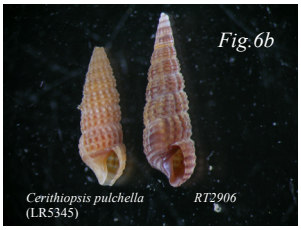
Substratum: Mud. Salinity: Full. Depth: Circalittoral. Geography: N. Scotland. Condition: Fair, Small, Juvenile. Note: Minute branchiae present on setigers 3 and 4 (5) – Figure 5b.

Ten generic and ten specific differences: Labs 03, 04, 05, 08, 09, 12 and 19 identified as *Lipobranchius jeffreysii* (no material available) (which lacks branchiae); Lab 13 identified as *Travisia forbesii* (Figure 5c) (which has a pointed prostomium and cirriform branchiae along the entire body); Lab 07 identified as *Asclerocheilus intermedius* (Figure 5d) (which has acicular chaetae in the anterior setigers and a much longer body); Lab 16 identified as *Commensodorum commensalis* (Figure 5e) (which has transverse dorsal papillae).

RT2906 – *Bittium reticulatum* (Figures 6a & b)

Substratum: Zostera. Salinity: Full. Depth: Infralittoral. Geography: S. W. England. Condition: Good, Medium.

One generic and one specific difference: Lab 07 identified as *Cerithiopsis barleii* (no material available; Figure 6b shows a related species) (which has a distinct siphonal canal).



RT2907 – *Paraonis fulgens* (Figure 7a)

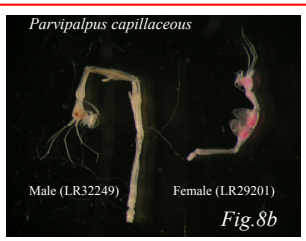
Substratum: Sand. Salinity: Full. Depth: Infralittoral. Geography: S. England. Condition: Good (complete specimens), Medium.

Five generic and five specific differences: Labs 02, 11 and 12 identified as *Levinsenia gracilis* (Figure 7b) (which has fewer branchiae, a more elongated body a blunt prostomium); Lab 16 identified as *Aricidea minuta* (Figure 7b) and Lab 18 identified as *A. catherinae* (Figure 7b) (both of which have a median antennae).

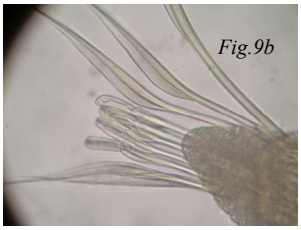
RT2908 – *Pariambus typicus* (Figure 8a)

Substratum: Stony Gravel. Salinity: Full. Depth: Circalittoral. Geography: N. Ireland. Condition: Fair (no rear pereopods; vestigal pereopod five present), Medium.

One generic and one specific difference: Lab 13 identified as *Parvipalpus capillaceous* (Figure 8b) (which has a fully developed fifth pereopod and an elongated posterior).

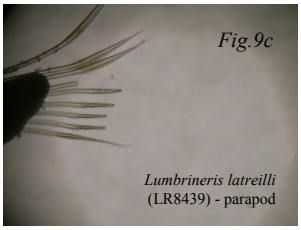


RT2909 – *Lumbrineris gracilis* (Figures 9a & b)



Substratum: Muddy Gravel. Salinity: Full. Depth: Circalittoral. Geography: S. W. England. Condition: Fair, Medium.

Two generic and five specific differences: Lab 11 identified as *L. latreilli* (Figure 9c) (which has composite hooded hooks with long, slender chaetal blades); Labs 13 and 19 identified as *Lumbrineris tetraura*, a South African species not found in Britain but similar to *Scoletoma impatiens* (no material available; Figure 9c shows a related species) (which lacks composite hooded hooks); Lab 07 identified as *Augeneria* sp. (no material available) (which has Mx IV shaped like broad plates with whitish central and dark peripheral area); Lab 16 identified as *Dasybranchus* sp. (Figure 9d) (which has biramous chaetigers and lacks jaws). Literature reference: Oug, 2003.



RT2910 – *Echinogammarus marinus* (Figure 10a)

Substratum: Hard. Salinity: High. Depth: Intertidal. Geography: S. W. England. Condition: Good, Large.

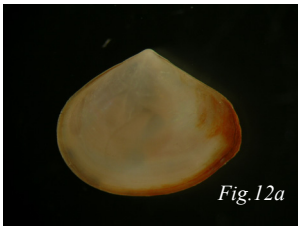
One generic and one specific difference: Labs 03, 06, 07, 12, 13 and 19 recorded the synonym *Chaetogammarus marinus*; Lab 16 identified as *Eulimnogammarus obtusatus* (no material available) (which has a distinctly larger gnathopod 1 propodus compared to gnathopod 2 propodus).

RT2911 – *Littorina obtusata* (Figure 11a)

Substratum: Hard. Salinity: High. Depth: Intertidal. Geography: S. W. England. Condition: Good, Medium (not adult).

One specific difference: Lab 04 identified as *Littorina mariae* (Figure 11b) (which has less angular whorls, is usually more strongly patterned and has a different angle of join between the upper part of the outer lip and the penultimate whorl).

RT2912 – *Abra tenuis* (Figures 12a & b)



Substratum: Mud. Salinity: Low. Depth: Intertidal. Geography: East Anglia. Condition: Good, Medium.

Two generic and two specific differences: Labs 02 and 13 identified as *Scrobicularia plana* (Figure 12b) (which has a conspicuous external ligament and a more rounded shell outline).

RT2913 – *Chelura terebrans* (Figure 13a)

Substratum: Driftwood. Salinity: Full. Depth: (Circalittoral). Geography: W. Scotland. Condition: Good, Large, Male.

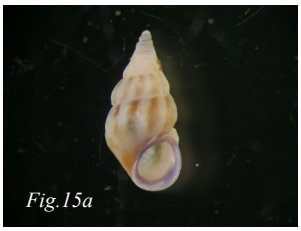
No differences recorded.

RT2914 – *Prionospio dubia* (Figure 14a & b)

Substratum: Mud/Fine Sand. Salinity: Full. Depth: Offshore. Geography: Celtic Sea. Condition: Fair, Large. Note: Pinnate branchiae present on setigers 1 and 4 (Figure 14b).

One generic and four specific differences: Labs 02 and 11 identified as *Prionospio ehlersi* (no material available) (which has an apinnate fourth pair of branchiae); Lab 12 identified as *P. steenstrupi* (no material available) (which has low dorsal crests on setigers 6 to 15(20)); Lab 13 identified as *Minuspio multibranchiata* (Figure 14c) (which has several pairs of apinnate branchiae).

RT2915 – *Rissoa guerinii* (Figure 15a)



Substratum: Zostera. Salinity: Full. Depth: Infralittoral. Geography: S. W. England. Condition: Good, Medium.

One specific difference: Lab 06 identified as *Rissoa membranacea* (Figure 15b) (which has a blunt columellar tooth).

RT2916 – *Abyssoninoe hibernica* (Figure 16a)

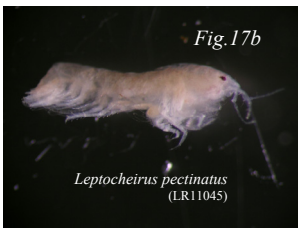
Substratum: Mud/Fine Sand. Salinity: Full. Depth: Offshore. Geography: Celtic Sea. Condition: Good, Medium.

Five generic and five specific differences: Labs 12 and 13 identified as *Lumbrineris latreilli* (Figure 9c) (which has composite hooded hooks); Lab 19 identified as *L. fragilis*, a synonym of *Scoletoma fragilis* (no material available; not recorded from the UK); Labs 02 and 16 identified as *Scolotoma impatiens* (no material available; Figure 9c shows a related species) (both of lack the pointed tip to the prostomium; S. fragilis has not been recorded in the UK). Literature reference: Oug, 2003.

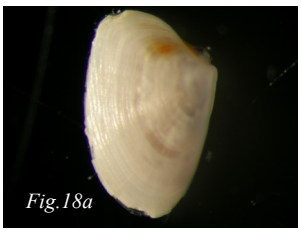
RT2917 – *Leptocheirus pilosus* (Figure 17a)

Substratum: Mixed. Salinity: Low. Depth: Shallow Subtidal. Geography: S. England. Condition: Good, Medium.

One specific difference: Lab 12 identified as *Leptocheirus pectinatus* (Figure 17b) (which has a small coxal plate 1and is not recorded from areas of low salinity).

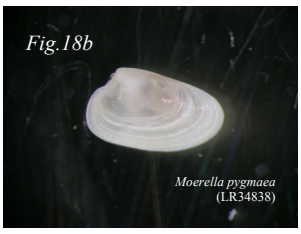


RT2918 – *Fabulina fabula* (Figure 18a)

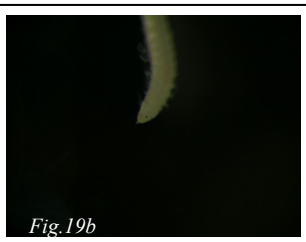


Substratum: Mixed. Salinity: Full. Depth: Circalittoral. Geography: N. Ireland. Condition: Fair, Small, Juvenile.

Six generic and six specific differences: Labs 05 and 12 identified as *Moerella pygmaea* or the synonym *Tellina pygmaea* (Figure 18b) (which has less angular outline); Lab 19 identified as *Moerella donacina* (Figure 18c) (which has a distinctive colour pattern); Lab 06 identified as *Angulus tenuis* (Figure 18d) (which has a less elongate shell); Lab 13 identified as *Abra longicallus* (no material available); Lab 16 identified as *Abra prismatica* juv. (Figure 18e) (both of which lack regular concentric sculpture and have less strongly projecting ligaments); All of the above lack diagonal sculpture.



RT2919 – *Armandia cirrhosa* (Figures 19a & b)



Substratum: Mud. Salinity: Full. Depth: Infralittoral. S. W. England. Condition: Fair, Small. Note: Palpode and eyes present (Figure 19b).

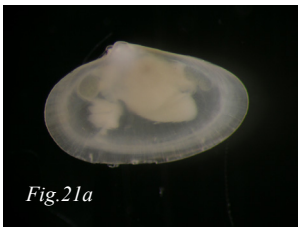
Three generic and four specific differences: Lab 03 identified as *Ophelina modesta* (Figures 19c & d) (which lacks a palpode); Lab 11 identified as *Ophelina acuminata* (Figures 19c & e) (which lacks eyespots and has a ventrally opening anal funnel); Lab 19 identified as *Armandia polyophthalmus* (Figures 19c & f) (which has more chaetigers); Lab 13 identified as *Aricidea* sp. (Figures 7b & 22b) (which has a median antennae and is not torpedo shaped).

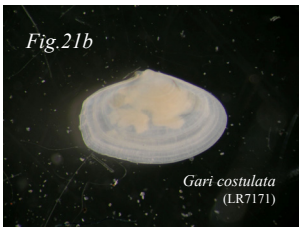
RT2920 – *Emarginula rosea* (Figures 20a & c)

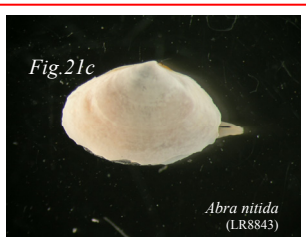
Substratum: Gravel. Salinity: Full. Depth: Offshore. Geography: S. England. Condition: Fair, Medium.

Three specific differences: Labs 03, 12 and 19 identified as the synonym *Emarginula conica*; Labs 06, 07 and 13 identified as *E. fissura* (Figures 20b & c) (which has coarser sculpture and a more posteriorly-placed apex).

RT2921 – *Gari tellinella* (Figure 21a)







Substratum: Gravel. Salinity: Full. Depth: Offshore. Geography: S. England. Condition: Good, Small (2-3 mm), Juvenile.

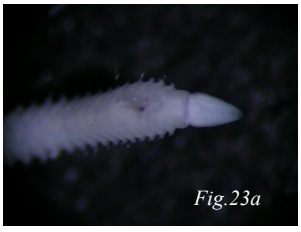
Six generic and seven specific differences: Lab 04 identified as *Gari costulata* (Figure 21b) (which has stronger sculpture); Labs 16 and 19 identified as adult and juvenile *Abra nitida* (Figure 21c); Lab 02 identified as *Abra* sp. juv. and Lab 13 identified as *A. prismatica* (Figure 18e) (all of which have less projecting umbones); Lab 05 identified as *Mya truncata* (Figure 21d) (which, at this size, has a more elongate, opaque shell); Lab 12 identified as *Donax vittatus* (Figure 21e) (which has a more angular shell).

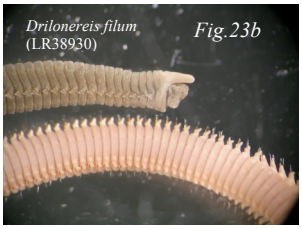
RT2922 – *Aonides paucibranchiata* (Figure 22a)

Substratum: Gravel. Salinity: Full. Depth: Offshore. Geography: S. England. Condition: Fair (½ to full length), Medium.

Two generic and two specific differences: Lab 11 identified as *Aricidea cerrutii* (Figure 22b); Lab 13 identified as *Levinsenia gracilis* (Figure 7b) (both of which have poorly developed postchaetal lamellae and branchiae commencing on or after the fourth setiger).

RT2923 – *Lumbrineriopsis paradoxa* (Figure 23a)

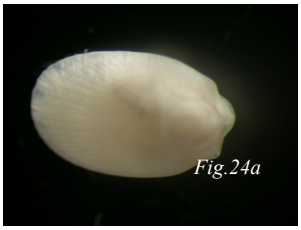




Substratum: Gravel. Salinity: Full. Depth: Offshore. Geography: S. England. Condition: Good (¾ to complete), Medium.

Three generic and three specific differences: Lab 09 identified as *Drilonereis filum* (Figure 23b) (which has a flattened prostomium, stout emergent aciculae and lacks hooded hooks); Lab 12 identified as *Lumbrineris latreilli* (Figure 9c); Lab 19 identified as *L. gracilis* (Figures 9a &b) (both of which have a less elongated prostomium and have composite hooded hooks).

RT2924 – *Limatula subauriculata* (Figure 24a)



Substratum: Gravel. Salinity: Full. Depth: Offshore. Geography: S. England. Condition: Good, Medium.

Seven specific differences: Labs 03, 12 and 19 identified as the synonym *Lima subauriculata*; Labs 02, 04, 05, 06, 13, 16 and 18 identified as *Limatula sulcata* or the synonym *Lima sulcata* (no material available; currently being sourced) (which has a more elongate shell).

RT2925 – *Dexamine thea* (Figures 25 a & c)

Substratum: Hard. Salinity: Full. Depth: Shallow Subtidal. Geography: Shetland. Condition: Good, Small.

One specific difference: Lab 19 identified as *Dexamine spinosa* (Figures 25b & c) (which has the posterior margin of pereopod 7 expanded).

Acknowledgements

We would like to thank Carol Milner (SEPA, Dingwall) and Myles O'Reilly (SEPA, East Kilbride) for donating some excellent ring test specimens for this circulation.

References

Costello, M.J., Emblow, C. & White, R., 2001. European register of marine species. A check list of the marine species in Europe and a bibliography of guides to their identification, *Patrimoines naturels* (M.N.H.N. /S.P.N.), 50: pp. 1-463.

Howson, C.M. & Picton, B.E. (eds), 1997. *The species directory of the marine fauna and flora of the British Isles and surrounding seas.* Ulster Museum and The Marine Conservation Society, Belfast and Ross-on-Wye, 508p.

Oug, E., 2003. Lumbrineridae from North East Atlantic Waters. *Prepared for the NMBAQC 2003 Benthic Invertebrate Taxonomic Workshop, Dove Marine Laboratory, Tynemouth, UK.* November 2003.

Ring Test Return Instructions

Please return all ring test specimens by 22nd December 2006. 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, Unicomarine Ltd., Head Office, 7 Diamond Centre, Works Road, Letchworth, Hertfordshire SG6 1LW, UK**