



The National Marine Biological  
Analytical Quality Control Scheme

Fish Reverse Ring Test - FRRT\_04

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Thomson Unicomarine Ltd.  
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Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Scyliorhinus canicula</i> ; Lesser Spotted Dogfish	1	0	-	Wheeler 1969
<i>Anguilla anguilla</i> ; European Eel	1	0	-	Maitland & Herdson 2009
<i>Alosa fallax</i> ; Twaite shad	1	0	-	Wheeler 1969
<i>Clupea harengus</i> ; Herring	12	0	68 - 148	Maitland & Herdson 2009
<i>Sardina pilchardus</i> ; Pilchard	1	0	-	Maitland & Herdson 2009
<i>Sprattus sprattus</i> ; Sprat	15	2	30 - 112	Maitland & Herdson 2009
<i>Blicca bjoerkna</i> ; Silver Bream	1	0	126	Maitland & Herdson 2009
<i>Abramis brama</i> ; Common Bream	3	0	-	Maitland & Herdson 2009
<i>Alburnus alburnus</i> ; Bleak	2	1	50 - 54	Maitland & Herdson 2009
<i>Cyprinus carpio</i> ; Mirror Carp	1	0	-	Maitland & Herdson 2009
<i>Leucaspius delineatus</i> ; Sunbleak	1	0	44	Maitland & Herdson 2009
<i>Leuciscus leuciscus</i> ; Dace	1	0	60	Maitland & Herdson 2009
<i>Rutilus rutilus</i> ; Roach	1	0	142	Maitland & Herdson 2009

Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Abramis brama</i> and <i>Rutilus rutilus</i> ; Common bream and Roach hybrid	1	0	65	Maitland & Herdson 2009
<i>Perca fluviatilis</i> ;-Perch	1	0	-	Maitland & Herdson 2009
<i>Osmerus eperlanus</i> ; Smelt	5	0	125	Maitland & Herdson 2009
<i>Salmo salar</i> ; Atlantic Salmon	2	1	-	Pinder 2001
<i>Salmo trutta trutta</i> ; Brown trout	2	0	235	Pinder 2001
<i>Merluccius merluccius</i> ; Hake	1	0	-	Wheeler 1969
<i>Ciliata mustela</i> ; Five Bearded Rockling	2	0	148	Maitland & Herdson 2009
<i>Gaidropsarus mediterraneus</i> ; Shore Rockling	1	0	-	Maitland & Herdson 2009
<i>Phycis blennoides</i> ; Greater Forkbeard	1	0	-	Maitland & Herdson 2009
<i>Gadus morhua</i> ; Cod	4	0	159	Wheeler 1969
<i>Merlangius merlangus</i> ; Whiting	10	0	85 - 135	Maitland & Herdson 2009
<i>Pollachius pollachius</i> ; Pollack	2	0	-	Wheeler 1969

Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Pollachius virens</i> ; Saithe	3	0	84	Wheeler 1969
<i>Raniceps raninus</i> ; Tadpole Fish	1	0	-	Maitland & Herdson 2009
<i>Trisopterus esmarkii</i> ; Norway Pout	1	0	-	Maitland & Herdson 2009
<i>Trisopterus luscus</i> ; Bib	6	1	-	Wheeler 1969
<i>Trisopterus minutus</i> ; Poor Cod	2	0	84 - 106	Wheeler 1969
<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	11	0	21 - 345	Wheeler 1969, Russell 1976
<i>Liza aurata</i> ; Golden Grey Mullet	9	3	60-112	Wheeler 1969
<i>Liza ramada</i> ; Thin-lipped Grey Mullet	3	1	63-65	Wheeler 1969
<i>Atherina presbyter</i> ; Sand Smelt	9	0	69 - 192	Maitland & Herdson 2009
<i>Belone belone</i> , Garfish	1	0	-	Maitland & Herdson 2009
<i>Zeus faber</i> , John Dory	3	0	-	Maitland & Herdson 2009
<i>Gasterosteus aculeatus aculeatus</i> ; Three-spined Stickleback	4	0	37 - 84	Maitland & Herdson 2009

Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Spinachia spinachia</i> ; 15-spined Stickleback	3	0	125	Maitland & Herdson 2009
<i>Entelurus aequoreus</i> ; Snake Pipefish	1	0	-	Wheeler 1969
<i>Nerophis lumbriciformis</i> ; Worm Pipefish	1	0	-	Wheeler 1969
<i>Syngnathus acus</i> ; Greater Pipefish	2	1	146	Wheeler 1969
<i>Syngnathus rostellatus</i> ; Lesser Pipefish	8	0	129 - 142	Wheeler 1969
<i>Chelidonichthys lucerna</i> ; Tub Gurnard	7	0	100 - 120	Wheeler 1969
<i>Eutrigla gurnardus</i> ; Grey Gurnard	4	0	-	Wheeler 1969
<i>Myoxocephalus scorpius</i> ; Bull Rout	1	0	-	Maitland & Herdson 2009
<i>Agonus cataphractus</i> ; Pogge	5	0	-	Maitland & Herdson 2009
<i>Liparis liparis liparis</i> ; Common Sea Snail	4	0	56	Maitland & Herdson 2009
<i>Liparis montagui</i> ; Montagu's Sea Snail	1	0	-	Maitland & Herdson 2009
<i>Dicentrarchus labrax</i> ; Sea Bass	10	0	46 - 142	Maitland & Herdson 2009

Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Trachurus trachurus</i> ; Scad	2	0	-	Maitland & Herdson 2009
<i>Spondyliosoma cantharus</i> ; Black Sea Bream	3	0	-	Lythgoe & Lythgoe 1991
<i>Mullus surmuletus</i> ; Red mullet	1	0	-	Wheeler 1969
<i>Labrus bergylta</i> ; Ballan Wrasse	3	2	-	Lythgoe & Lythgoe 1991
<i>Symphodus melops</i> ; Corkwing Wrasse	2	0	-	Lythgoe & Lythgoe 1991
<i>Ctenolabrus rupestris</i> ; Goldsinny	2	0	-	Maitland & Herdson 2009
<i>Zoarces viviparus</i> ; Eelpout	2	0	-	Maitland & Herdson 2009
<i>Pholis gunnellus</i> ; Butterfish	1	0	-	Maitland & Herdson 2009
<i>Ammodytes tobianus</i> ; Lesser Sandeel	8	0	94 - 134	Wheeler 1969
<i>Hyperoplus lanceolatus</i> ; Greater Sandeel	3	0	135	Wheeler 1969
<i>Echiichthys vipera</i> ; Lesser Weever	6	0	33 - 126	Maitland & Herdson 2009
<i>Lipophrys pholis</i> ; Shanny	3	0	-	Maitland & Herdson 2009

Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Apletodon dentatus</i> ; Small-headed Clingfish	1	0	-	Maitland & Herdson 2009
<i>Diplecogaster bimaculata bimaculata</i> ; Two-spotted Clingfish	1	0	-	Maitland & Herdson 2009
<i>Callionymus reticulatus</i> ; Reticulated Dragonet	2	2	-	Maitland & Herdson 2009
<i>Callionymus maculatus</i> ; Spotted Dragonet	1	0		Kay & Dipper 2009
<i>Callionymus lyra</i> ; Common Dragonet	7	0	87	Maitland & Herdson 2009
<i>Aphia minuta</i> ; Transparent goby	6	0	52	Lythgoe & Lythgoe 1991
<i>Gobius couchi</i> ; Couch's Goby	1	0	-	Lythgoe & Lythgoe 1991
<i>Gobius niger</i> ; Black Goby	3	1	69	Lythgoe & Lythgoe 1991
<i>Gobius paganellus</i> ; Rock Goby	2	0	84	Lythgoe & Lythgoe 1991
<i>Gobiusculus flavescens</i> ; Two-spotted Goby	5	0	38 - 39	Lythgoe & Lythgoe 1991
<i>Pomatoschistus microps</i> ; Common Goby	11	1	32 - 50	Lythgoe & Lythgoe 1991
<i>Pomatoschistus minutus</i> ; Sand Goby	22	1	34 - 157	Lythgoe & Lythgoe 1991



Table 1. Summary of data and specimens received from participating laboratories for the fourth fish reverse ring test – FRRT\_04.

Species Submitted	Number of Specimens	Number of Taxonomic Errors	Size Range (Min - Max; mm)	Thomson Unicomarine References
<i>Pomatoschistus pictus</i> ; Painted Goby	4	0	-	Lythgoe & Lythgoe 1991
<i>Scomber scombrus</i> ; Mackerel	1	0	235	Maitland & Herdson 2009
<i>Capros aper</i> ; Boar Fish	1	0	-	Wheeler 1969
<i>Psetta maxima</i> ; Turbot	1	0	-	Maitland & Herdson 2009
<i>Scophthalmus rhombus</i> ; Brill	3	0	82	Maitland & Herdson 2009
<i>Zeugopterus regius</i> ; Eckström's Topknot	1	0	-	Maitland & Herdson 2009
<i>Limanda limanda</i> ; Dab	6	0	48 - 192	Maitland & Herdson 2009
<i>Platichthys flesus</i> ; Flounder	11	0	35 - 345	Wheeler 1969
<i>Pleuronectes platessa</i> ; Plaice	14	0	61 - 235	Wheeler 1969
<i>Arnoglossus laterna</i> ; Scaldfish	2	0	-	Wheeler 1969
<i>Buglossidium luteum</i> ; Solenette	4	0	-	Maitland & Herdson 2009
<i>Microchirus variegatus</i> ; Thickback Sole	1	0	-	Maitland & Herdson 2009
<i>Solea solea</i> ; Common Sole	6	0	62	Maitland & Herdson 2009

Total number of specimens submitted = 325

Total number of taxonomic errors = 17

Table 2. Summary of taxonomic errors by participating laboratories for the fourth fish reverse ring test - FRRT\_04, sorted by taxonomic group.

Total Number of Entries - 325

Total Number of Taxonomic Errors - 17

LabCode	Laboratory identification	Thomson Unicomarine identification	Reason for Taxonomic Error
1949	<i>Sprattus sprattus</i> ; Sprat	<i>Clupea harengus</i> ; Herring	TE - Pelvic fin positioned behind dorsal fin
1951	<i>Sprattus sprattus</i> ; Sprat	<i>Clupea harengus</i> ; Herring	TE - Pelvic fin positioned behind dorsal fin
1937	<i>Trisopterus luscus</i> ; Bib	<i>Trisopterus minutus</i> ; Poor Cod	TE - 1st anal fin origin between 1st & 2nd dorsal fins
1954	<i>Syngnathus acus</i> ; Greater Pipefish	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	TE - 15 pre-anal body rings, dorsal fin covers 12 body rings
1938	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	TE - Lower half of upper lip with papillations
1940	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	TE - Ventral head pigmentation
1952	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	TE - Upper lip with papillations, pectoral fin does not extend to or beyond the eye
1952	<i>Liza ramada</i> ; Thin-lipped Mullet	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	TE - Ventral head pigmentation
1904	<i>Callionymus reticulatus</i> ; Reticulated Dragonet	<i>Callionymus lyra</i> ; Common Dragonet	TE - 4 spines on preoperculum
1945	<i>Callionymus reticulatus</i> ; Reticulated Dragonet	<i>Callionymus lyra</i> ; Common Dragonet	TE - 4 spines on preoperculum
1938	<i>Pomatoschistus microps</i> ; Common goby	<i>Pomatoschistus pictus</i> ; Painted Goby	TE - Banded 2nd dorsal fin, ventral head pigmentation
1945	<i>Gobius niger</i> ; Black goby	<i>Pomatoschistus pictus</i> ; Painted Goby	TE - Banded 2nd dorsal fin, ventral head pigmentation
1949	<i>Pomatoschistus minutus</i> ; Sand Goby	<i>Pomatoschistus microps</i> ; Common Goby	TE - No villi present on anterior membrane, ventral head pigmentation
1904	<i>Salmo salar</i> ; Salmon	<i>Salmo trutta trutta</i> ; Brown trout	TE - Operculum with more than 3 black spots. Adipose fin red. Tail fin with a shallow fork and rounded ends. Maxilla reaching midway between pupil and rear of eye (Parr)
1939	<i>Labrus bergyllta</i> ; Ballan Wrasse	<i>Symphodus melops</i> ; Corkwing Wrasse	TE - Spot on caudal peduncle just below lateral line
1945	<i>Labrus bergyllta</i> ; Ballan Wrasse	<i>Symphodus melops</i> ; Corkwing Wrasse	TE - Spot on caudal peduncle just below lateral line
1949	<i>Alburnus alburnus</i> ; Bleak	<i>Leucaspius delineatus</i> ; Sunbleak	TE - Lateral line incomplete

NMBAQC Scheme Interim Results

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 13/12/2012  
 Specimens Received - 13/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1902

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Sprattus sprattus</i> ; -; -	<i>Sprattus sprattus</i> ; Sprat	-
2	<i>Sygnathus rostellatus</i> ; -; -	<i>Sygnathus rostellatus</i> ; Lesser Pipefish	-
3	<i>Pomatoschistus microps</i> ; -; -	<i>Pomatoschistus microps</i> ; Common Goby	-
4	<i>Chelon labrosus</i> ; -; -	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
5	<i>Chelon labrosus</i> ; -; -	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
6	<i>Liza aurata</i> ; -; -	<i>Liza aurata</i> ; Golden Grey Mullet	-
7	<i>Sprattus sprattus</i> ; -; -	<i>Sprattus sprattus</i> ; Sprat	-
8	<i>Pomatoschistus minutus</i> ; -; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
9	<i>Pomatoschistus microps</i> ; -; -	<i>Pomatoschistus microps</i> ; Common Goby	-
10	<i>Pomatoschistus minutus</i> ; -; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
11	<i>Gaidropsarus mediterraneus</i> ; -; -	<i>Gaidropsarus mediterraneus</i> ; Shore Rockling	-
12	<i>Pomatoschistus minutus</i> ; -; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
13	<i>Clupea harengus</i> ; -; -	<i>Clupea harengus</i> ; Herring	-
14	<i>Anguilla anguilla</i> ; -; -	<i>Anguilla anguilla</i> ; European Eel	-
15	<i>Perca fluviatilis</i> ; -; -	<i>Perca fluviatilis</i> ; Perch	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 25/10/2012  
 Specimens Received - 26/10/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1903

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Pleuronectes platessa</i> ; -; -	<i>Pleuronectes platessa</i> ; Plaice	-
2	<i>Platichthys flesus</i> ; -; -	<i>Platichthys flesus</i> ; Flounder	-
3	<i>Zeugopterus regius</i> ; -; -	<i>Zeugopterus regius</i> ; Eckström's Topknot	-
4	<i>Apletodon microcephalus</i> ; -; -	<b><i>Apletodon dentatus</i>; Small-headed clingfish</b>	nc
5	<i>Liparis montagui</i> ; -; -	<i>Liparis montagui</i> ; Montagu's Sea Snail	-
6	<i>Gobius paganellus</i> ; -; -	<i>Gobius paganellus</i> ; Rock Goby	-
7	<i>Pomatoschistus pictus</i> ; -; -	<i>Pomatoschistus pictus</i> ; Painted Goby	-
8	<i>Salmo salar</i> ; -; -	<i>Salmo salar</i> ; Atlantic Salmon	-
9	<i>Scophthalmus rhombus</i> ; -; -	<i>Scophthalmus rhombus</i> ; Brill	-
10	<i>Solea solea</i> ; -; -	<i>Solea solea</i> ; Common Sole	-
11	<i>Syngnathus rostellatus</i> ; -; -	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-
12	<i>Sprattus sprattus</i> ; -; -	<i>Sprattus sprattus</i> ; Sprat	-
13	<i>Liparis liparis</i> ; -; -	<i>Liparis liparis</i> ; Common Sea Snail	-
14	<i>Osmerus eperlanus</i> ; -; -	<i>Osmerus eperlanus</i> ; Smelt	-
15	<i>Trisopterus luscus</i> ; -; -	<i>Trisopterus luscus</i> ; Bib	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 14/12/2012  
 Specimens Received - 14/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1904

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
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 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Callionymus reticulatus</i> ; Reticulated Dragonet; -	<b><i>Callionymus lyra</i>; Common Dragonet</b>	TE - 4 spines on preoperculum
2	<i>Callionymus maculatus</i> ; Spotted Dragonet; -	<i>Callionymus maculatus</i> ; Spotted Dragonet	-
3	<i>Callionymus lyra</i> ; Common Dragonet; -	<i>Callionymus lyra</i> ; Common Dragonet	-
4	<i>Pollachius pollachius</i> ; Pollack; -	<i>Pollachius pollachius</i> ; Pollack	-
5	<i>Trisopterus minutus</i> ; Poor Cod; -	<i>Trisopterus minutus</i> ; Poor Cod	-
6	<i>Merlangius merlangius</i> ; Whiting; -	<b><i>Merlangius merlangus</i>; Whiting</b>	sp
7	<i>Gobiusculus flavescens</i> ; 2-Spotted Goby; -	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	-
8	<i>Ammodytes tobianus</i> ; Lesser Sand Eel; -	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
9	<i>Crenilabrus melops</i> ; Corkwing; -	<b><i>Symphodus melops</i> ; Corkwing Wrasse</b>	nc
10	<i>Lipophrys pholis</i> ; Shanny; -	<i>Lipophrys pholis</i> ; Shanny	-
11	<i>Pollachius virens</i> ; Saithe; -	<i>Pollachius virens</i> ; Saithe	-
12	<i>Salmo salar</i> ; Salmon; -	<b><i>Salmo trutta trutta</i>; Brown trout</b>	TE - Operculum with more than 3 black spots. Adipose fin red. Tail fin with a shallow fork and rounded ends. Maxilla reaching midway between pupil and rear of eye (Parr).
	<i>Salmo trutta</i> ; Trout?; -	<b><i>Salmo trutta trutta</i>; Brown trout</b>	nc
14	<i>Atherina presbyter</i> ; Sand Smelt; -	<i>Atherina presbyter</i> ; Sand Smelt	-
15	<i>Zoarces viviparus</i> ; Eelpout; -	<i>Zoarces viviparus</i> ; Eelpout	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 04/12/12  
 Specimens Received - 04/12/12  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1906

**Key to codes:**

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
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 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Alosa fallax</i> ; Twaite Shad; -	<i>Alosa fallax</i> ; Twaite Shad; -	-
2	<i>Pollachius pollachius</i> ; Pollack; -	<i>Pollachius pollachius</i> ; Pollack; -	-
3	<i>Belone belone</i> ; Garfish; -	<i>Belone belone</i> ; Garfish; -	-
4	<i>Gasterosteus aculeatus aculeatus</i> ; Three-spined Stickleback; -	<i>Gasterosteus aculeatus aculeatus</i> ; Three-spined Stickleback; -	-
5	<i>Raniceps raninus</i> ; Tadpole Fish	<i>Raniceps raninus</i> ; Tadpole Fish; -	-
6	<i>Phycis blennoides</i> ; Greater Forkbeard; -	<i>Phycis blennoides</i> ; Greater Forkbeard; -	-
7	<i>Capros aper</i> ; Boar Fish; -	<i>Capros aper</i> ; Boar Fish; -	-
8	<i>Gadus morhua</i> ; Cod; -	<i>Gadus morhua</i> ; Cod; -	-
9	<i>Trachurus trachurus</i> ; Scad; -	<b><i>Trachurus trachurus</i>; Scad; -</b>	sp
10	<i>Diplecogaster bimaculata</i> ; Two-spotted Clingfish;-	<b><i>Diplecogaster bimaculata bimaculata</i> ; Two-spotted Clingfish;-</b>	sp
11	<i>Microchirus variegatus</i> ; Thickback Sole;-	<i>Microchirus variegatus</i> ; Thickback Sole;-	-
12	<i>Agonus cataphractus</i> ; Pogge; -	<i>Agonus cataphractus</i> ; Pogge; -	-
13	<i>Clupea harengus</i> ; Herring;-	<i>Clupea harengus</i> ; Herring;-	-
14	<i>Merluccius merluccius</i> ; Hake;-	<i>Merluccius merluccius</i> ; Hake;-	-
15	<i>Ctenolabrus rupestris</i> ; Goldsinny wrasse	<i>Ctenolabrus rupestris</i> ; Goldsinny; -	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 26/10/2012  
 Specimens Received - 26/10/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1936

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
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 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Gasterosteus aculeatus</i> ; Three Spined Stickleback; 84	<i>Gasterosteus aculeatus aculeatus</i> ; Three-spined Stickleback	-
2	<i>Platichthys flesus</i> ; Flounder; 345	<i>Platichthys flesus</i> ; Flounder	-
3	<i>Pleuronectes Platessa</i> ; Plaice; 235	<i>Pleuronectes platessa</i> ; Plaice	-
4	<i>Atherina presbyter</i> ; Sand Smelt; 192	<i>Atherina presbyter</i> ; Sand Smelt	-
5	<i>Dicentrarchus labrax</i> ; Sea Bass; 142	<i>Dicentrarchus labrax</i> ; Sea Bass	-
6	<i>Osmerus eperlanus</i> ; European Smelt; 125	<i>Osmerus eperlanus</i> ; Smelt	-
7	<i>Rutilus rutilus</i> ; Roach; 142	<i>Rutilus rutilus</i> ; Roach	-
8	<i>Abramis bjoerkna</i> ; Silver Bream; 126	<b><i>Blicca bjoerkna</i>; Silver Bream</b>	nc
9	<i>Gadus Morhua</i> ; Cod; 120	<i>Gadus morhua</i> ; Cod	-
10	<i>Pollachius virens</i> ; Saithe; 100	<i>Pollachius virens</i> ; Saithe	-
11	<i>Clupea harengus</i> ; Herring; 148	<i>Clupea harengus</i> ; Herring	-
12	<i>Pomatoshistus minutus</i> ; Sand Goby; 157	<i>Pomatoschistus minutus</i> ; Sand Goby	-
13	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel; 135	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel	-
14	<i>Ammodytes tobianus</i> ; Lesser Sandeel; 134	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
15	<i>Liza aurata</i> ; Golden Grey Mullet; 112	<i>Liza aurata</i> ; Golden Grey Mullet	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 21/12/2012  
 Specimens Received - 21/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1937

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicmarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicmarine identification	Code / Comments
1	<i>Atherina presbyter</i> ; Sand Smelt	<i>Atherina presbyter</i> ; Sand Smelt	-
2	<i>Clupea harengus</i> ; Herring	<i>Clupea harengus</i> ; Herring	-
3	<i>Platichthys flesus</i> ; Flounder	<i>Platichthys flesus</i> ; Flounder	-
4	<i>Chelon labrosus</i> ; Thick-lipped Mullet	<i>Chelon labrosus</i> ; Thick-lipped Mullet	-
5	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Liza aurata</i> ; Golden Grey Mullet	-
6	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
7	<i>Liparis liparis</i> ; Common Sea Snail	<b><i>Liparis liparis liparis</i>; Common Sea Snail</b>	nc
8	<i>Limanda limanda</i> ; Dab	<i>Limanda limanda</i> ; Dab	-
9	<i>Trisopterus minutus</i> ; Poor Cod	<i>Trisopterus minutus</i> ; Poor Cod	-
10	<i>Sprattus sprattus</i> ; Sprat	<i>Sprattus sprattus</i> ; Sprat	-
11	<i>Echiichthys vipera</i> ; Lesser Weaver	<b><i>Echiichthys vipera</i>; Lesser Weever</b>	sp
12	<i>Trisopterus luscus</i> ; Bib	<b><i>Trisopterus minutus</i>; Poor Cod</b>	TE - 1st anal fin origin between 1st & 2nd dorsal fins
13	<i>Gadus morhua</i> ; Cod	<i>Gadus morhua</i> ; Cod	-
14	<i>Solea solea</i> ; Common sole	<i>Solea solea</i> ; Common Sole	-
15	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-



NMBAQC Scheme Interim Results

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 11/12/2012  
 Specimens Received - 11/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1938

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Liza ramada</i> ; Thin-lipped Grey Mullet	<i>Liza ramada</i> ; Thin-lipped Grey Mullet	-
2	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Liza aurata</i> ; Golden Grey Mullet	-
3	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-
4	<i>Callionymus lyra</i> ; Common Dragonet	<i>Callionymus lyra</i> ; Common Dragonet	-
5	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
6	<i>Sprattus sprattus</i> ; Sprat	<i>Sprattus sprattus</i> ; Sprat	-
7	<i>Pomatoschistus minutus</i> ; Sandy Goby	<i>Pomatoschistus minutus</i> ; Sandy Goby	-
8	<i>Clupea harengus</i> ; Herring	<i>Clupea harengus</i> ; Herring	-
9	<i>Trigla lucerna</i> ; Tub Gurnard	<i>Chelidonichthys lucerna</i> ; Tub Gurnard	nc
10	<i>Pomatoschistus microps</i> ; Common goby	<b><i>Pomatoschistus pictus</i>; Painted Goby</b>	TE - banded 2nd dorsal fin, ventral head pigmentation
11	<i>Pleuronectes plesus</i> ; Flounder	<i>Pleuronectes flesus</i> ; Flounder	-
12	<i>Pomatoschistus minutus</i> ; Sandy Goby	<i>Pomatoschistus minutus</i> ; Sandy Goby	-
13	<i>Liza aurata</i> ; Golden Grey Mullet	<b><i>Chelon labrosus</i>; Thick-lipped Grey Mullet</b>	TE - lower half of upper lip with papillations
14	-	-	Taxon not supplied
15	-	-	Taxon not supplied

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 13/12/2012  
 Specimens Received - 13/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1939

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Sprattus sprattus</i> ; Sprat	<i>Sprattus sprattus</i> ; Sprat	-
2	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-
3	<i>Pomatoschistus minutus</i> ; Sand Goby	<i>Pomatoschistus minutus</i> ; Sand Goby	-
4	<i>Ammodytes tobianus</i> ; Lesser sandeel	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
5	<i>Spinachia spinachia</i> ; 15-spined Stickleback	<i>Spinachia spinachia</i> ; 15-spined Stickleback	-
6	<i>Atherina presbyter</i> ; Sand Smelt	<i>Atherina presbyter</i> ; Sand Smelt	-
7	<i>Chelidonichthys lucernus</i> ; Tub Gurnard	<b><i>Chelidonichthys lucerna</i>; Tub Gurnard</b>	sp
8	<i>Liza aurata</i> ; Golden Grey Mullet	<i>Liza aurata</i> ; Golden Grey Mullet	-
9	<i>Dicentrarchus labrax</i> ; Sea Bass	<i>Dicentrarchus labrax</i> ; Sea Bass	-
10	<i>Labrus bergylta</i> ; Ballan Wrasse	<b><i>Symphodus melops</i>; Corkwing Wrasse</b>	TE - Spot on caudal peduncle just below lateral line
11	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel	-
12	<i>Psetta maxima</i> ; Turbot	<i>Psetta maxima</i> ; Turbot	-
13	<i>Limanda limanda</i> ; Dab	<i>Limanda limanda</i> ; Dab	-
14	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
15	<i>Syngnathus rostellatus</i> ; Lesser pipefish	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 14/11/2012  
 Specimens Received - 14/11/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1940

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Scophthalmus rhombus</i> ; Brill; 82	<i>Scophthalmus rhombus</i> ; Brill	-
2	<i>Platichthys flesus</i> ; Flounder; 90	<i>Platichthys flesus</i> ; Flounder	-
3	<i>Clupea harengus</i> ; Herring; -	<i>Clupea harengus</i> ; Herring	-
4	<i>Sprattus sprattus</i> ; Sprat; -	<i>Sprattus sprattus</i> ; Sprat	-
5	<i>Pleuronectes platessa</i> ; Plaice; -	<i>Pleuronectes platessa</i> ; Plaice	-
6	<i>Echiichthys vipera</i> ; Lesser Weever; -	<i>Echiichthys vipera</i> ; Lesser Weever	-
7	<i>Agonus cataphractus</i> ; Pogge; -	<i>Agonus cataphractus</i> ; Pogge	-
8	<i>Atherina presbyter</i> ; Sand Smelt; -	<i>Atherina presbyter</i> ; Sand Smelt	-
9	<i>Pomatoschistus minutus</i> ; Sand Goby; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
10	<i>Trigla lucerna</i> ; Tub Gurnard; -	<b><i>Chelidonichthys lucerna</i> ; Tub Gurnard</b>	nc
11	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel; -	<i>Hyperoplus lanceolatus</i> ; Greater Sandeel	-
12	<i>Pomatoschistus microps</i> ; Common Goby; -	<i>Pomatoschistus microps</i> ; Common Goby	-
13	<i>Sardina pilchardus</i> ; Pilchard; -	<i>Sardina pilchardus</i> ; Pilchard	-
14	<i>Ammodytes tobianus</i> ; Lesser Sandeel; -	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
15	<i>Liza aurata</i> ; Golden Grey Mullet; -	<b><i>Chelon labrosus</i>; Thick-lipped Grey Mullet</b>	TE - ventral head pigmentation

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 21/12/2012  
 Specimens Received - 21/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1941

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-
2	<i>Limanda limanda</i> ; Dab	<i>Limanda limanda</i> ; Dab	-
3	<i>Trisopterus luscus</i> ; Bib	<i>Trisopterus luscus</i> ; Bib	-
4	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
5	<i>Sprattus sprattus</i> ; Sprat	<i>Sprattus sprattus</i> ; Sprat	-
6	<i>Clupea harengus</i> ; Herring	<i>Clupea harengus</i> ; Herring	-
7	<i>Aphia minuta</i> ; Transparent Goby	<i>Aphia minuta</i> ; Transparent Goby	-
8	<i>Pomatoschistus minutus</i> ; Sand Goby	<i>Pomatoschistus minutus</i> ; Sand Goby	-
9	<i>Pomatoschistus microps</i> ; Common Goby	<i>Pomatoschistus microps</i> ; Common Goby	-
10	<i>Pholis gunnellus</i> ; Butterfish	<i>Pholis gunnellus</i> ; Butterfish	-
11	<i>Pomatoschistus pictus</i> ; Painted Goby	<i>Pomatoschistus pictus</i> ; Painted Goby	-
12	<i>Buglossidium luteum</i> ; Solenette	<i>Buglossidium luteum</i> ; Solenette	-
13	<i>Eutrigla gurnardus</i> ; Grey Gurnard	<i>Eutrigla gurnardus</i> ; Grey Gurnard	-
14	<i>Callionymus lyra</i> ; Common Dragonet	<i>Callionymus lyra</i> ; Common Dragonet	-
15	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04

Return Deadline - 14/12/2012

Data Received - 21/12/2012

Specimens Received - 21/12/2012

Number of Subscribing Laboratories - 24

Laboratory Code - 1942

Key to codes:

TE - Taxonomic error

sp - Spelling error

nc - Name change

mx - Mixture of species

\* - Problem taxa indicated

TUM - Thomson Unicmarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicmarine identification	Code / Comments
1	<i>Sprattus sprattus</i> ; Sprat; -	<i>Sprattus sprattus</i> ; Sprat	-
2	<i>Clupea harengus</i> ; Herring; -	<i>Clupea harengus</i> ; Herring	-
3	<i>Zoarces viviparus</i> ; Viviparous Blenny; -	<b><i>Zoarces viviparus</i>; Eelpout</b>	sp
4	<i>Agonus cataphractus</i> ; Pogge; -	<i>Agonus cataphractus</i> ; Pogge	-
5	<i>Liparis liparis</i> ; Common Sea Snail; -	<b><i>Liparis liparis liparis</i>; Common Sea Snail</b>	nc
6	<i>Buglossidium luteum</i> ; Solenette; -	<i>Buglossidium luteum</i> ; Solenette	-
7	<i>Osmerus eperlanus</i> ; Smelt; -	<i>Osmerus eperlanus</i> ; Smelt	-
8	<i>Pomatoschistus minutus</i> ; Sand Goby; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
9	<i>Ciliata mustela</i> ; Five-bearded Rockling; -	<i>Ciliata mustela</i> ; Five-bearded Rockling	-
10	<i>Gadus morhua</i> ; Cod;-	<i>Gadus morhua</i> ; Cod	-
11	<i>Myoxocephalus scorpius</i> ; Bullrout; -	<i>Myoxocephalus scorpius</i> ; Bull Rout	-
12	<i>Callionymus lyra</i> ; Common Dragonet; -	<i>Callionymus lyra</i> ; Common Dragonet	-
13	<i>Syngnathus rostellatus</i> ; Lesser Pipefish; -	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-
14	<i>Merlangius merlangus</i> ; Whiting; -	<i>Merlangius merlangus</i> ; Whiting	-
15	<i>Eutrigla gurnardus</i> ; Grey Gurnard; -	<i>Eutrigla gurnardus</i> ; Grey Gurnard	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 18/10/2012  
 Specimens Received - 17/10/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1943

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Scyliorhinus canicula</i> ; Common dogfish; -	<i>Scyliorhinus canicula</i> ; Lesser Spotted Dogfish	-
2	<i>Pleuronectes platessa</i> ; Plaice; -	<i>Pleuronectes platessa</i> ; Plaice	-
3	<i>Limanda limanda</i> ; Dab; -	<i>Limanda limanda</i> ; Dab	-
4	<i>Arnoglossus laterna</i> ; Scaldfish; -	<i>Arnoglossus laterna</i> ; Scaldfish	-
5	<i>Buglossidium luteum</i> ; Solenette; -	<i>Buglossidium luteum</i> ; Solenette	-
6	<i>Eutrigla gurnardus</i> ; Grey Gurnard; -	<i>Eutrigla gurnardus</i> ; Grey Gurnard	-
7	<i>Chelidonichthys lucernus</i> ; Tub Gurnard; -	<b><i>Chelidonichthys lucerna</i>; Tub Gurnard</b>	sp
8	<i>Merlangius merlangus</i> ; Whiting; -	<i>Merlangius merlangus</i> ; Whiting	-
9	<i>Zeus faber</i> ; John Dory; -	<i>Zeus faber</i> ; John Dory	-
10	<i>Pomatoschistus minutus</i> ; Sand Goby; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
11	<i>Syngnathus rostellatus</i> ; Lesser Pipefish; -	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-
12	<i>Sprattus sprattus</i> ; Sprat; -	<i>Sprattus sprattus</i> ; Sprat	-
13	<i>Echiichthys vipera</i> ; Lesser Weaver; -	<b><i>Echiichthys vipera</i>; Lesser Weever</b>	sp
14	<i>Callionymus lyra</i> ; Common Dragonet; -	<i>Callionymus lyra</i> ; Common Dragonet	-
15	<i>Agonus cataphractus</i> ; Pogge; -	<i>Agonus cataphractus</i> ; Pogge	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04

Return Deadline - 14/12/2012

Data Received - 20/11/2012

Specimens Received -20/11/2012

Number of Subscribing Laboratories - 24

Laboratory Code - 1944

Key to codes:

TE - Taxonomic error

sp - Spelling error

nc - Name change

mx - Mixture of species

\* - Problem taxa indicated

TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Aphia minuta</i> ; Transparent goby; -	<i>Aphia minuta</i> ; Transparent goby	-
2	<i>Echiichthys vipera</i> ; Lesser Weaver; -	<b><i>Echiichthys vipera</i>; Lesser Weever</b>	sp
3	<i>Trisopterus luscus</i> ; Bib / Pout; -	<i>Trisopterus luscus</i> ; Bib	-
4	<i>Ctenelabrus rupestris</i> ; Goldsinny; -	<i>Ctenolabrus rupestris</i> ; Goldsinny	-
5	<i>Merlangius merlangus</i> ; Whiting; -	<i>Merlangius merlangus</i> ; Whiting	-
6	<i>Liparis liparis</i> ; Common Sea Snail; -	<b><i>Liparis liparis liparis</i>; Common Sea Snail</b>	nc
7	<i>Zeus faber</i> ; John Dory; -	<i>Zeus faber</i> ; John Dory	-
8	<i>Buglossidium luteum</i> ; Solonette; -	<i>Buglossidium luteum</i> ; Solonette	-
9	<i>Entelurus aequoreus</i> ; Snake Pipefish; -	<i>Entelurus aequoreus</i> ; Snake Pipefish	-
10	<i>Agonus cataphractus</i> ; Pogge; -	<i>Agonus cataphractus</i> ; Pogge	-
11	<i>Limanda limanda</i> ; Dab; -	<i>Limanda limanda</i> ; Dab	-
12	<i>Solea solea</i> ; Common Sole; -	<i>Solea solea</i> ; Common Sole	-
13	<i>Eutrigla gurnardus</i> ; Grey Gurnard; -	<i>Eutrigla gurnardus</i> ; Grey Gurnard	-
14	<i>Chelidonichthys lucernus</i> ; Tub Gurnard; -	<b><i>Chelidonichthys lucerna</i>; Tub Gurnard</b>	sp
15	<i>Pomatoschistus minutus</i> ; Sand Goby; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04

Return Deadline - 14/12/2012

Data Received - 14/02/13

Specimens Received - 13/12/12

Number of Subscribing Laboratories - 24

Laboratory Code - 1945

Key to codes:

TE - Taxonomic error

sp - Spelling error

nc - Name change

mx - Mixture of species

\* - Problem taxa indicated

TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Pomatoschistus minutus</i> ; Sand Goby; -	<i>Pomatoschistus minutus</i> ; Sand Goby	-
2	<i>Platichthys flesus</i> ; Flounder; -	<i>Platichthys flesus</i> ; Flounder	-
3	<i>Callionymus reticulatus</i> ; Reticulated Dragonet; -	<i>Callionymus lyra</i> ; Common Dragonet	TE - 4 spines on preoperculum
4	<i>Labrus Bergylta</i> ; Ballon Wrasse; -	<b><i>Symphodus melops</i>; Corkwing Wrasse</b>	TE - Spot on caudal peduncle just below lateral line
5	<i>Scophthalmus rhombus</i> ; Brill; -	<i>Scophthalmus rhombus</i> ; Brill	-
6	<i>Gobius niger</i> ; Black Goby; -	<i>Gobius niger</i> ; Black Goby	-
7	<i>Pleuronectes platessa</i> ; Plaice; -	<i>Pleuronectes platessa</i> ; Plaice	-
8	<i>Spondyliosoma cantharus</i> ; Black Bream; -	<i>Spondyliosoma cantharus</i> ; Black Sea Bream	-
9	<i>Chelidonichthys lucernus</i> ; Tub Gurnard; -	<b><i>Chelidonichthys lucerna</i> ; Tub Gurnard</b>	sp
10	<i>Solea solea</i> ; Sole; -	<i>Solea solea</i> ; Common Sole	-
11	<i>Gobius niger</i> ; Black Goby; -	<i>Pomatoschistus pictus</i> ; Painted Goby	TE - banded 2nd dorsal fin, ventral head pigmentation
12	<i>Pomatoschistus microps</i> ; Common Goby; -	<i>Pomatoschistus microps</i> ; Common Goby	-
13	<i>Callionymus lyra</i> ; Common Dragonet; -	<i>Callionymus lyra</i> ; Common Dragonet	-
14	<i>Aphia minuta</i> ; Transparent Goby; -	<i>Aphia minuta</i> ; Transparent Goby	-
15	<i>Sprattus sprattus</i> ; Sprat; -	<i>Sprattus sprattus</i> ; Sprat	-



**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04

Return Deadline - 14/12/2012

Data Received - 13/12/2012

Specimens Received - 13/12/2012

Number of Subscribing Laboratories - 24

Laboratory Code - 1946

Key to codes:

TE - Taxonomic error

sp - Spelling error

nc - Name change

mx - Mixture of species

\* - Problem taxa indicated

TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Mullus surmuletus</i> ; Red mullet	<i>Mullus surmuletus</i> ; Red mullet	-
2	<i>Trachurus trachurus</i> ; Horse Mackerel / Scad	<i>Trachurus trachurus</i> ; Scad	-
3	<i>Zeus faber</i> ; John Dory	<i>Zeus faber</i> ; John Dory	-
4	<i>Callionymus lyra</i> ; Dragonet	<i>Callionymus lyra</i> ; Common Dragonet	-
5	<i>Trisopterus luscus</i> ; Bib / Pout	<i>Trisopterus luscus</i> ; Bib	-
6	<i>Arnoglossus laterna</i> ; Scaldfish	<i>Arnoglossus laterna</i> ; Scaldfish	-
7	<i>Spondyliosoma cantharus</i> ; Black Sea Bream	<i>Spondyliosoma cantharus</i> ; Black Sea Bream	-
8	<i>Pomatoschistus pictus</i> ; Painted Goby (3 individuals)	<i>Pomatoschistus pictus</i> ; Painted Goby	-
9	<i>Nerophis lumbriciformis</i> ; Worm Pipefish	<i>Nerophis lumbriciformis</i> ; Worm Pipefish	-
10	<i>Aphia minuta</i> ; Transparent Goby	<i>Aphia minuta</i> ; Transparent Goby	-
11	<i>Gobius couchi</i> ; Couch's Goby	<i>Gobius couchi</i> ; Couch's Goby	-
12	<i>Solea solea</i> ; Dover Sole	<i>Solea solea</i> ; Common Sole	-
13	<i>Syngnathus rostellatus</i> ; Nilsson's / Lesser Pipefish	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-
14	<i>Ammodytes tobianus</i> ; Lesser Sandeel	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
15	<i>Trisopterus esmarkii</i> ; Norway Pout	<i>Trisopterus esmarkii</i> ; Norway Pout	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04

Return Deadline - 14/12/2012

Data Received - 06/12/2012

Specimens Received - 06/12/2012

Number of Subscribing Laboratories - 24

Laboratory Code - 1947

Key to codes:

TE - Taxonomic error

sp - Spelling error

nc - Name change

mx - Mixture of species

\* - Problem taxa indicated

TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Pomatoschistus microps</i> ; Common Goby; 43	<i>Pomatoschistus microps</i> ; Common Goby	-
2	<i>Pomatoschistus microps</i> ; Common Goby; 45	<i>Pomatoschistus microps</i> ; Common Goby	-
3	<i>Pomatoschistus microps</i> ; Common Goby; 32	<i>Pomatoschistus microps</i> ; Common Goby	-
4	<i>Dicentrarchus labrax</i> ; Sea Bass; 46	<i>Dicentrarchus labrax</i> ; Sea Bass	-
5	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet; 52	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
6	<i>Sprattus sprattus</i> ; Sprat; 30	<i>Sprattus sprattus</i> ; Sprat	-
7	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet; 44	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
8	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet; 45	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
9	<i>Pomatoschistus minutus</i> ; Sand Goby; 50	<i>Pomatoschistus minutus</i> ; Sand Goby	-
10	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet; 48	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
11	<i>Pomatoschistus minutus</i> ; Sand Goby 42	<i>Pomatoschistus minutus</i> ; Sand Goby	-
12	<i>Dicentrarchus labrax</i> ; Sea Bass; 70	<i>Dicentrarchus labrax</i> ; Sea Bass	-
13	<i>Dicentrarchus labrax</i> ; Sea Bass; 49	<i>Dicentrarchus labrax</i> ; Sea Bass	-
14	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet; 72	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
15	<i>Liza ramda</i> ; Thin-lipped Grey Mullet; 65	<i>Liza ramada</i> ; Thin-lipped Grey Mullet	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 01/11/2012  
 Specimens Received - 06/11/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1948

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Gobiusculus flavescens</i> ; Two-spotted Goby; 39	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	-
2	<i>Dicentrarchus labrax</i> ; Bass; 44	<i>Dicentrarchus labrax</i> ; Sea Bass	-
3	<i>Gobius niger</i> ; Black Goby; 69	<i>Gobius niger</i> ; Black Goby	-
4	<i>Pomatoschistus minutus</i> ; Sand Goby; 65	<i>Pomatoschistus minutus</i> ; Sand Goby	-
5	<i>Atherina presbyter</i> ; Sand Smelt; 57	<i>Atherina presbyter</i> ; Sand Smelt	-
6	<i>Platichthys flesus</i> ; Flounder; 103	<i>Platichthys flesus</i> ; Flounder	-
7	<i>Syngnathus acus</i> ; Greater Pipefish; 146	<i>Syngnathus acus</i> ; Greater Pipefish	-
8	<i>Ammodytes tobianus</i> ; Common Sand Eel; 94	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
9	<i>Pleuronectes platessa</i> ; Plaice; 45	<b><i>Pleuronectes platessa</i>; Plaice</b>	sp
10	<i>Chelon labrosus</i> ; Thick-lipped Mullet; 21	<i>Chelon labrosus</i> ; Thick-lipped Mullet	-
11	<i>Echiichthys vipera</i> ; Lesser Weaver; 105	<b><i>Echiichthys vipera</i>; Lesser Weever</b>	sp
12	<i>Pleuronectes platessa</i> ; Plaice; 82	<b><i>Pleuronectes platessa</i>; Plaice</b>	sp
13	<i>Clupea harengus</i> ; Herring; 68	<i>Clupea harengus</i> ; Herring	-
14	<i>Gobiusculus flavescens</i> ; Two-spotted Goby; 38	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	-
15	<i>Pomatoschistus minutus</i> ; Sand Goby; 69	<i>Pomatoschistus minutus</i> ; Sand Goby	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 13/12/2012  
 Specimens Received - 13/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1949

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Dicentrarchus labrax</i> ; Bass; 56	<i>Dicentrarchus labrax</i> ; Sea Bass	-
2	<i>Sprattus sprattus</i> ; Sprat; 77	<b><i>Clupea harengus</i>; Herring</b>	TE - Pelvic fin positioned behind dorsal fin
3	<i>Abramis brama</i> ; Common Bream; 55	<i>Abramis brama</i> ; Common Bream	-
4	<i>Pomatoschistus minutus</i> ; Sand Goby; 57	<i>Pomatoschistus minutus</i> ; Sand Goby	-
5	<i>Gasterosteus aculeatus</i> ; Three-spined Stickleback; 37	<b><i>Gasterosteus aculeatus aculeatus</i>; Three-spined Stickleback</b>	nc
6	<i>Aphia minuta</i> ; Transparent Goby; 52	<i>Aphia minuta</i> ; Transparent Goby; 53	-
7	<i>Alburnus alburnus</i> ; Bleak; 54; 50 (2 individuals)	<i>Alburnus alburnus</i> ; Bleak	-
8	<i>Alburnus alburnus</i> ; Bleak; 44	<b><i>Leucaspis delineatus</i>; Sunbleak</b>	TE - Lateral line incomplete
9	<i>Abramis brama</i> ; Common Bream; 67	<i>Abramis brama</i> ; Common Bream	-
10	<i>Abramis brama and Rutilus rutilus</i> ; Common bream and Roach hybrid; 65	<i>Abramis brama and Rutilus rutilus</i> ; Common bream and Roach hybrid	-
11	<i>Pomatoschistus minutus</i> ; Sand Goby; 34	<b><i>Pomatoschistus microps</i>; Common Goby</b>	TE - no villi present on anterior membrane, ventral head pigmentation
12	-	-	Taxon not supplied
13	<i>Leuciscus leuciscus</i> ; Dace; 60	<i>Leuciscus leuciscus</i> ; Dace	-
14	<i>Cyprinus carpio</i> ; Mirror Carp; 44	<i>Cyprinus carpio</i> ; Mirror Carp	-
15	<i>Atherina presbyter</i> ; Sand Smelt; 64	<i>Atherina presbyter</i> ; Sand Smelt	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 11/12/2012  
 Specimens Received - 11/12/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1951

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Clupea harengus</i> ; Herring; -	<i>Clupea harengus</i> ; Herring	-
2	<i>Dicentrarchus labrax</i> ; Bass; -	<i>Dicentrarchus labrax</i> ; Sea Bass	-
3	<i>Liza aurata</i> ; Golden Grey Mullet; -	<i>Liza aurata</i> ; Golden Grey Mullet	-
4	<i>Pleuronectes platessa</i> ; Plaice; -	<i>Pleuronectes platessa</i> ; Plaice	-
5	<i>Platichthys flesus</i> ; Flounder; -	<i>Platichthys flesus</i> ; Flounder	-
6	<i>Aphia minuta</i> ; Transparent Goby; -	<i>Aphia minuta</i> ; Transparent Goby	-
7	<i>Gobiusculus flavescens</i> ; Two-spotted Goby; -	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	-
8	<i>Lipophrys pholis</i> ; Shanny; -	<i>Lipophrys pholis</i> ; Shanny	-
9	<i>Symphodus melops</i> ; Corkwing Wrasse; -	<i>Symphodus melops</i> ; Corkwing Wrasse	-
10	<i>Labrus bergylta</i> ; Ballan Wrasse; -	<i>Labrus bergylta</i> ; Ballan Wrasse	-
11	<i>Trisopterus luscus</i> ; Pouting; -	<i>Trisopterus luscus</i> ; Bib	-
12	<i>Abramis brama</i> ; Common Bream; -	<i>Abramis brama</i> ; Common Bream	-
13	<i>Pomatoschistus microps</i> ; Common Goby; -	<i>Pomatoschistus microps</i> ; Common Goby	-
14	<i>Pomatoschistus microps</i> ; Sand Goby; -	<i>Pomatoschistus microps</i> ; Sand Goby	-
15	<i>Sprattus sprattus</i> ; Sprat; -	<i>Clupea harengus</i> ; Herring	TE - pelvic fin positioned behind dorsal fin

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 29/11/2012  
 Specimens Received - 29/11/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1952

Key to codes:

TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Lipophrys pholis</i> ; Shanny	<i>Lipophrys pholis</i> ; Shanny	-
2	<i>Liza aurata</i> ; Golden Grey Mullet	<b><i>Chelon labrosus</i> ; Thick-lipped Grey Mullet</b>	TE - Upper lip with papillations, pectoral fin does not extend to or beyond the eye
3	<i>Pomatoschistus microps</i> ; Common Goby	<i>Pomatoschistus microps</i> ; Common Goby	-
4	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	<i>Gobiusculus flavescens</i> ; Two-spotted Goby	-
5	<i>Spondyliosoma cantharus</i> ; Black Bream	<i>Spondyliosoma cantharus</i> ; Black Sea Bream	-
6	<i>Pomatoschistus pictus</i> ; Painted Goby	<i>Pomatoschistus pictus</i> ; Painted Goby	-
7	<i>Atherina presbyter</i> ; Sand Smelt	<i>Atherina presbyter</i> ; Sand Smelt	-
8	<i>Liza ramada</i> ; Thin-lipped Mullet	<b><i>Chelon labrosus</i> ; Thick-lipped Grey Mullet</b>	TE - ventral head pigmentation
9	<i>Dicentrarchus labrax</i> ; Sea Bass	<i>Dicentrarchus labrax</i> ; Sea Bass	-
10	<i>Ammodytes tobianus</i> ; Lesser Sandeel	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
11	<i>Spinachia spinachia</i> ; Fifteen-spined Stickleback	<i>Spinachia spinachia</i> ; Fifteen-spined Stickleback	-
12	<i>Solea solea</i> ; Common (Dover) Sole	<i>Solea solea</i> ; Common Sole	-
13	<i>Pomatoschistus minutus</i> ; Sand Goby	<i>Pomatoschistus minutus</i> ; Sand Goby	-
14	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-
15	<i>Leucaspius delineatus</i> ; Sunbleak (motherless minnow)	<i>Leucaspius delineatus</i> ; Sunbleak	-

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 29/11/2012  
 Specimens Received - 29/11/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1953

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicomarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicomarine identification	Code / Comments
1	<i>Dicentrarchus labrax</i> ; Sea Bass	<i>Dicentrarchus labrax</i> ; Sea Bass	-
2	<i>Gasterosteus aculeatus</i> ; Three-spined Stickleback	<b><i>Gasterosteus aculeatus aculeatus</i>; Three-spined Stickleback</b>	nc
3	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
4	<i>Pomatoschistus minutus</i> ; Sand Goby	<i>Pomatoschistus minutus</i> ; Sand Goby	-
5	<i>Clupea harengus</i> ; Herring	<i>Clupea harengus</i> ; Herring	-
6	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	<i>Chelon labrosus</i> ; Thick-lipped Grey Mullet	-
7	<i>Pleuronectes platessa</i> ; Plaice	<i>Pleuronectes platessa</i> ; Plaice	-
8	<i>Platichthys flesus</i> ; Flounder	<i>Platichthys flesus</i> ; Flounder	-
9	<i>Osmerus eperlanus</i> ; Smelt	<i>Osmerus eperlanus</i> ; Smelt	-
10	<i>Pollachius virens</i> ; Saith	<b><i>Pollachius virens</i>; Saithe</b>	sp
11	<i>Salmo trutta</i> ; Sea Trout	<i>Salmo trutta trutta</i> ; Brown Trout	nc
12	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	<i>Syngnathus rostellatus</i> ; Lesser Pipefish	-
13	<i>Ammodytes tobianus</i> ; Sand eel	<i>Ammodytes tobianus</i> ; Lesser Sandeel	-
14	-	-	Taxon not supplied
15	-	-	Taxon not supplied

**EXERCISE DETAILS**

Fish Reverse Ring Test - F\_RRT04  
 Return Deadline - 14/12/2012  
 Data Received - 30/10/2012  
 Specimens Received - 31/10/2012  
 Number of Subscribing Laboratories - 24  
 Laboratory Code - 1954

Key to codes:  
 TE - Taxonomic error  
 sp - Spelling error  
 nc - Name change  
 mx - Mixture of species  
 \* - Problem taxa indicated  
 TUM - Thomson Unicmarine

Specimen No.	Laboratory id. (Genus species; common name; length in mm)	Thomson Unicmarine identification	Code / Comments
1	<i>Gobius paganellus</i> ; Rock Goby	<i>Gobius paganellus</i> ; Rock Goby	-
2	<i>Chelon labrosus</i> ; Thick-lipped Mullet	<i>Chelon labrosus</i> ; Thick-lipped Mullet	-
3	<i>Scomber scombrus</i> ; Mackerel	<i>Scomber scombrus</i> ; Mackerel	-
4	<i>Limanda limanda</i> ; Dab	<i>Limanda limanda</i> ; Dab	-
5	<i>Atherina presbyter</i> ; Sand Smelt	<i>Atherina presbyter</i> ; Sand Smelt	-
6	<i>Spinachia spinachia</i> ; Fifteen-spined Stickleback	<i>Spinachia spinachia</i> ; Fifteen-spined Stickleback	-
7	<i>Syngnathus acus</i> ; Greater Pipefish	<b><i>Syngnathus rostellatus</i> : Lesser Pipefish</b>	TE - 15 pre-anal body rings, dorsal fin covers 12 body rings.
8	<i>Echiichthys vipera</i> ; Lesser Weaver	<b><i>Echiichthys vipera</i>; Lesser Weever</b>	sp
9	<i>Chelidonichthys lucernus</i> ; Tub gurnard	<b><i>Chelidonichthys lucerna</i> ; Tub gurnard</b>	sp
10	<i>Osmerus eperlanus</i> ; Smelt	<i>Osmerus eperlanus</i> ; Smelt	-
11	<i>Ciliata mustela</i> ; Five-bearded Rockling	<i>Ciliata mustela</i> ; Five-bearded Rockling	-
12	<i>Platichthys flesus</i> ; Flounder	<i>Platichthys flesus</i> ; Flounder	-
13	<i>Merlangius merlangus</i> ; Whiting	<i>Merlangius merlangus</i> ; Whiting	-
14	<i>Clupea harengus</i> ; Herring	<i>Clupea harengus</i> ; Herring	-
15	<i>Sprattus sprattus</i> ; Sprat	<i>Sprattus sprattus</i> ; Sprat	-



## Appendix 1

### **References**

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