# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

www.nmbaqcs.org

## Ring Test Bulletin – RTB#54


Tim Worsfold
David Hall
Søren Pears (Images)

**APEM Ltd.**
**March 2018**

*E-mail: nmbaqc@apemltd.co.uk*

**RING TEST DETAILS**

**Ring Test #54**

**Type/Contents – Spionidae**

**Circulated – 13/10/17**

**Results deadline – 10/01/18**

**Number of Subscribing Laboratories – 23**

**Number of Participating Laboratories – 21**

**Number of Results Received – 21***

***multiple data entries per laboratory permitted**

**Summary of differences**

| Specimen | Genus | Species | Size | Total differences for 21 returns | |
|---|---|---|---|---|---|
| | | | | Genus | Species |
| RT5401 | *Spio* | *martinensis* | medium | 0 | 5 |
| RT5402 | *Prionospio* | *cirrifera* complex | medium | 0 | 1 |
| RT5403 | *Laonice* | *bahusiensis* | small | 2 | 2 |
| RT5404 | *Dipolydora* | 'species B' | small | 2 | 10 |
| RT5405 | *Malacoceros* | *tetracerus* | medium | 0 | 8 |
| RT5406 | *Aonides* | *paucibranchiata* | small | 0 | 0 |
| RT5407 | *Spiophanes* | *wigleyi* | small | 4 | 5 |
| RT5408 | *Scolelepis* | *squamata* | small | 0 | 1 |
| RT5409 | *Malacoceros* | *vulgaris* | small | 10 | 13 |
| RT5410 | *Malacoceros* | *vulgaris* | medium | 1 | 2 |
| RT5411 | *Polydora* | *cornuta* | medium | 1 | 1 |
| RT5412 | *Pseudopolydora* | 'species A' | medium | 3 | 9 |
| RT5413 | *Pygospio* | *elegans* | medium | 0 | 0 |
| RT5414 | *Prionospio* | *cirrifera* complex | medium | 3 | 6 |
| RT5415 | *Aonides* | *oxycephala* | medium | 0 | 0 |
| RT5416 | *Aurospio* | *banyulensis* | medium | 7 | 10 |
| RT5417 | *Prionospio* | *cf. dubia* | medium | 1 | 3 |
| RT5418 | *Poecilochaetus* | *serpens* | medium | 0 | 0 |
| RT5419 | *Spiophanes* | *kroyeri* | medium | 0 | 1 |
| RT5420 | *Prionospio* | *fallax* | medium | 0 | 2 |
| RT5421 | *Dipolydora* | *quadrilobata* | medium | 4 | 9 |
| RT5422 | *Polydora* | *ciliata* | small | 2 | 5 |
| RT5423 | *Spio* | *cf. symphyta* | medium | 2 | 5 |
| RT5424 | *Prionospio* | *plumosa* | medium | 1 | 8 |
| RT5425 | *Pseudopolydora* | *paucibranchiata* | medium | 2 | 6 |
| | | | Total differences | 45 | 112 |
| | | | Average differences /lab. | 2.1 | 5.3 |

**Figure 1. The number of differences from the AQC identification of specimens distributed in RT54 for each of the participating laboratories. Arranged in order of increasing number of differences (by specific followed by generic errors).**

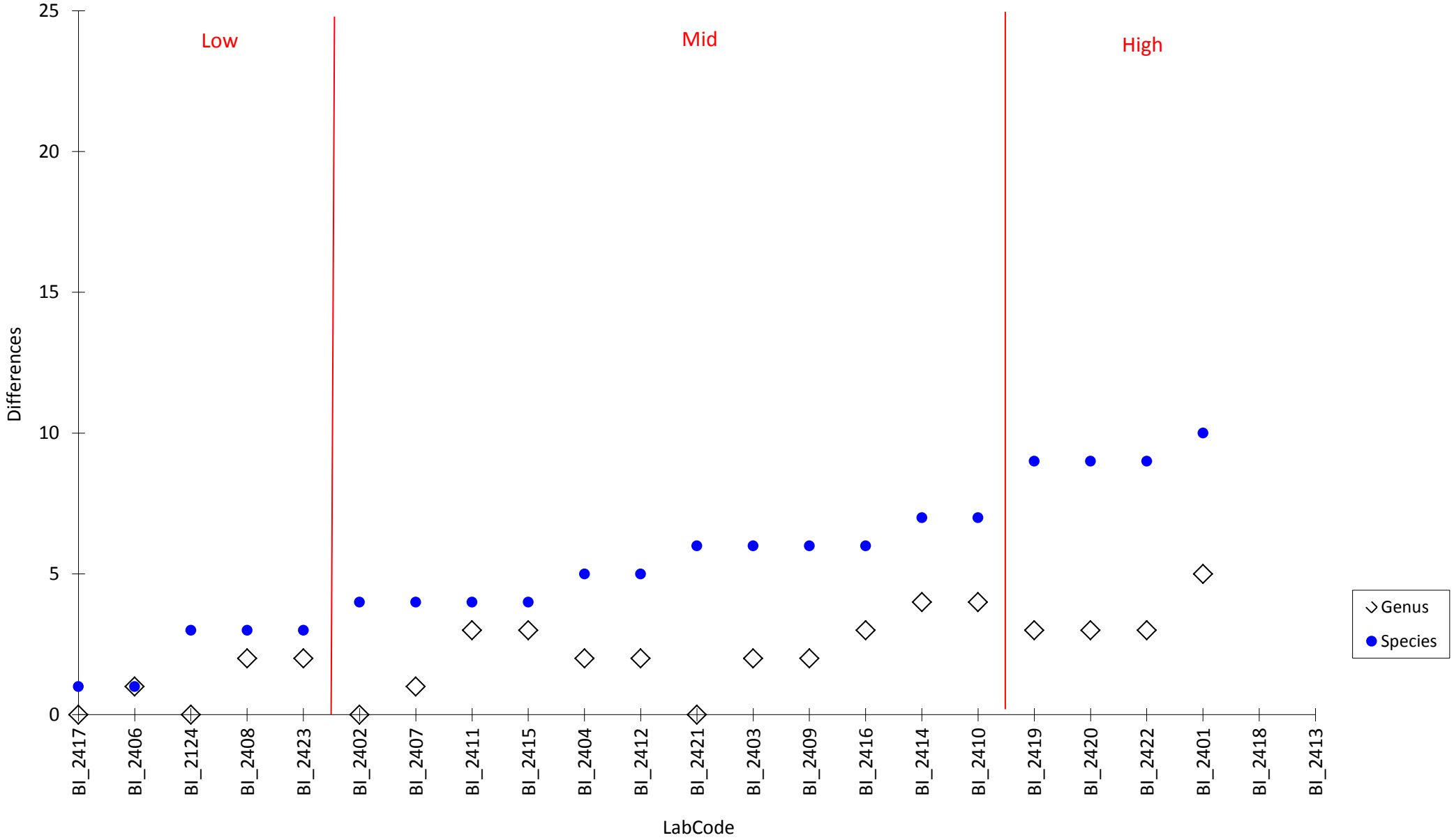

Table 1. The identification of fauna made by participating laboratories for RT54 (arranged by specimen). Names are given only where different from the AQC identification.

| | RT5401 | RT5402 | RT5403 | RT5404 | RT5405 |
|---|---|---|---|---|---|
| LabCode | *Spio martinensis* | *Prionospio cirrifera complex* | *Laonice bahusiensis* | *Dipolydora sp. B* | *Malacoceros tetracerus* |
| BI_2401 | - armata | - [cirrifera] | - - | Atherospio guillei | - vulgaris |
| BI_2402 | - - | - [cirrifera] | - - | - [saintjosephi] | [Scolelepis] fuliginosus |
| BI_2403 | - - | - [cirrifera] | - - | - coeca | - fuliginosus |
| BI_2404 | - goniocephala | - [cirrifera] | - - | - - | - - |
| BI_2406 | - - | - [cirrifera complex (c.f. cirrifera)] | - - | - [saintjosephi] | - - |
| BI_2407 | - [martinesis] | - [cirrifera] | - - | - coeca | - - |
| BI_2408 | - - | - [cirrifera] | - - | - coeca | - - |
| BI_2409 | - armata agg. | - - | - - | - - | - - |
| BI_2410 | - - | - [cirrifera] | - - | - socialis | - fulginosus |
| BI_2411 | - - | - - | - - | - - | - - |
| BI_2412 | - - | - [cirrifera (complex)] | - - | - coeca | - - |
| BI_2414 | - - | - [cirrifera] | Microspio mecznikowiana | Pseudopolydora pulchra | - - |
| BI_2415 | - - | - [cirrifera] | - - | - [saintjosephi] | - - |
| BI_2416 | - - | - [cirrifera] | Aonidella cf. cirrobranchiata | - sp. A | - fuliginosus |
| BI_2417 | - [martinenesis] | - [cirrifera] | - - | - [saintjosephi] | - girardi |
| BI_2419 | - goniocephala | - [cirrifera] | - - | - [saintjosephi] | - - |
| BI_2420 | - - | - [cirrifera] | - - | - coeca | [Scolelepis] fuliginosa |
| BI_2421 | - armata | - multibranchiata | - - | - - | - - |
| BI_2422 | - - | - - | - - | [Diploydora] [saintjosephi] | - - |
| BI_2423 | - - | - [cirrifera] | - - | - flava | - - |
| BI_2124 | - [martinenesis] | - [cirrifera] | - - | - - | - vulgaris |

Table 1. The identification of fauna made by participating laboratories for RT54 (arranged by specimen). Names are given only where different from the AQC identification.

| | RT5406 | RT5407 | RT5408 | RT5409 | RT5410 |
|---|---|---|---|---|---|
| LabCode | *Aonides paucibranchiata* | *Spiophanes wigleyi* | *Scolelepis squamata* | *Malacoceros vulgaris* | *Malacoceros vulgaris* |
| BI_2401 | - - | - - | - bonnieri | Marenzelleria viridis | - - |
| BI_2402 | - - | - - | [Scolelepis (Scolelepis)] - | [Scolelepis] [fuliginosus] | [Scolelepis] [fuliginosus] |
| BI_2403 | - - | - [wigley] | - - | Spio goniocephala | - [fuliginosus] |
| BI_2404 | - - | - - | - - | - - | - [fuliginosus] |
| BI_2406 | - - | - - | - - | Spio goniocephala | - - |
| BI_2407 | - - | Marenzelleria wireni | - - | - - | - girardi |
| BI_2408 | - - | - - | - - | Spio goniocephala | - - |
| BI_2409 | - - | Marenzelleria wireni | - - | Spio martinensis | - - |
| BI_2410 | - - | - - | - - | Spio multioculata | - [fulginosus] |
| BI_2411 | - - | - - | - - | - jirkovi | - - |
| BI_2412 | - - | Marenzelleria wireni | - - | - girardi | - - |
| BI_2414 | - - | - - | - - | Spio filicornis | - [fuliginosus] |
| BI_2415 | - - | - - | - - | Spio goniocephala | - - |
| BI_2416 | - - | - - | - - | - [fuliginosus] | - [fuliginosus] |
| BI_2417 | - - | - - | - - | - - | - - |
| BI_2419 | - - | - - | - - | Scolelepis cantebra | - - |
| BI_2420 | - - | - kroyeri | [Scolelepis (Scolelepis)] - | Marenzelleria viridis | [Scolelepis] [fuliginosa] |
| BI_2421 | - - | - - | - - | - - | - - |
| BI_2422 | - - | Spio armata | - - | - - | Spiophanes bombyx |
| BI_2423 | - - | - - | - - | - [vulgaris sensu Radashevsky] | - [vulgaris sensu Radashevsky] |
| BI_2124 | - - | - - | - - | - jirkovi | - - |

Table 1. The identification of fauna made by participating laboratories for RT54 (arranged by specimen). Names are given only where different from the AQC identification.

| | RT5411 | RT5412 | RT5413 | RT5414 | RT5415 |
|---|---|---|---|---|---|
| LabCode | *Polydora cornuta* | *Pseudopolydora sp. A* | *Pygospio elegans* | *Prionospio cirrifera complex* | *Aonides oxycephala* |
| BI_2401 | - - | Atherospio disticha | - - | Aurospio 0 | - - |
| BI_2402 | - - | - paucibranchiata | - - | - [cirrifera] | - - |
| BI_2403 | - - | - paucibranchiata | - - | - [cirrifera] | - - |
| BI_2404 | - - | - paucibranchiata | - - | - [cirrifera] | - - |
| BI_2406 | - - | - - | - - | - [cirrifera complex (c.f. aluta)] | - - |
| BI_2407 | - - | - - | - - | - [cirrifera] | - - |
| BI_2408 | - - | - [sp A] | - - | - [cirrifera] | - - |
| BI_2409 | - - | - paucibranchiata | - - | - - | - - |
| BI_2410 | Pseudopolydora antennata | Dipolydora coeca | - - | Laonice norgensis | - - |
| BI_2411 | - - | Dipolydora - | - - | - steenstrupi | - - |
| BI_2412 | - - | - paucibranchiata | - - | - [cirrifera (complex)] | - - |
| BI_2414 | - - | - - | - - | - [cirrifera] | - - |
| BI_2415 | - - | - - | - - | Aurospio banyulensis | - - |
| BI_2416 | - - | - - | - - | - [cirrifera] | - - |
| BI_2417 | - - | - [A] | - - | - [cirrifera] | - - |
| BI_2419 | - - | - paucibranchiata | - - | - multibranchiata | - - |
| BI_2420 | - - | - - | - - | - [cirrifera] | - - |
| BI_2421 | - - | - - | - - | - [cirrifera] | - - |
| BI_2422 | - - | - antennata | - - | - multibranciata | - - |
| BI_2423 | - - | - - | - - | - [cirrifera] | - - |
| BI_2124 | - - | - - | - - | - [cirrifera] | - - |

Table 1. The identification of fauna made by participating laboratories for RT54 (arranged by specimen). Names are given only where different from the AQC identification.

| | RT5416 | RT5417 | RT5418 | RT5419 | RT5420 | RT5421 |
|---|---|---|---|---|---|---|
| LabCode | *Aurospio banyulensis* | *Prionospio cf. dubia* | *Poecilochaetus serpens* | *Spiophanes kroyeri* | *Prionospio fallax* | *Dipolydora quadrilobata* |
| BI_2401 | - - | - [dubia] | - - | - - | - caspersi | Pseudopolydora pulchra |
| BI_2402 | - - | - caspersi | - - | - - | - - | - - |
| BI_2403 | - - | - - | - - | - - | - - | - - |
| BI_2404 | - - | - - | - - | - - | - - | - sp. B |
| BI_2406 | [Prionospio] [c.f. multibranchiata] | - [c.f. dubia] | - - | - - | - - | - - |
| BI_2407 | - - | - [dubia] | - - | - - | - - | - - |
| BI_2408 | Prionospio cirrifera | - - | - - | - - | - - | - - |
| BI_2409 | - - | - [cf.dubia] | - - | - - | - - | - giardi |
| BI_2410 | - - | - [dubia] | - - | - - | - - | - - |
| BI_2411 | Prionospio cirrifera complex | - [ cf dubia] | - - | - - | - - | - - |
| BI_2412 | Prionospio cirrifera (complex) | - - | - - | - - | - - | - - |
| BI_2414 | - dibranchiata | - - | - - | - - | - - | Pseudopolydora antennata |
| BI_2415 | Pygospio elegans | - [dubia] | - - | - - | - steenstrupi | - - |
| BI_2416 | - - | Aurospio dibranchiata | - - | - - | - - | - langerhansi |
| BI_2417 | - - | - - | - - | - - | - - | - - |
| BI_2419 | - dibranchiata | - [dubia] | - - | - - | - - | Pseudopolydora paucibranchiata |
| BI_2420 | Prionospio multibranchiata | - steenstrupi | - - | - - | - - | Pseudopolydora sp.A |
| BI_2421 | - dibranchiata | - - | - - | - - | - - | - flava |
| BI_2422 | Prionospio cirrifera complex | - [dubia] | - - | - wigleyi | - - | - caulleryi |
| BI_2423 | Prionospio cirrifera | - [dubia] | - - | - - | - - | - - |
| BI_2124 | - - | - - | - - | - - | - - | - - |

Table 1. The identification of fauna made by participating laboratories for RT54 (arranged by specimen). Names are given only where different from the AQC identification.

| | RT5422 | RT5423 | RT5424 | RT5425 |
|---|---|---|---|---|
| LabCode | *Polydora ciliata* | *Spio symphyta* | *Prionospio plumosa* | *Pseudopolydora paucibranchiata* |
| BI_2401 | - hermaphroditica | - [decorata] | - - | - - |
| BI_2402 | - - | - [decorata] | - - | - pulchra |
| BI_2403 | - - | - cf. filicornis | Paraprionospio alata | - - |
| BI_2404 | - - | Marenzelleria viridis | - - | Atherospio guillei |
| BI_2406 | - [calcarea] | - - | - - | - - |
| BI_2407 | - hermaphroditica | - - | - - | - - |
| BI_2408 | - - | - [decorata] | - - | - - |
| BI_2409 | - [calcarea] | - [decorata] | - fallax | - - |
| BI_2410 | - [calcarea] | - - | - steenstrupi | - - |
| BI_2411 | - [calcarea] | - - | - - | Dipolydora sp. A |
| BI_2412 | - - | - [decoratus] | - - | - - |
| BI_2414 | - - | - armata | - fallax | - - |
| BI_2415 | - [calcarea] | - - | - - | - - |
| BI_2416 | - - | Microspio mecznikowianus | - - | - - |
| BI_2417 | - - | - [aff. decorata] | - - | - - |
| BI_2419 | Pseudopolydora Pulchra | - - | - steenstrupi | - pulchra |
| BI_2420 | - - | - [decorata] | - caspersi | - pulchra |
| BI_2421 | - [agg. calcarea/ ciliata] | - [decorata] | - steenstrupi | - sp. A |
| BI_2422 | - [calcarea] | - filicormis | - steenstrupi | [Polydora] [paucibranciata] |
| BI_2423 | Dipolydora coeca | - [decorata] | - - | - - |
| BI_2124 | - hoplura | - [decorata] | - - | - - |

Table 2. The identification of fauna made by participating laboratories for RT54 (arranged by participant). Names are given only where different from the AQC identification.

| | Taxon | BI_2401 | BI_2402 | BI_2403 | BI_2404 | BI_2406 |
|---|---|---|---|---|---|---|
| RT5401 | *Spio martinensis* | - armata | - - | - - | - goniocephala | - - |
| RT5402 | *Prionospio cirrifera complex* | - [cirrifera] | - [cirrifera] | - [cirrifera] | - [cirrifera] | - [cirrifera complex (c.f. cirrifera)] |
| RT5403 | *Laonice bahusiensis* | - - | - - | - - | - - | - - |
| RT5404 | *Dipolydora sp. B* | Atherospio guillei | - [saintjosephi] | - coeca | - - | - [saintjosephi] |
| RT5405 | *Malacoceros tetracerus* | - vulgaris | [Scolelepis] fuliginosus | - fuliginosus | - - | - - |
| RT5406 | *Aonides paucibranchiata* | - - | - - | - - | - - | - - |
| RT5407 | *Spiophanes wigleyi* | - - | - - | - [wigley] | - - | - - |
| RT5408 | *Scolelepis squamata* | - bonnieri | [Scolelepis (Scolelepis)] - | - - | - - | - - |
| RT5409 | *Malacoceros vulgaris* | Marenzelleria viridis | [Scolelepis] [fuliginosus] | Spio goniocephala | - - | Spio goniocephala |
| RT5410 | *Malacoceros vulgaris* | - - | [Scolelepis] [fuliginosus] | - [fuliginosus] | - [fuliginosus] | - - |
| RT5411 | *Polydora cornuta* | - - | - - | - - | - - | - - |
| RT5412 | *Pseudopolydora sp. A* | Atherospio disticha | - paucibranchiata | - paucibranchiata | - paucibranchiata | - - |
| RT5413 | *Pygospio elegans* | - - | - - | - - | - - | - - |
| RT5414 | *Prionospio cirrifera complex* | Aurospio 0 | - [cirrifera] | - [cirrifera] | - [cirrifera] | - [cirrifera complex (c.f. aluta)] |
| RT5415 | *Aonides oxycephala* | - - | - - | - - | - - | - - |
| RT5416 | *Aurospio banyulensis* | - - | - - | - - | - - | [Prionospio] [c.f. multibranchiata] |
| RT5417 | *Prionospio cf. dubia* | - [dubia] | - caspersi | - - | - - | - [c.f. dubia] |
| RT5418 | *Poecilochaetus serpens* | - - | - - | - - | - - | - - |
| RT5419 | *Spiophanes kroyeri* | - - | - - | - - | - - | - - |
| RT5420 | *Prionospio fallax* | - caspersi | - - | - - | - - | - - |
| RT5421 | *Dipolydora quadrilobata* | Pseudopolydora pulchra | - - | - - | - sp. B | - - |
| RT5422 | *Polydora ciliata* | - hermaphroditica | - - | - - | - - | - [calcarea] |
| RT5423 | *Spio symphyta* | - [decorata] | - [decorata] | - cf. filicornis | Marenzelleria viridis | - - |
| RT5424 | *Prionospio plumosa* | - - | - - | Paraprionospio alata | - - | - - |
| RT5425 | *Pseudopolydora paucibranchiata* | - - | - pulchra | - - | Atherospio guillei | - - |

Table 2. The identification of fauna made by participating laboratories for RT54 (arranged by participant). Names are given only where different from the AQC identification.

| | Taxon | BI_2407 | BI_2408 | BI_2409 | BI_2410 | BI_2411 | BI_2412 |
|---|---|---|---|---|---|---|---|
| RT5401 | *Spio martinensis* | - [martinesis] | - - | - armata agg. | - - | - - | - - |
| RT5402 | *Prionospio cirrifera complex* | - [cirrifera] | - [cirrifera] | - - | - [cirrifera] | - - | - [cirrifera (complex)] |
| RT5403 | *Laonice bahusiensis* | - - | - - | - - | - - | - - | - - |
| RT5404 | *Dipolydora sp. B* | - coeca | - coeca | - - | - socialis | - - | - coeca |
| RT5405 | *Malacoceros tetracerus* | - - | - - | - - | - fulginosus | - - | - - |
| RT5406 | *Aonides paucibranchiata* | - - | - - | - - | - - | - - | - - |
| RT5407 | *Spiophanes wigleyi* | Marenzelleria wireni | - - | Marenzelleria wireni | - - | - - | Marenzelleria wireni |
| RT5408 | *Scolelepis squamata* | - - | - - | - - | - - | - - | - - |
| RT5409 | *Malacoceros vulgaris* | - - | Spio goniocephala | Spio martinensis | Spio multioculata | - jirkovi | - girardi |
| RT5410 | *Malacoceros vulgaris* | - girardi | - - | - - | - [fulginosus] | - - | - - |
| RT5411 | *Polydora cornuta* | - - | - - | - - | Pseudopolydora antennata | - - | - - |
| RT5412 | *Pseudopolydora sp. A* | - - | - [sp A] | - paucibranchiata | Dipolydora coeca | Dipolydora - | - paucibranchiata |
| RT5413 | *Pygospio elegans* | - - | - - | - - | - - | - - | - - |
| RT5414 | *Prionospio cirrifera complex* | - [cirrifera] | - [cirrifera] | - - | Laonice norgensis | - steenstrupi | - [cirrifera (complex)] |
| RT5415 | *Aonides oxycephala* | - - | - - | - - | - - | - - | - - |
| RT5416 | *Aurospio banyulensis* | - - | Prionospio cirrifera | - - | - - | Prionospio cirrifera complex | Prionospio cirrifera (complex) |
| RT5417 | *Prionospio cf. dubia* | - [dubia] | - - | - [cf.dubia] | - [dubia] | - [ cf dubia] | - - |
| RT5418 | *Poecilochaetus serpens* | - - | - - | - - | - - | - - | - - |
| RT5419 | *Spiophanes kroyeri* | - - | - - | - - | - - | - - | - - |
| RT5420 | *Prionospio fallax* | - - | - - | - - | - - | - - | - - |
| RT5421 | *Dipolydora quadrilobata* | - - | - - | - giardi | - - | - - | - - |
| RT5422 | *Polydora ciliata* | - hermaphroditica | - - | - [calcarea] | - [calcarea] | - [calcarea] | - - |
| RT5423 | *Spio symphyta* | - - | - [decorata] | - [decorata] | - - | - - | - [decoratus] |
| RT5424 | *Prionospio plumosa* | - - | - - | - fallax | - steenstrupi | - - | - - |
| RT5425 | *Pseudopolydora paucibranchiata* | - - | - - | - - | - - | Dipolydora sp. A | - - |

Table 2. The identification of fauna made by participating laboratories for RT54 (arranged by participant). Names are given only where different from the AQC identification.

| | Taxon | BI_2414 | BI_2415 | BI_2416 | BI_2417 | BI_2419 |
|---|---|---|---|---|---|---|
| RT5401 | *Spio martinensis* | - - | - - | - - | - [martinenesis] | - goniocephala |
| RT5402 | *Prionospio cirrifera complex* | - [cirrifera] | - [cirrifera] | - [cirrifera] | - [cirrifera] | - [cirrifera] |
| RT5403 | *Laonice bahusiensis* | Microspio mecznikowiana | - - | Aonidella cf. cirrobranchiata | - - | - - |
| RT5404 | *Dipolydora sp. B* | Pseudopolydora pulchra | - [saintjosephi] | - sp. A | - [saintjosephi] | - [saintjosephi] |
| RT5405 | *Malacoceros tetracerus* | - - | - - | - fuliginosus | - girardi | - - |
| RT5406 | *Aonides paucibranchiata* | - - | - - | - - | - - | - - |
| RT5407 | *Spiophanes wigleyi* | - - | - - | - - | - - | - - |
| RT5408 | *Scolelepis squamata* | - - | - - | - - | - - | - - |
| RT5409 | *Malacoceros vulgaris* | Spio filicornis | Spio goniocephala | - [fuliginosus] | - - | Scolelepis cantebra |
| RT5410 | *Malacoceros vulgaris* | - [fuliginosus] | - - | - [fuliginosus] | - - | - - |
| RT5411 | *Polydora cornuta* | - - | - - | - - | - - | - - |
| RT5412 | *Pseudopolydora sp. A* | - - | - - | - - | - [A] | - paucibranchiata |
| RT5413 | *Pygospio elegans* | - - | - - | - - | - - | - - |
| RT5414 | *Prionospio cirrifera complex* | - [cirrifera] | Aurospio banyulensis | - [cirrifera] | - [cirrifera] | - multibranchiata |
| RT5415 | *Aonides oxycephala* | - - | - - | - - | - - | - - |
| RT5416 | *Aurospio banyulensis* | - dibranchiata | Pygospio elegans | - - | - - | - dibranchiata |
| RT5417 | *Prionospio cf. dubia* | - - | - [dubia] | Aurospio dibranchiata | - - | - [dubia] |
| RT5418 | *Poecilochaetus serpens* | - - | - - | - - | - - | - - |
| RT5419 | *Spiophanes kroyeri* | - - | - - | - - | - - | - - |
| RT5420 | *Prionospio fallax* | - - | - steenstrupi | - - | - - | - - |
| RT5421 | *Dipolydora quadrilobata* | Pseudopolydora antennata | - - | - langerhansi | - - | Pseudopolydora paucibranchiata |
| RT5422 | *Polydora ciliata* | - - | - [calcarea] | - - | - - | Pseudopolydora Pulchra |
| RT5423 | *Spio symphyta* | - armata | - - | Microspio mecznikowianus | - [aff. decorata] | - - |
| RT5424 | *Prionospio plumosa* | - fallax | - - | - - | - - | - steenstrupi |
| RT5425 | *Pseudopolydora paucibranchiata* | - - | - - | - - | - - | - pulchra |

Table 2. The identification of fauna made by participating laboratories for RT54 (arranged by participant). Names are given only where different from the AQC identification.

| | Taxon | BI_2420 | BI_2421 | BI_2422 | BI_2423 | BI_2124 |
|---|---|---|---|---|---|---|
| RT5401 | *Spio martinensis* | - - | - armata | - - | - - | - [martinenesis] |
| RT5402 | *Prionospio cirrifera complex* | - [cirrifera] | - multibranchiata | - - | - [cirrifera] | - [cirrifera] |
| RT5403 | *Laonice bahusiensis* | - - | - - | - - | - - | - - |
| RT5404 | *Dipolydora sp. B* | - coeca | - - | [Diploydora] [saintjosephi] | - flava | - - |
| RT5405 | *Malacoceros tetracerus* | [Scolelepis] fuliginosa | - - | - - | - - | - vulgaris |
| RT5406 | *Aonides paucibranchiata* | - - | - - | - - | - - | - - |
| RT5407 | *Spiophanes wigleyi* | - kroyeri | - - | Spio armata | - - | - - |
| RT5408 | *Scolelepis squamata* | [Scolelepis (Scolelepis)] - | - - | - - | - - | - - |
| RT5409 | *Malacoceros vulgaris* | Marenzelleria viridis | - - | - - | - [vulgaris sensu Radashevsky] | - jirkovi |
| RT5410 | *Malacoceros vulgaris* | [Scolelepis] [fuliginosa] | - - | Spiophanes bombyx | - [vulgaris sensu Radashevsky] | - - |
| RT5411 | *Polydora cornuta* | - - | - - | - - | - - | - - |
| RT5412 | *Pseudopolydora sp. A* | - - | - - | - antennata | - - | - - |
| RT5413 | *Pygospio elegans* | - - | - - | - - | - - | - - |
| RT5414 | *Prionospio cirrifera complex* | - [cirrifera] | - [cirrifera] | - multibranciata | - [cirrifera] | - [cirrifera] |
| RT5415 | *Aonides oxycephala* | - - | - - | - - | - - | - - |
| RT5416 | *Aurospio banyulensis* | Prionospio multibranchiata | - dibranchiata | Prionospio cirrifera complex | Prionospio cirrifera | - - |
| RT5417 | *Prionospio cf. dubia* | - steenstrupi | - - | - [dubia] | - [dubia] | - - |
| RT5418 | *Poecilochaetus serpens* | - - | - - | - - | - - | - - |
| RT5419 | *Spiophanes kroyeri* | - - | - - | - wigleyi | - - | - - |
| RT5420 | *Prionospio fallax* | - - | - - | - - | - - | - - |
| RT5421 | *Dipolydora quadrilobata* | Pseudopolydora sp.A | - flava | - caulleryi | - - | - - |
| RT5422 | *Polydora ciliata* | - - | - [agg. calcarea/ ciliata] | - [calcarea] | Dipolydora coeca | - hoplura |
| RT5423 | *Spio symphyta* | - [decorata] | - [decorata] | - filicormis | - [decorata] | - [decorata] |
| RT5424 | *Prionospio plumosa* | - caspersi | - steenstrupi | - steenstrupi | - - | - - |
| RT5425 | *Pseudopolydora paucibranchiata* | - pulchra | - sp. A | [Polydora] [paucibranciata] | - - | - - |

## Specimen Images and Detailed Breakdown of Identifications

RT54 was designed to test and assist with the development of identification literature for Spionidae and to test the compatibility of spionid records from northern Europe. Soon after it was circulated, the then current version of the guide (Radashevsky, 2017) that resulted from the 2016 spionid workshop was also circulated to ring test participants (3rd November 2017), along with the RT documentation. Specimens from ring test source pots or adjacent samples were sent to Dr Vasily Radashevsky (VR) for examination, for the majority of RT specimens; details are included in the explanations below each circulated specimen entry. Several participants highlighted problems with the originally circulated identifications. The results have identified several areas that require further research and some amendments that will be needed to the key. These are detailed under the specimen headings and in the discussion section below. The key is currently under continuous modification and several updates have been made since circulation of the RT and the guide version sent to accompany it; identifications given in this bulletin follow the circulated guide (Radashevsky, 2017). Further edits will be made, partly to be informed by this RT, and we hope that a published version will be produced this year.

LabCodes are abbreviated in this report to exclude the Scheme year, *e.g.* BI_2401 = 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)

### RT5401 – *Spio martinensis* (Figure 1a)

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Wales. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 1a. *Spio martinensis* (RT5401) – L

Five specific differences: Labs 01 and 21 identified as *S. armata* (Figure 1b); lab 09 identified as *S. armata* agg.; Labs 04, and 19 identified as *S. goniocephala* (Figure 1c) (all of which have the branchiae of chaetiger 1 much shorter than those on chaetiger 2). *Spio* were not included in the draft of the workshop key circulated with the ring test (Radashevsky, 2017). Identification features for north east Atlantic *Spio* were published by Bick et al. (2010) and Meißner et al. (2011).

Labs 07, 17 and 24 mis-spelled the species as *martinesis*, and *martinenesis*, respectively.

Fig. 1b. *Spio armata* (11224) – L

Fig. 1c. *Spio goniocephala* (10461) – D

**RT5402 – *Prionospio cirrifera* complex (Figure 2a)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Western Scotland. Condition: Fair, medium; inter-parapodial pouches present. Specimens from three samples; remainder from one reviewed by V. Radashevsky.

Fig. 2a. *Prionospio cirrifera* complex (RT5102) – D

One specific difference: Lab 21 identified as *P. multibranchiata* (Figure 2b) (which has more branchiae and in which the neuropodial postchaetal lamellae of chaetiger 2 are ventrally rounded).

Labs 01, 02, 03, 04, 07, 08, 14, 15, 16, 17, 19, 20, 23 and 24 excluded 'complex' from the taxon name.

Fig. 2b. *Prionospio* c.f. *multibranchiata* (58579) – D

**RT5403 – *Laonice bahusiensis* (Figure 3a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southeast England. Condition: Fair, small. Specimens from three samples; remainder from two reviewed by V. Radashevsky.

Fig. 3a. *Laonice bahusiensis* (RT5403) - D

Two generic and Two specific differences: Lab 14 identified as *Microspio mecznikowiana* (no material available; Figure 3b shows *M. atlantica*) (in which the branchiae begin on chaetiger 2); Lab 16 identified as *Aonidella cf. cirrobranchiata* (Figure 3c) (which has a dorso-ventrally flattened prostomium).

Fig. 3b. *Microspio atlantica* (7109) – L

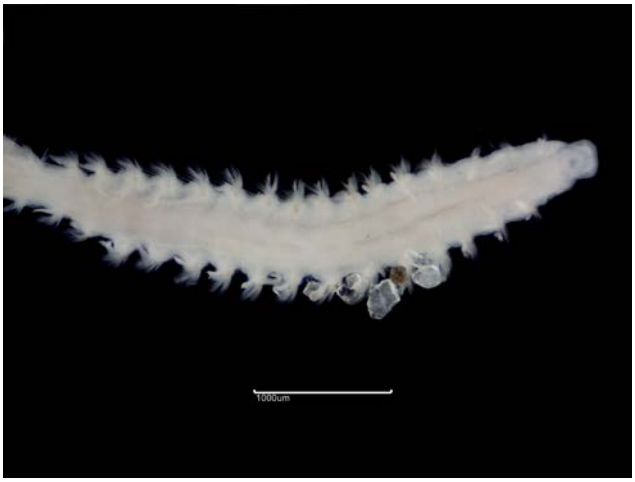

Fig. 3c. *Aonidella c.f. cirrobranchiata* (60039) – D

**RT5404 – *Dipolydora* 'species. B' (Figure 4a, 4b)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southeast England. Condition: Fair, small. Specimens from five samples; remainder from three and one more from same survey reviewed by V. Radashevsky; these pots included some other species but the circulated specimens were checked to exclude these.

Fig. 4a. *Dipolydora* 'species B' (RT5404) - D

Two generic and ten specific differences: Lab 01 identified as *Atherospio guillei* (Figure 4b) (in which the heavy falcate spines of chaetiger 5 are neuropodial); Lab 14 identified as *Pseudopolydora pulchra* (Figure 4c) (which has chaetiger 5 only slightly larger than chaetigers 4 and 6); Lab 16 identified as *Dipolydora* 'species A' (Figure 4d) (which has bristles on the heavy spines of chaetiger 5); Lab 10 identified as *Dipolydora socialis* (no material available) (which is not known from European waters); Lab 23 identified as *Dipolydora flava* (Figure 4e) (in which posterior notopodia have tight packets of needle-like spines); Labs 03,

07, 08, 12 and 20 identified as *Dipolydora coeca* (no material available) (which has ten or more heavy spines in a series on chaetiger 5).

Labs 02, 06, 15, 17, 19 and 22 identified as *Dipolydora saintjosephi*, which lacks a median antenna. As some RT specimens may have lacked or had an eroded median antenna and the possibility of other distinguishing features between D. *saintjosephi* and 'species B' is under review, we have considered identifications of *D. saintjosephi* as correct for the purposes of this exercise.

Fig. 4b. *Atherospio guillei* (10353) – D

Fig. 4c. *Pseudopolydora pulchra* (6054) – D

Fig. 4d. *Dipolydora* 'species A' (10210) – L

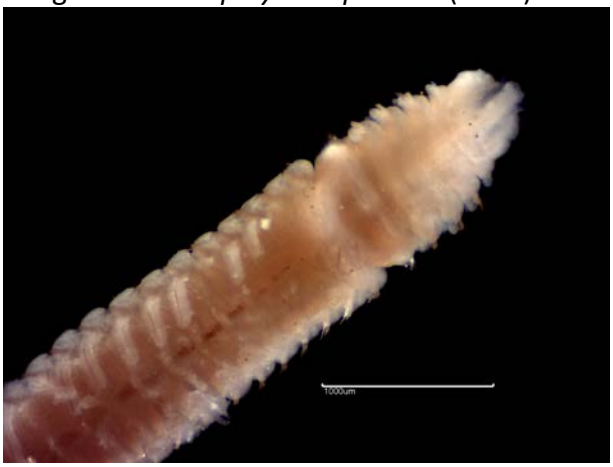

Fig. 4e. *Dipolydora flava* (9587) – D

**RT5405 – *Malacoceros tetracerus* (Figure 5a)**

Substratum: Sand. Salinity: Variable (Euryhaline). Depth: Intertidal. Geography: Northeast England. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 5a. *Malacoceros tetracerus* (RT5405) – L

Eight specific differences: Labs 01 and 24 identified as *M. vulgaris* (Figure 10a) (which usually has only 3-5 hooks per neuropodium); Labs 02, 03, 10, 16 and 20 identified as its synonym *M. fuliginosus*; Lab 17 identified as *M. girardi* (Figure 5b) (which has serpentine ciliary bands laterally on each segment).

Labs 02 and 20 incorrectly assigned the species (identified as *M. fuliginosus*) to *Scolelepis*. We have assumed identifications of *M. vulgaris* to be as defined in the key circulated with this ring test.

Fig. 5b. *Malacoceros girardi* (58111) – D

**RT5406 – Aonides paucibranchiata (Figure 6a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southeast England. Condition: Fair, small. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 6a. *Aonides paucibranchiata* (RT5406) – L

No generic and no specific differences.

**RT5407 – *Spiophanes wigleyi* (Figure 7a)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Lower Shelf). Geography: Norway. Condition: Fair, small. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky these pots included some other species but the circulated specimens were checked to exclude these.

Fig. 7a. *Spiophanes wigleyi* (RT5407) – D

Four generic and five specific differences: Labs 07, 09 and 12 identified as *Marenzelleria wireni* (no material available; Figure 7b shows *M. neglecta*); Lab 22 identified as *Spio armata* (Figure 1b) (both of which have branchiae and lack curved spines on chaetiger 1); Lab 20 identified as *Spiophanes kroyeri* (Figure 19a) (which has an occipital antenna).

Lab 03 mis-spelled the species as *wigley*.

Fig. 7b. *Marenzelleria neglecta* (RT4108) - L

**RT5408 – *Scolelepis squamata* (Figure 8a)**

Substratum: Sand. Salinity: Full (Euhaline). Depth: Infralittoral. Geography: Wales. Condition: Fair, small. Specimens from two samples; remainder from one reviewed by V. Radashevsky.

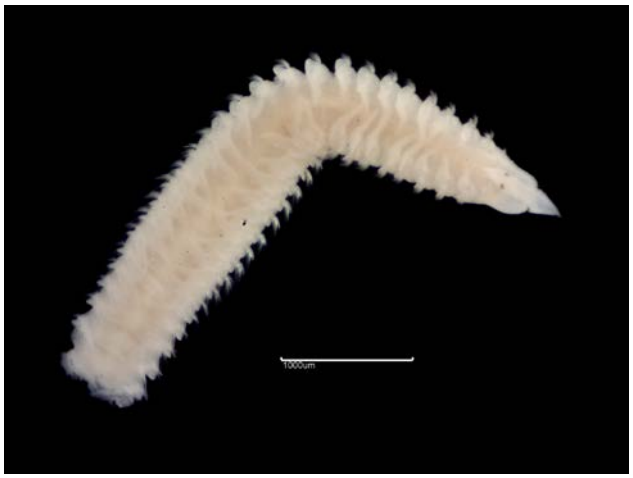

Fig. 8a. *Scolelepis squamata* (RT5408) – D

One specific difference: Lab 01 identified as *S. bonnieri* (Figures 8b, 8c) (which has an occipital antenna). *Scolelepis* were not included in the draft of the workshop key circulated with the ring test (Radashevsky, 2017). Identification features for *Scolelepis* have been published by Sikorski & Pavlova (2015) and Surugiu (2016).

Labs 02 and 20 included the subgenus: *Scolelepis (Scolelepis)*.

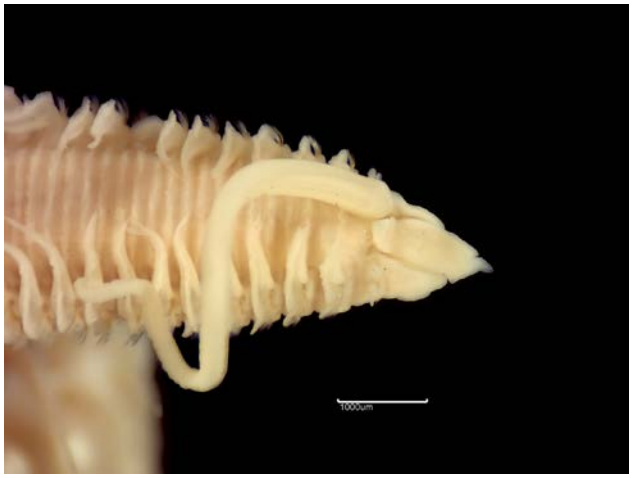

Fig. 8b. *Scolelepis bonnieri* (8172) - D

Fig. 8c. *Scolelepis bonnieri* (8172) - L

**RT5409 – *Malacoceros vulgaris* (Figure 9a)**

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Western Scotland. Condition: Fair, small.

Fig. 9a. *Malacoceros vulgaris* (RT5409) – D

Ten generic and thirteen specific differences: Labs 03, 06, 08 and 15 identified as *Spio goniocephala* (Figure 1c); Lab 09 identified as *Spio martinensis* (Figure 1a); Lab 10 identified as *Spio multioculata* (no material available); Lab 14 identified as *Spio filicornis* (Figures 9b, 9c); Lab 19 identified as *Scolelepis cantebra*, i.e. *S. cantabra* (Figure 9d) (all of which lack prostomial horns); Labs 01 and 20 identified as *Marenzelleria viridis* (no material available; Figure 7b shows *M. neglecta*) (which has long dorsal capillaries on anterior chaetigers); Labs 11 and 24 identified as *Malacoceros jirkovi* (Figure 9e) (which has branchiae free from the notopodial postchaetal lamellae); Lab 12 identified as *Malacoceros girardi* (Figure 5b) (which has serpentine ciliary bands laterally on each segment).

Labs 02 and 16 used the synonym *fuliginosus*, which Lab 02 incorrectly placed in *Scolelepis*.

Fig. 9b. *Spio c.f. filicornis* (59315) – D

Fig. 9c. *Spio c.f. filicornis* (59315) – V

Fig. 9d. *Scolelepis cantabra* (56883) – D

Fig. 9e. *Malacoceros jirkovi* (59477) – D

**RT5410 – *Malacoceros vulgaris* (Figure 10a)**

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Northeast England. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 10a. *Malacoceros vulgaris* (RT5410) – D

One generic and two specific differences: Lab 22 identified as *Spiophanes bombyx* (Figure 10b) (which lacks branchiae); Lab 12 identified as *Malacoceros girardi* (Figure 5b) (which has serpentine ciliary bands laterally on each segment).

Labs 02, 03, 04, 10, 14, 16 and 20 used the synonym *fuliginosus*, which Labs 02 and 20 incorrectly placed in *Scolelepis*.

Fig. 10b. *Spiophanes bombyx* (9802) – D

**RT5411 – *Polydora cornuta* (Figure 11a)**

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Wales. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 11a. *Polydora cornuta* (RT5411) – D

One generic and specific difference: Lab 10 identified as *Pseudopolydora antennata* (no material available; Figure 12a shows *P.* 'species A', Figure 25a shows *P. paucibranchiata*, Figure 25b shows *P. pulchra*) (which has chaetiger 5 only slightly larger than the others).

**RT5412 – *Pseudopolydora* 'species A' (Figure 12a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Fair, medium. All specimens from one sample; specimens from another sample from the same survey reviewed by V. Radashevsky.

Fig. 12a. *Pseudopolydora* 'species A' (RT5412) – D

Three generic and nine specific differences: Lab 01 identified as *Atherospio disticha* (no material available; Figure 04b shows *A. guillei*) (which has aristate spines in both chaetiger 4 and chaetiger 5); Lab 10 identified as *Dipolydora coeca*; Lab 11 identified as *Dipolydora* (Figure 04a shows *Dipolydora* 'species B') (which have chaetiger 5 almost twice as large as chaetigers 4 and 6); Lab 22 identified as *Pseudopolydora antennata* (no material available) (which has a deeply incised prostomium); Labs 02, 03, 04, 09, 12 and 19 identified as *P. paucibranchiata* (Figure 25a) (in which the caruncle reaches chaetiger 4).

**RT5413 – *Pygospio elegans* (Figure 13a)**

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Wales. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 13a. *Pygospio elegans* (RT5413) - D

No generic and no specific differences.

**RT5414 – *Prionospio cirrifera* complex (Figure 14a)**

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Lower shelf). Geography: North Sea. Condition: Fair, medium; inter-parapodial pouches present. Specimens from two samples; remainder of one source pot and another from the same survey reviewed by V. Radashevsky.

Fig. 14a. *Prionospio cirrifera* complex (RT5414) – L

Three generic and six specific differences: Lab 10 identified as *Laonice norgensis* (no material available; Figure 3a shows *L. bahusiensis*); Lab 01 identified as *Aurospio*; Lab 15 identified as *A. banyulensis* (Figure 16a); Lab 11 identified as *Prionospio steenstrupi* (no material available); Labs 19 and 22 identified as *Prionospio multibranchiata* (Figure 2b) (in all of which the neuropodial postchaetal lamellae of chaetiger 2 are ventrally rounded).

Labs 02, 03, 04, 07, 08, 14, 16, 17, 20, 21, 23 and 24 excluded 'complex' from the taxon name. Lab 06 included '*c.f. aluta*'.

**RT5415 – *Aonides oxycephala* (Figure 15a)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Western Scotland. Condition: Fair, medium. Specimens from two samples; remainder of one source pot reviewed by V. Radashevsky

Fig. 15a. *Aonides oxycephala* (RT5415) – L

No generic and no specific differences.

**RT5416 – *Aurospio banyulensis* (Figure 16a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southwest England. Condition: Fair, medium. Specimens from four samples; remainder of one source pot reviewed by V. Radashevsky.

Fig. 16a. *Aurospio banyulensis* (RT5416) – L

Seven generic and ten specific differences: Lab 15 identified as *Pygospio elegans* (Figure 13a) (which lacks anterior branchiae); Lab 20 identified as *Prionospio multibranchiata* (Figure 1b); Labs 08, 11, 12, 22 and 23 identified as *Prionospio cirrifera*, sometimes as 'complex' (Figures 1a, 14a) (in all of which the branchiae begin on chaetiger 2); Labs 14, 19 and 21 identified as *Aurospio dibranchiata* (no material available) (in which the neuropodial hooks begin on chaetiger 9-11).

Lab 06 identified as *Prionospio c.f. multibranchiata*; upon re-examination of this specimen, we acknowledge that it was a misplaced *Prionospio* and have counted the identification as correct for this exercise.

**RT5417 – *Prionospio cf. dubia* (Figure 17a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southwest England. Condition: Fair, medium. Specimens from three samples; remainder of two source pots reviewed by V. Radashevsky.

Fig. 17a. *Prionospio cf. dubia* (RT5416) – D

One generic and three specific differences: Lab 16, identified as *Aurospio dibranchiata* (no material available, Figure 16a, shows *A. banyulensis*) (in which the branchiae begin on chaetiger 3); Lab 02 identified as *Prionospio caspersi* (no material available); Lab 20 identified as *Prionospio steenstrupi* (no material available) (both of which have dorsal crests on chaetiger 7).

Labs 01, 07, 10, 15, 19, 22 and 23 excluded 'c.f.' from the taxon name.

**RT5418 – *Poecilochaetus serpens* (Figure 18a)**

Substratum: Sand. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Southeast England. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 18a. *Poecilochaetus serpens* (9000) – D

No generic and no specific differences.

**RT5419 – *Spiophanes kroyeri* (Figure 19a)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North Sea. Condition: Fair, medium. Specimens from five samples; remainder of one source pot reviewed by V. Radashevsky; this included another species but the circulated specimens were checked to exclude this.

Fig. 19a. *Spiophanes kroyeri* (RT5419) – D

One specific difference: Lab 22 identified as *Spiophanes wigleyi* (Figure 7a) (which lacks an occipital antenna).

**RT5420 – *Prionospio fallax* (Figures 20a, 20b)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Western Scotland. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

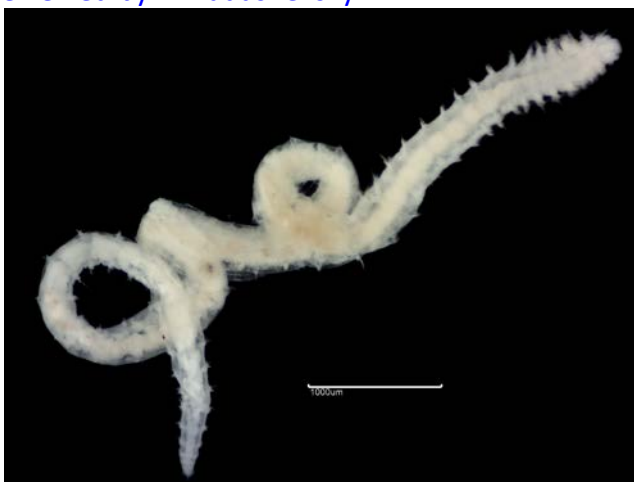

Fig. 20a. *Prionospio fallax* (RT5420) – D

Fig. 20b. *Prionospio fallax* (RT5420) – L

Two specific differences: Lab 15 identified as *Prionospio steenstrupi* (no material available) (which has dorsal crests on several segments); Lab 01 identified as *Prionospio caspersi* (no material available) (which has notopodial hooks from chaetigers 22-40).

**RT5421 – *Dipolydora quadrilobata* (Figure 21a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: north of Ireland. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 21a. *Dipolydora quadrilobata* (RT5421) – D

Four generic and nine specific differences: Lab 01 identified as *Pseudopolydora pulchra* (Figure 4c); Lab 14 identified *Pseudopolydora antennata* (no material available); Lab 19 identified *Pseudopolydora paucibranchiata* (Figure 25a); Lab 20 identified *Pseudopolydora* 'species A' (Figure 12a) (all of which have chaetiger 5 only slightly larger than chaetigers 4 and 6); Lab 22 identified *Dipolydora caulleryi* (Figure 21b) (in which the heavy spines of chaetifer 5 are falcate); Lab 04 identified *Dipolydora* 'species B' (Figure 04a); Lab 04 identified *Dipolydora flava* (Figure 4e); Lab 16 identified *Dipolydora langerhansi* (no material available; Figures 4a and 4e show related *Dipolydora* spp.); Lab 09 identified *Dipolydora giardi* (Figure 21d) (all of which lack bristles on the heavy spines of chaetiger 5).

Fig. 21b. *Dipolydora caulleryi* (60240) – D

Fig. 21c. *Dipolydora giardi* (59873) - L

**RT5422 – *Polydora ciliata* (Figure 22a)**

Substratum: Diamicton. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: North of Ireland. Condition: Fair, small. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 22a. *Polydora ciliata* (RT5422) – D

Two generic and five specific differences: Lab 19 identified as *Pseudopolydora pulchra* (Figure 4c) (which has chaetiger 5 only slightly larger than chaetigers 4 and 6); Lab 23 identified as *Dipolydora coeca* (no material available; Figures 4a and 4e show related *Dipolydora* spp.) (which has notochaetae on chaetiger 1); Lab 24 identified as *Polydora hoplura* (no material available) (which has an occipital antenna); Lab 07 identified as *Polydora hermaphroditica* (no material available) (which has needle-like spines in posterior notopodia).

Labs 06, 09, 10, 11, 15 and 22 identified as *Polydora calcarea* (no material available), which bores into shell; Lab 21 named as *Polydora calcarea/ciliata*. As the habitat description (diamicton) allowed for the possibility of *P. calcarea* and there are no known morphological differences, identifications of *P. calcarea* have been accepted as correct for the purposes of this exercise; however, we would recommend use of the name *P. ciliata*, except where specimens are known to have been extracted from shell.

**RT5423 – *Spio cf. symphyta* (Figure 23a)**

Substratum: Diamicton. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: North of Ireland. Condition: Fair, medium. All specimens from one sample; specimens from another sample from the same survey reviewed by V. Radashevsky.

Fig. 23a. *Spio cf. symphyta* (RT5423) – L

Two generic and five specific differences: Lab 04 identified as *Marenzelleria viridis* (no material available; Figure 7b shows *M. neglecta*) (which lacks a pigment pattern); Lab 16 identified as *Microspio mecznikowianus* (no material available; Figure 3b shows *M. atlantica*) (which has branchiae beginning on chaetiger 2); Lab 14 identified as *Spio armata* (Figure 1b) (which has the branchiae of chaetiger 1 much shorter than those on chaetiger 2); Labs 03 and 22 identified as *Spio filicornis*, or 'aff. *filicornis*' (Figure 9b) (which has a distinct keel on the posterior part of the prostomium).

Labs 01, 02, 08, 09, 17, 20, 21, 23 and 24 identified as *Spio decorata* (no material

available) or '*S.* aff. *decorata*'; as the taxonomy of UK *Spio* requires further research, we have accepted identifications of *S. decorata* as correct for the purposes of this exercise. Figures 23b and 23c show views of another form similar to *S. symphyta*. Figures 23d and 23e show a form similar to *S. decorata*. The true identities of all these forms are still under investigation.


Fig. 23b. *Spio cf. symphyta* (55371) – D

Fig. 23c. *Spio cf. symphyta* (55371) – V

Fig. 23d. *Spio cf. decorata* (56883) – D

Fig. 23e. *Spio cf. decorata* (56883) – V

**RT5424 – *Prionospio plumosa* (Figure 24a)**

Substratum: Mud. Salinity: Full (Euhaline). Depth: Circalittoral (Upper Shelf). Geography: Norway. Condition: Fair, medium. All specimens from one sample; remainder of source pot reviewed by V. Radashevsky.

Fig. 24a. *Prionospio plumosa* (RT5424) – L

One generic and eight specific differences: Labs 10, 19, 21 and 22 identified as *Prionospio steenstrupi* (no material available) (which has dorsal crests on several chaetigers); Lab 20 identified as *Prionospio caspersi* (no material available); Labs 09 and 14 identified as *Prionospio fallax* (Figure 20a) (both of which apinnate branchiae on chaetiger 3).

Lab 03 named as *Paraprionospio alata* (no material available); this was apparently a WoRMS misinterpretation error, whereby *Prionospio plumosa* under a different author is corrected to *Paraprionospio alata*; whilst the identification may have been correct, this 'WoRMS error' is considered a generic error from a data perspective.

**RT5425 – *Pseudopolydora paucibranchiata* (Figure 25a)**

Substratum: Mud. Salinity: Variable (Euryhaline). Depth: Infralittoral. Geography: Netherlands. Condition: Fair, medium. All specimens from one sample; provided by M. Faasse.

Fig. 25a. *Pseudopolydora paucibranchiata* (RT5425) – D

Two generic and six specific differences: Lab 04 identified as *Atherospio guillei* (Figure 4b) (in which the heavy falcate spines of chaetiger 5 are neuropodial); Lab 11 identified as *Dipolydora* 'species B' (Figure 4a) (which has chaetiger 5 much larger than chaetigers 4 and 6); Labs 02, 19 and 20 identified as *Pseudopolydora pulchra* (Figure 21b) (which has a bilobed prostomium); Lab 21 identified as *Pseudopolydora* 'species A' (Figure 12a) (which has a caruncle extending only to the end of chaetiger 2).

Lab 22 erroneously assigned the species to *Polydora*.

## Taxonomic and Identification policy problems highlighted by this RT

The ring test was circulated during ongoing work on an updated key to British spionids, as part of the process of developing the key. It was anticipated that it would highlight areas for further work. Some participants submitted comments following submission of the initial results and reviews of identifications and scoring policies were made after circulation of the interim results. Several taxonomic and identification problems were highlighted through this exercise, discussed above; more detail on the more complex problems is given below.

*Dipolydora coeca* complex. VR identified *Dipolydora* from samples associated with Specimen 04 as either *D. flava* or the as yet un-named *Dipolydora* 'species B'. It was known that the original sample pots (originally named as *D. coeca* agg. by APEM) would contain mixtures but RT specimens were selected to represent one segregate species. The main distinguishing feature of 'species B' is the presence of an occipital antenna but the large number of *D. saintjosephi* identifications suggests that the antenna may often be eroded. Further work will be required to fully resolve the identities of these species.

*Spio cf. decorata / symphyta* complex. Specimen 23 was originally identified by APEM as *Spio cf. decorata*, following literature to date and recognition of consistent colour patterns. VR identified those from a sample associated with the RT specimens as S*. cf. symphyta*. The identification of UK *Spio* species remains uncertain and progress through the NMBAQC workshop and this RT will hopefully lead to future resolution of these problems.

## Acknowledgements

We would like to thank Marco Faasse (ECoast Marine Research) for supply of Specimen 25; and all participants that have provided feedback following issue of interim results. We are especially grateful to Vasily Radashevsky (Institute of Marine Biology, National Scientific Center of Marine Biology, Far Eastern Branch of the Russian Academy of Sciences) for producing the spionid guide that accompanied this ring test and for the review of many specimens from the same samples or projects as the ring test specimens.

## References

Bick, A., Otte, K & Meißner, K., 2010. A contribution to the taxonomy of *Spio* (Spionidae, Polychaeta, Annelida) occurring in the North and Baltic Seas, with a key to species recorded in this area. *Marine Biodiversity*, 40, 161-180.

Meißner, K., Bick, A. & Bastrop, R., 2011. On the identity of *Spio filicornis* (O.F. Müller, 1776) - with the designation of a neotype, and the description of two new species from the North East Atlantic Ocean based on morphological and genetic studies. *Zootaxa*, 2815, 1-27.

Radashevsky, V.I., 2017. Identification keys and comments on the taxonomy of spionid polychaetes (Annelida: Spionidae) from the continental shelf of northern Europe. (unpublished draft circulated to ring test participants, 3rd November 2017).

Sikorski, A.V. & Pavlova, L.V., 2015. New species of *Scolelepis* (Polychaeta, Spionidae) from the Norwegian coast and Barents Sea with a brief review of the genus. *Fauna Norvegica*, 35, 9-19.

Surugiu, V., 2016. On the taxonomic status of the European *Scolelepis (Scolelepis) squamata* (Polychaeta: Spionidae), with description of a new species from southern Europe. *Zootaxa*, 4161(2), 151-176.

**Index (Figures)**

*Spio cf. filicornis*.....9b, 9c

*Spio goniocephala*.....1c

*Spio martinensis*.....1a

*Spio cf. symphyta*.....23a, 23b, 23c

*Spiophanes bombyx*.....10b

*Spiophanes kroyeri*.....19a

*Spiophanes wigleyi*.....7a

**Ring Test Specimen Return Instructions**

**Please return all ring test specimens by 27th April 2018.** 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**