

The National Marine Biological
Analytical Quality Control Scheme

Fish Ring Test Bulletin - F_RT05

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RING TEST DETAILS

Fish Ring Test #05

Type/Contents - General

Circulated – 06/02/2012

Completion Date – 27/04/2012

Number of Participating Laboratories - 11

Number of Results Received – 17*

*Multiple data entries per laboratory permitted

Summary of Differences

| Specimen | Genus | Species | Total differences for 17 returns | |
|----------|-----------------------|---------------------------|----------------------------------|---------|
| | | | Genus | Species |
| FRT0501 | <i>Hyperoplus</i> | <i>lanceolatus</i> | 0 | 0 |
| FRT0502 | <i>Oncorhynchus</i> | <i>mykiss</i> | 9 | 9 |
| FRT0503 | <i>Gobius</i> | <i>niger</i> | 5 | 5 |
| FRT0504 | <i>Lipophrys</i> | <i>pholis</i> | 0 | 0 |
| FRT0505 | <i>Pleuronectes</i> | <i>platessa</i> | 5 | 5 |
| FRT0506 | <i>Phrynorhombus</i> | <i>norvegicus</i> | 6 | 6 |
| FRT0507 | <i>Ammodytes</i> | <i>tobianus</i> | 10 | 10 |
| FRT0508 | <i>Hyperoplus</i> | <i>lanceolatus</i> | 7 | 13 |
| FRT0509 | <i>Zeus</i> | <i>faber</i> | 0 | 0 |
| FRT0510 | <i>Pomatoschistus</i> | <i>microps</i> | 1 | 4 |
| FRT0511 | <i>Microchirus</i> | <i>variegatus</i> | 5 | 5 |
| FRT0512 | <i>Trisopterus</i> | <i>minutus</i> | 1 | 6 |
| FRT0513 | <i>Perca</i> | <i>fluviatilis</i> | 0 | 0 |
| FRT0514 | <i>Raja</i> | <i>clavata</i> | 0 | 6 |
| FRT0515 | <i>Lophius</i> | <i>piscatorius</i> | 0 | 0 |
| | | Total differences | 49 | 69 |
| | | Average differences /lab. | 2.9 | 4.1 |

Table 1. The identification of fauna made by participating laboratories for F_RT05 (arranged by specimen). Names are given only where different from the AQC identification.

| | FRT0501 | FRT0502 | FRT0503 | FRT0504 | FRT0505 | FRT0506 | FRT0507 | FRT0508 |
|--------------|-------------------------------|----------------------------|---------------------------|-------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|
| Taxon | <i>Hyperoplus lanceolatus</i> | <i>Oncorhynchus mykiss</i> | <i>Gobius niger</i> | <i>Lipophrys pholis</i> | <i>Pleuronectes platessa</i> | <i>Phrynorhombus norvegicus</i> | <i>Ammodytes tobianus</i> | <i>Hyperoplus lanceolatus</i> |
| LB1802 | -- | [Oncorhynchus] - | -- | -- | Platichthys flesus | -- | -- | - immaculatus |
| LB1803 | -- | -- | -- | -- | -- | Zeugopterus regius | Tobianus marinus | -- |
| LB1804 | -- | Salmo trutta | -- | -- | -- | -- | -- | -- |
| LB1805 | -- | -- | Pomatoschistus vernacular | -- | -- | -- | Hyperoplus lanceolatus | Ammodytes tobianus |
| LB1806 | -- | Salmo salar | Thorogobius ephippiatus | -- | Glyptocephalus cynoglossus | -- | Hyperoplus lanceolatus | Ammodytes tobianus |
| LB1808 | -- | Salmo trutta | -- | -- | -- | -- | -- | -- |
| LB1809 | -- | -- | -- | -- | -- | -- | -- | - immaculatus |
| LB1814a | -- | Salmo trutta | -- | -- | -- | -- | -- | - immaculatus |
| LB1814b | -- | Salmo trutta | -- | -- | -- | -- | Hyperoplus lanceolatus | - immaculatus |
| LB1814c | -- | Salmo trutta | -- | -- | -- | -- | Hyperoplus immaculatus | - immaculatus |
| LB1814d | [Hyperlopus] - | Salmo trutta | -- | -- | -- | [Phynorhombus] - | Hyperlopus immaculatus | [Hyperlopus] - |
| LB1849a | -- | -- | -- | -- | Hippoglossoides platessoides | Limanda limanda | Gymnammodytes semisquamatus | Ammodytes tobianus |
| LB1849b | -- | -- | Pomatoschistus microps | -- | Hippoglossus hippoglossus | Limanda limanda | Gymnammodytes semisquamatus | Ammodytes tobianus |
| LB1849c | -- | -- | -- | -- | Hippoglossoides platessa | Limanda limanda | Gymnammodytes semisquamatus | Ammodytes tobianus |
| LB1849d | -- | -- | -- | -- | -- | Limanda limanda | Gymnammodytes semisquamatus | Ammodytes tobianus |
| LB1850 | -- | Salmo trutta | Pomatoschistus microps | [Lipophrys] - | -- | Lepidorhombus whiffiagonis | -- | - immaculatus |
| LB1863 | -- | Salmo salar | Pomatoschistus microps | -- | -- | -- | -- | Ammodytes marinus |

| | FRT0509 | FRT0510 | FRT0511 | FRT0512 | FRT0513 | FRT0514 | FRT0515 |
|--------------|-------------------|-------------------------------|-------------------------------|----------------------------|--------------------------|---------------------|----------------------------|
| Taxon | <i>Zeus faber</i> | <i>Pomatoschistus microps</i> | <i>Microchirus variegatus</i> | <i>Trisopterus minutus</i> | <i>Perca fluviatilis</i> | <i>Raja clavata</i> | <i>Lophius piscatorius</i> |
| LB1802 | -- | Gobius minutus | Glyptocephalus cynoglossus | -- | - [fluviatilis] | -- | -- |
| LB1803 | -- | -- | -- | -- | - [fluviatilis] | -- | - [piscatorus] |
| LB1804 | -- | -- | -- | -- | -- | -- | -- |
| LB1805 | -- | -- | -- | -- | -- | - montagui | -- |
| LB1806 | -- | -- | -- | - esmarkii | -- | -- | -- |
| LB1808 | -- | -- | -- | - esmarkii | -- | -- | -- |
| LB1809 | -- | -- | -- | -- | -- | -- | -- |
| LB1814a | -- | -- | -- | -- | -- | -- | -- |
| LB1814b | -- | -- | -- | -- | -- | -- | -- |
| LB1814c | -- | -- | -- | -- | -- | -- | -- |
| LB1814d | [Zues] - | -- | -- | - esmarkii | -- | -- | - [piscatores] |
| LB1849a | -- | -- | Buglossidium luteum | - [minutus] | -- | - brachyura | -- |
| LB1849b | -- | - minutus | Buglossidium luteum | - esmarkii | -- | - brachyura | -- |
| LB1849c | -- | -- | Buglossidium luteum | -- | -- | - brachyura | -- |
| LB1849d | -- | -- | Buglossidium luteum | - esmarkii | -- | - brachyura | -- |
| LB1850 | -- | - pictus | -- | -- | -- | - brachyura | -- |
| LB1863 | -- | - pictus | -- | Gadus morhua | -- | -- | -- |

Table 2. The identification of fauna made by participating laboratories for F_RT05 (arranged by participant). Names are given only where different from the AQC identification.

| FRT05 | Taxon | LB1802 | LB1803 | LB1804 | LB1805 | LB1806 |
|---------|---------------------------------|----------------------------|--------------------|--------------|---------------------------|----------------------------|
| FRT0501 | <i>Hyperoplus lanceolatus</i> | -- | -- | -- | -- | -- |
| FRT0502 | <i>Oncorhynchus mykiss</i> | [Oncorhynchus] - | -- | Salmo trutta | -- | Salmo salar |
| FRT0503 | <i>Gobius niger</i> | -- | -- | -- | Pomatoschistus vernacular | Thorogobius ephippiatus |
| FRT0504 | <i>Lipophrys pholis</i> | -- | -- | -- | -- | -- |
| FRT0505 | <i>Pleuronectes platessa</i> | Platichthys flesus | -- | -- | -- | Glyptocephalus cynoglossus |
| FRT0506 | <i>Phrynorhombus norvegicus</i> | -- | Zeugopterus regius | -- | -- | -- |
| FRT0507 | <i>Ammodytes tobianus</i> | -- | Tobianus marinus | -- | Hyperoplus lanceolatus | Hyperoplus lanceolatus |
| FRT0508 | <i>Hyperoplus lanceolatus</i> | - immaculatus | -- | -- | Ammodytes tobianus | Ammodytes tobianus |
| FRT0509 | <i>Zeus faber</i> | -- | -- | -- | -- | -- |
| FRT0510 | <i>Pomatoschistus microps</i> | Gobius minutus | -- | -- | -- | -- |
| FRT0511 | <i>Microchirus variegatus</i> | Glyptocephalus cynoglossus | -- | -- | -- | -- |
| FRT0512 | <i>Trisopterus minutus</i> | -- | -- | -- | -- | - esmarkii |
| FRT0513 | <i>Perca fluviatilis</i> | - [fluviatilis] | - [fluviatilis] | -- | -- | -- |
| FRT0514 | <i>Raja clavata</i> | -- | -- | -- | - montagui | -- |
| FRT0515 | <i>Lophius piscatorius</i> | -- | - [piscatorus] | -- | -- | -- |

| FRT05 | Taxon | LB1808 | LB1809 | LB1814a | LB1814b | LB1814c |
|---------|---------------------------------|--------------|---------------|---------------|------------------------|------------------------|
| FRT0501 | <i>Hyperoplus lanceolatus</i> | -- | -- | -- | -- | -- |
| FRT0502 | <i>Oncorhynchus mykiss</i> | Salmo trutta | -- | Salmo trutta | Salmo trutta | Salmo trutta |
| FRT0503 | <i>Gobius niger</i> | -- | -- | -- | -- | -- |
| FRT0504 | <i>Lipophrys pholis</i> | -- | -- | -- | -- | -- |
| FRT0505 | <i>Pleuronectes platessa</i> | -- | -- | -- | -- | -- |
| FRT0506 | <i>Phrynorhombus norvegicus</i> | -- | -- | -- | -- | -- |
| FRT0507 | <i>Ammodytes tobianus</i> | -- | -- | -- | Hyperoplus lanceolatus | Hyperoplus immaculatus |
| FRT0508 | <i>Hyperoplus lanceolatus</i> | -- | - immaculatus | - immaculatus | - immaculatus | - immaculatus |
| FRT0509 | <i>Zeus faber</i> | -- | -- | -- | -- | -- |
| FRT0510 | <i>Pomatoschistus microps</i> | -- | -- | -- | -- | -- |
| FRT0511 | <i>Microchirus variegatus</i> | -- | -- | -- | -- | -- |
| FRT0512 | <i>Trisopterus minutus</i> | - esmarkii | -- | -- | -- | -- |
| FRT0513 | <i>Perca fluviatilis</i> | -- | -- | -- | -- | -- |
| FRT0514 | <i>Raja clavata</i> | -- | -- | -- | -- | -- |
| FRT0515 | <i>Lophius piscatorius</i> | -- | -- | -- | -- | -- |

Table 2. The identification of fauna made by participating laboratories for F_RT05 (arranged by participant). Names are given only where different from the AQC identification.

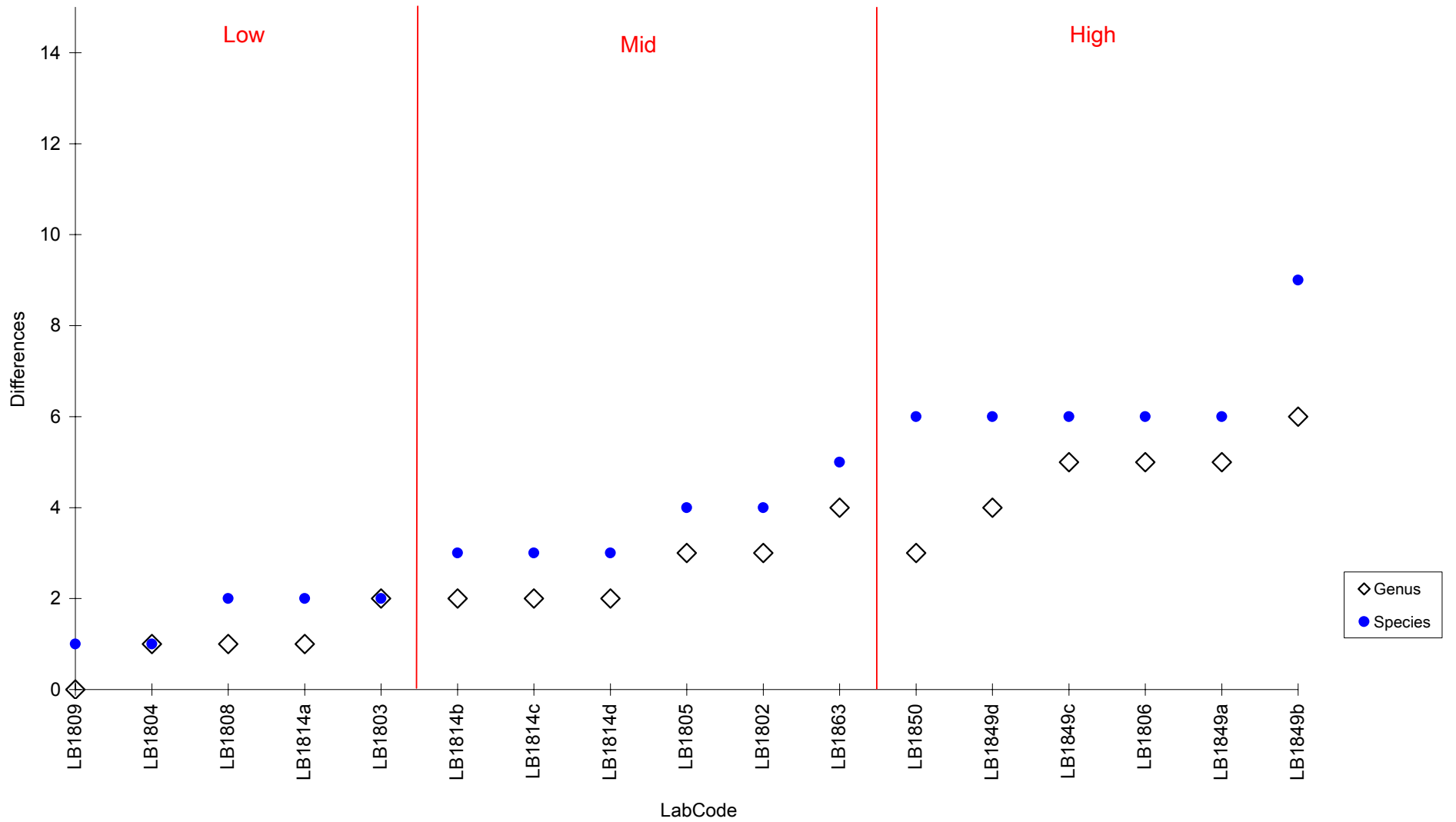
| FRT05 | Taxon | LB1814d | LB1849a | LB1849b | LB1849c |
|---------|---------------------------------|------------------------|------------------------------|-----------------------------|-----------------------------|
| FRT0501 | <i>Hyperoplus lanceolatus</i> | [Hyperlopus] - | -- | -- | -- |
| FRT0502 | <i>Oncorhynchus mykiss</i> | Salmo trutta | -- | -- | -- |
| FRT0503 | <i>Gobius niger</i> | -- | -- | Pomatoschistus microps | -- |
| FRT0504 | <i>Lipophrys pholis</i> | -- | -- | -- | -- |
| FRT0505 | <i>Pleuronectes platessa</i> | -- | Hippoglossoides platessoides | Hippoglossus hippoglossus | Hippoglossoides platessa |
| FRT0506 | <i>Phrynorhombus norvegicus</i> | [Phynorhombus] - | Limanda limanda | Limanda limanda | Limanda limanda |
| FRT0507 | <i>Ammodytes tobianus</i> | Hyperlopus immaculatus | Gymnammodytes semisquamatus | Gymnammodytes semisquamatus | Gymnammodytes semisquamatus |
| FRT0508 | <i>Hyperoplus lanceolatus</i> | [Hyperlopus] - | Ammodytes tobianus | Ammodytes tobianus | Ammodytes tobianus |
| FRT0509 | <i>Zeus faber</i> | [Zues] - | -- | -- | -- |
| FRT0510 | <i>Pomatoschistus microps</i> | -- | -- | - minutus | -- |
| FRT0511 | <i>Microchirus variegatus</i> | -- | Buglossidium luteum | Buglossidium luteum | Buglossidium luteum |
| FRT0512 | <i>Trisopterus minutus</i> | - esmarkii | - [mintutus] | - esmarkii | -- |
| FRT0513 | <i>Perca fluviatilis</i> | -- | -- | -- | -- |
| FRT0514 | <i>Raja clavata</i> | -- | - brachyura | - brachyura | - brachyura |
| FRT0515 | <i>Lophius piscatorius</i> | - [piscatores] | -- | -- | -- |

| FRT05 | Taxon | LB1849d | LB1850 | LB1863 |
|---------|---------------------------------|-----------------------------|----------------------------|------------------------|
| FRT0501 | <i>Hyperoplus lanceolatus</i> | -- | -- | -- |
| FRT0502 | <i>Oncorhynchus mykiss</i> | -- | Salmo trutta | Salmo salar |
| FRT0503 | <i>Gobius niger</i> | -- | Pomatoschistus microps | Pomatoschistus microps |
| FRT0504 | <i>Lipophrys pholis</i> | -- | [Lipophrys] - | -- |
| FRT0505 | <i>Pleuronectes platessa</i> | -- | -- | -- |
| FRT0506 | <i>Phrynorhombus norvegicus</i> | Limanda limanda | Lepidorhombus whiffiagonis | -- |
| FRT0507 | <i>Ammodytes tobianus</i> | Gymnammodytes semisquamatus | -- | -- |
| FRT0508 | <i>Hyperoplus lanceolatus</i> | Ammodytes tobianus | - immaculatus | Ammodytes marinus |
| FRT0509 | <i>Zeus faber</i> | -- | -- | -- |
| FRT0510 | <i>Pomatoschistus microps</i> | -- | - pictus | - pictus |
| FRT0511 | <i>Microchirus variegatus</i> | Buglossidium luteum | -- | -- |
| FRT0512 | <i>Trisopterus minutus</i> | - esmarkii | -- | Gadus morhua |
| FRT0513 | <i>Perca fluviatilis</i> | -- | -- | -- |
| FRT0514 | <i>Raja clavata</i> | - brachyura | - brachyura | -- |
| FRT0515 | <i>Lophius piscatorius</i> | -- | -- | -- |

Table 3. Literature and resources cited by participating laboratories for F_RT05.

| LabCode | Literature Cited for F_RT05 Identification (errors corrected) |
|---------|---|
| LB1802 | Wheeler 1978, Collins, Miller (Gobies of the British isles). |
| LB1803 | - |
| LB1804 | Wheeler 1978 & Muus and Dahlstrom 1974. |
| LB1805 | - |
| LB1806 | Wheeler 1978. |
| LB1808 | - |
| LB1809 | UNESCO 1989, Wheeler 1998. |
| LB1814a | - |
| LB1814b | - |
| LB1814c | - |
| LB1814d | Maitland and Herdson 2010 (EA fish ID), Kay and Dipper 2009. |
| LB1849a | - |
| LB1849b | - |
| LB1849c | - |
| LB1849d | - |
| LB1850 | - |
| LB1863 | Maitland and Herdson 2010 (EA fish ID), Hayward & Ryland 1994, Miller & Lates 1997, Kay and Dipper 2009, Miller (unpub various keys). |

Figure 1. The number of differences from the AQC identification of specimens distributed in F_RT05 for each of the participating laboratories. Arranged in order of increasing number of differences.



Specimen Images and Detailed Breakdown of Identifications

The common names provided include that stated in FishBase (<http://www.fishbase.org/search.php>) first followed by other commonly used names, where appropriate. LabCodes are abbreviated in this report to exclude the Scheme year, *i.e.* LB1801a = Lab 01a. An additional terminal character has been added within each LabCode (small case sequential letters) to permit multiple data entries from each laboratory, *i.e.* two participants from laboratory 01 would be coded as Lab 01a & Lab 01b. For details of your LabCode please contact your Scheme representative or Thomson Unicomarine Ltd.

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

F_RT0501 – *Hyperoplus lanceolatus* (Greater Sandeel) (Figure 1a)

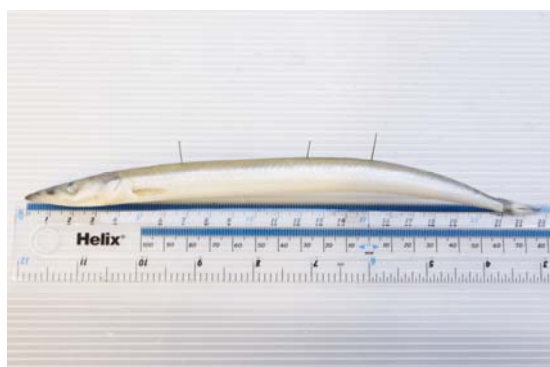


Figure 1a (F_RT0501) - L

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Good, Length 23-26cm.

No differences recorded.

Lab 14d incorrectly spelt the genus.

F_RT0502 – *Oncorhynchus mykiss* (Rainbow Trout) (Figure 2a)



Figure 2a (F_RT0502) – L

Substratum: Mixed. Salinity: Low. Depth: Infralittoral. Geography: S.W. England. Condition: Good, Length 16-19cm.

Nine generic and nine specific differences: Labs 04, 08, 14a, 14b, 14c, 14d and 50 identified as *Salmo trutta*; Labs 06 and 63 identified as *Salmo salar* (both of which lack numerous black spots on the caudal and adipose fin).

Lab 02 incorrectly spelt the genus.

F_RT0503 – *Gobius niger* (Black Goby) (Figure 3a)



Figure 3a (F_RT0503) – L

Substratum: Mixed. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Fair, Length 6-7cm.

Five generic and five specific differences: Lab 06 identified as *Thorogobius ehippiatus* (which has no papillae around the lower border of the eye and orange spots on the head and body); Lab 05 identified as *Pomatoschistus vernacular*; Labs 49b, 50 and 63 identified as *Pomatoschistus microps* (which have a longer, narrower caudal peduncle and a row of complete papillae along the underside of the eye).

F_RT0504 – *Lipophrys pholis* (Shanny) (Figure 4a)



Figure 4a (F_RT0504) – L

Substratum: Mixed. Salinity: Full. Depth: Intertidal. Geography: Wales. Condition: Good, Length 3.5-4.5cm.

No differences recorded.

Lab 50 incorrectly spelt the genus.

F_RT0505 – *Pleuronectes platessa* (Plaice) (Figure 5a)



Figure 5a (F_RT0505) – L (right-eyed side)

Substratum: Mixed. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Fair, Length 6-7cm.

Five generic and five specific differences: Lab 02 identified as *Platichthys flesus* (which has short spines between the fin ray bases of the dorsal and anal fins); Lab 06 identified as *Glyptocephalus cynoglossus* (which has a more slender body outline and a straight lateral line); Lab 49b identified as *Hippoglossus hippoglossus*; Lab 49a and 49c identified as

Hippoglossoides platessoides or *Hippoglossoides platessa* (spelling error) (all of which have large jaws that extend past the centre of the eye).

F_RT0506 – *Phrynorhombus norvegicus* (Norwegian Topknot) (Figure 6a)



Figure 6a (F_RT0506) – L (left-eyed side)

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Fair, Length 8.5-10.5cm.

Six generic and six specific differences: Lab 03 identified as *Zeugopterus regius* (which has a deeper body and smaller scales which are heavily toothed); Labs 49a, 49b, 49c and 49d identified as *Limanda limanda* (which is right-eyed and has a distinct “D” shaped lateral line); Lab 50 identified as *Lepidorhombus whiffiagonis* (which has a more slender body outline, a larger head and does not have a lobe that connects the dorsal and anal fins under the lower side of the tail).

Lab 14d incorrectly spelt the genus.

F_RT0507 – *Ammodytes tobianus* (Lesser Sandeel) (Figure 7a)



Figure 7a (F_RT0507) – L

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Poor, Length 12.5-14cm.

Ten generic and ten specific differences: Lab 03 identified as *Tobianus marinus* (which is not a valid taxon); Labs 05, 06 and 14b identified as *Hyperoplus lanceolatus*; Labs 14c and 14d identified as *Hyperoplus immaculatus* (both of which lack a protrusible upper jaw); Labs 49a, 49b, 49c and 49d identified as *Gymnammodytes semisquamatus* (which has lateral line pores that open at the end of short canals at right angles to the lateral line and lack scales on anterior part of body).

F_RT0508 – *Hyperoplus lanceolatus* (Greater Sandeel) (Figure 8a)



Figure 8a (F_RT0508) – L

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Good, Length 14.5-17.5cm.

Seven generic and thirteen specific differences: Labs 02, 09, 14a, 14b, 14c and 50 identified as *Hyperoplus immaculatus* (which lacks a dark spot on the upper jaw, midway between the eye and snout tip); Labs 05, 06, 49a, 49b, 49c and 49d identified as *Ammodytes tobianus*; Lab 63 identified as *Ammodytes marinus* (both of which have a protrusible upper jaw, yellowish back and sides and scales which lie in oblique skin folds).

Lab 14d incorrectly spelled the genus.

F_RT0509 – *Zeus faber* (John Dory) (Figure 9a)



Figure 9a (F_RT0509) – L

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Fair, Length 14-17cm.

No differences recorded.

Lab 14d incorrectly spelled the genus.

F_RT0510 – *Pomatoschistus microps* (Common Goby) (Figure 10a)



Figure 10a (F_RT0510) – L

Substratum: Mixed. Salinity: Low. Depth: Infralittoral. Geography: S.E. England. Condition: Fair, Length 4-5cm.

One generic and four specific differences: Labs 02 and 49b identified as *Gobius minutus* or the synonym *Pomatoschistus minutus*; Labs 50 and 63 identified as *Pomatoschistus pictus* (both of which lack the inverted “v” pigment on the pectoral fins and have different ventral head pigmentation).

Additional literature: Edlund *et al*, 1980.

F_RT0511 – *Microchirus variegatus* (Thickback Sole) (Figure 11a)



Figure 11a (F_RT0511) – L (right-eyed side)

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Fair, Length 14-18.5cm.

Five generic and five specific differences: Lab 02 identified as *Glyptocephalus cynoglossus* (which does not have a smoothly rounded front of head, has a terminal mouth and lacks small sensory papillae under the head on the blind side); Labs 49a, 49b, 49c and 49d identified as *Buglossidium luteum* (which has smaller eyes and attains a maximum length of 13cm).

F_RT0512 – *Trisopterus minutus* (Poor-Cod) (Figure 12a)



Figure 12a (F_RT0512) - L

Substratum: Mixed. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Poor, Length 5-7.5cm.

One generic and six specific differences: Labs 06, 08, 14d, 49b and 49d identified as *Trisopterus esmarkii* (which has a longer lower jaw and the anal fin starts below the last rays of the first dorsal fin); Lab 63 identified as *Gadus morhua* (which has a shorter anal fin originating behind the first dorsal fin base and a smaller eye).

Lab 49a incorrectly spelt the genus.

F_RT0513 – *Perca fluviatilis* (European Perch) (Figure 13a)



Figure 13a (F_RT0513) - L

Substratum: Mixed. Salinity: Low. Depth: Infralittoral. Geography: Ireland. Condition: Good, Length 14.5-18.5cm.

No differences recorded.

Labs 02 and 03 incorrectly spelt the species.

F_RT0514 – *Raja clavata* (Thornback Ray, Roker) (Figure 14a)



Figure 14a (F_RT0514) - D

Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Good, Length 17.5-21cm.

No generic and six specific differences: Lab 05 identified as *Raja montagui* (which lacks coarse prickles over the entire dorsal surface and has rounded pectoral wings); Labs 49a, 49b, 49c, 49d and 50 identified as *Raja brachyura* (which has dark pigment spots extending to the edge of the pectoral wings).

F_RT0515 – *Lophius piscatorius* (Angler, Monkfish, Frogfish) (Figure 15a)



Figure 15a (F_RT0515) - D

Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S.W. England. Condition: Fair, Length 25.5-30cm.

No differences recorded.

Labs 03 and 14d incorrectly spelt the species.

References

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- Wheeler, A., 1978. *Key to the fishes of Northern Europe*. Warne, London, 380pp.
- FishBase - <http://www.fishbase.org/search.php>
- The Aquarium Project – <http://web.ukonline.co.uk/aquarium/>

Specimen Labels

You are **not** required to return the specimens to Thomson Unicomarine Ltd. A sheet of labels is provided for incorporating these specimens into in-house reference collections.

If you have no further use for the specimens please return them to the following address:

**Jessica Taylor, Thomson Unicomarine Ltd., 7A Diamond Centre,
Works Road, Letchworth, Hertfordshire SG6 1LW, UK**

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|-------------------------------|
| NMBAQC Scheme |
| <i>Hyperoplus lanceolatus</i> |
| Location: Cornwall |
| Gear: Otter Trawl |
| FullCode #: F_RT05_01 |

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|----------------------------|
| NMBAQC Scheme |
| <i>Oncorhynchus mykiss</i> |
| Location: Wiltshire |
| Gear: Net |
| FullCode #: F_RT05_02 |

| |
|-----------------------|
| NMBAQC Scheme |
| <i>Gobius niger</i> |
| Location: Harwich |
| Gear: Beam Trawl |
| FullCode #: F_RT05_03 |

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| NMBAQC Scheme |
| <i>Lipophrys pholis</i> |
| Location: Carmathen Bay |
| Gear: Net |
| FullCode #: F_RT05_04 |

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| NMBAQC Scheme |
| <i>Pleuronectes platessa</i> |
| Location: Harwich |
| Gear: Beam Trawl |
| FullCode #: F_RT05_05 |

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| NMBAQC Scheme |
| <i>Phrynorhombus norvegicus</i> |
| Location: Plymouth |
| Gear: Beam Trawl |
| FullCode #: F_RT05_06 |

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| NMBAQC Scheme |
| <i>Ammodytes tobianus</i> |
| Location: Cornwall |
| Gear: Otter Trawl |
| FullCode #: F_RT05_07 |

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|-------------------------------|
| NMBAQC Scheme |
| <i>Hyperoplus lanceolatus</i> |
| Location: Cornwall |
| Gear: Otter Trawl |
| FullCode #: F_RT05_08 |

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| NMBAQC Scheme |
| <i>Zeus faber</i> |
| Location: Plymouth |
| Gear: Beam Trawl |
| FullCode #: F_RT05_09 |

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| NMBAQC Scheme |
| <i>Pomatoschistus microps</i> |
| Location: Thames |
| Gear: Kick Net |
| FullCode #: F_RT05_10 |

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| NMBAQC Scheme |
| <i>Microchirus variegatus</i> |
| Location: Plymouth |
| Gear: Beam Trawl |
| FullCode #: F_RT05_11 |

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| NMBAQC Scheme |
| <i>Trisopterus minutus</i> |
| Location: Plymouth |
| Gear: Beam Trawl |
| FullCode #: F_RT05_12 |

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| NMBAQC Scheme |
| <i>Perca fluviatilis</i> |
| Location: Ireland |
| Gear: Beam Trawl |
| FullCode #: F_RT05_13 |

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| NMBAQC Scheme |
| <i>Raja clavata</i> |
| Location: Harwich |
| Gear: Beam Trawl |
| FullCode #: F_RT05_14 |

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| NMBAQC Scheme |
| <i>Lophius piscatorius</i> |
| Location: Plymouth |
| Gear: Beam Trawl |
| FullCode #: F_RT05_15 |