

The National Marine Biological
Analytical Quality Control Scheme

Fish Ring Test Bulletin - F_RT04

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RING TEST DETAILS

Fish Ring Test #04

Type/Contents - General

Circulated – 07/02/2011

Completion Date – 29/04/2011

Number of Participating Laboratories - 8*

Number of Results Received – 13*

*Multiple data entries per laboratory permitted

Summary of Differences

Specimen	Genus	Species	Total differences for 13 returns	
			Genus	Species
F_RT0401	<i>Solea</i>	<i>solea</i>	0	0
F_RT0402	<i>Merlangius</i>	<i>merlangus</i>	2	2
F_RT0403	<i>Raja</i>	<i>clavata</i>	0	3
F_RT0404	<i>Pomatoschistus</i>	<i>minutus</i>	1	1
F_RT0405	<i>Chelon</i>	<i>labrosus</i>	6	6
F_RT0406	<i>Gobius</i>	<i>niger</i>	4	4
F_RT0407	<i>Raja</i>	<i>clavata</i>	0	1
F_RT0408	<i>Platichthys</i>	<i>flesus</i>	1	1
F_RT0409	<i>Rutilus</i>	<i>rutilus</i>	0	0
F_RT0410	<i>Microstomus</i>	<i>kitt</i>	3	3
F_RT0411	<i>Limanda</i>	<i>limanda</i>	0	0
F_RT0412	<i>Aspitrigla</i>	<i>cuculus</i>	2	2
F_RT0413	<i>Callionymus</i>	<i>lyra</i>	0	2
F_RT0414	<i>Hyperoplus</i>	<i>lanceolatus</i>	0	0
F_RT0415	<i>Sardina</i>	<i>pilchardus</i>	2	2
Total differences			21	27
Average differences /lab.			1.6	2.1

Table 1. The identification of fauna made by participating laboratories for F_RT04 (arranged by specimen). Names are given only where different from the AQC identification.

	FRT0401	FRT0402	FRT0403	FRT0404	FRT0405	FRT0406	FRT0407	FRT0408
LabCode	<i>Solea solea</i>	<i>Merlangius merlangus</i>	<i>Raja clavata</i>	<i>Pomatoschistus minutus</i>	<i>Chelon labrosus</i>	<i>Gobius niger</i>	<i>Raja clavata</i>	<i>Platichthys flesus</i>
LB1701	--	--	- brachyura	--	--	--	--	--
LB1702	--	--	--	--	Liza ramada	--	--	--
LB1703	--	Gadus morhua	--	Thorogobius ephippiatus	--	Lesueurigobius friesii	--	--
LB1705a	--	--	--	--	--	Pomatoschistus microps	--	--
LB1705b	--	Pollachius pollachius	--	--	Crenilabrus melops	Pomatoschistus minutus	--	--
LB1705c	--	--	- batis	--	--	Pomatoschistus microps	- montagui	--
LB1706	--	[Merlangius] -	--	--	--	--	--	--
LB1707a	--	--	--	--	Liza ramada	--	--	--
LB1707b	--	--	--	--	Liza ramada	--	--	--
LB1707c	--	--	--	--	--	--	--	--
LB1713a	--	--	--	--	--	--	--	--
LB1713b	--	--	--	--	Liza ramada	--	--	--
LB1727	--	- [merlangius]	- montagui	--	Liza ramada	--	--	Pleuronectes platessa

	FRT0409	FRT0410	FRT0411	FRT0412	FRT0413	FRT0414	FRT0415
LabCode	<i>Rutilus rutilus</i>	<i>Microstomus kitt</i>	<i>Limanda limanda</i>	<i>Aspitrigla cuculus</i>	<i>Callionymus lyra</i>	<i>Hyperoplus lanceolatus</i>	<i>Sardina pilchardus</i>
LB1701	--	--	--	--	--	--	[Sardinia] -
LB1702	--	Glyptocephalus cynoglossus	--	[Aspitrigla] -	--	--	--
LB1703	--	Glyptocephalus cynoglossus	--	[Chelidonichthys] -	- reticulatus	--	--
LB1705a	--	--	--	Eutrigla gurnardus	--	--	Alosa fallax
LB1705b	--	--	--	[Aspitrigla] -	--	--	--
LB1705c	--	Glyptocephalus cynoglossus	--	Trigla lucerna	[Callionymus] ?	--	Alosa fallax
LB1706	--	--	--	[Chelidonichthys] -	--	--	--
LB1707a	- [rutilo]	--	--	--	--	--	--
LB1707b	--	--	--	--	--	--	--
LB1707c	--	--	--	--	--	--	--
LB1713a	--	--	--	[Chelidonichthys] -	--	--	--
LB1713b	--	--	--	[Chelidonichthys] -	--	--	--
LB1727	--	--	--	--	--	--	--

Table 2. The identification of fauna made by participating laboratories for F_RT04 (arranged by participant). Names are given only where different from the AQC identification.

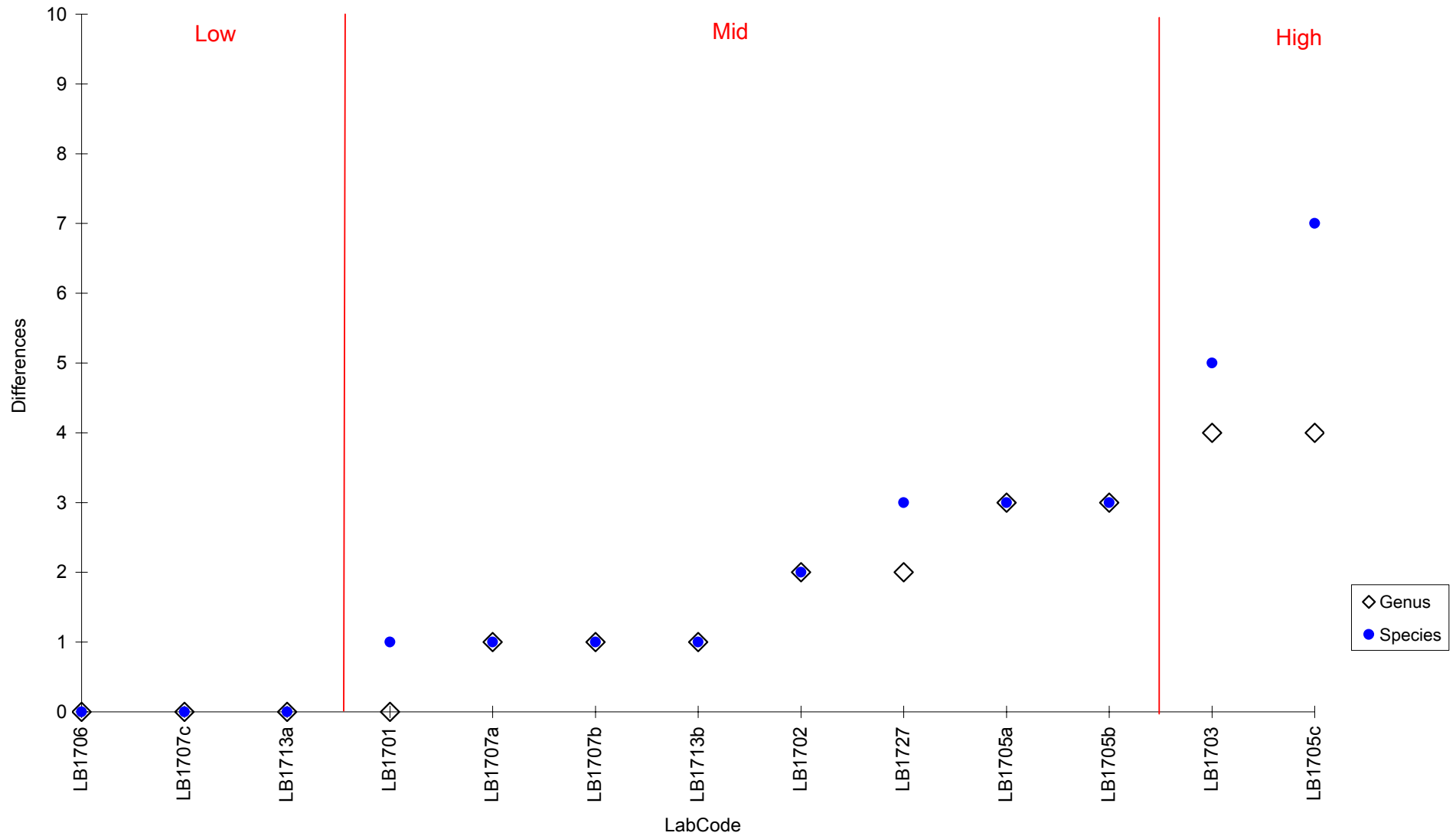
FRT04	Taxon	LB1701	LB1702	LB1703	LB1705a	LB1705b	LB1705c	LB1706
FRT0401	<i>Solea solea</i>	--	--	--	--	--	--	--
FRT0402	<i>Merlangius merlangus</i>	--	--	Gadus morhua	--	Pollachius pollachius	--	[Merlanguis] -
FRT0403	<i>Raja clavata</i>	- brachyura	--	--	--	--	- batis	--
FRT0404	<i>Pomatoschistus minutus</i>	--	--	Thorogobius ephippiatus	--	--	--	--
FRT0405	<i>Chelon labrosus</i>	--	Liza ramada	--	--	Crenilabrus melops	--	--
FRT0406	<i>Gobius niger</i>	--	--	Lesueurigobius friesii	Pomatoschistus microps	Pomatoschistus minutus	Pomatoschistus microps	--
FRT0407	<i>Raja clavata</i>	--	--	--	--	--	- montagui	--
FRT0408	<i>Platichthys flesus</i>	--	--	--	--	--	--	--
FRT0409	<i>Rutilus rutilus</i>	--	--	--	--	--	--	--
FRT0410	<i>Microstomus kitt</i>	--	Glyptocephalus cynoglossus	Glyptocephalus cynoglossus	--	--	Glyptocephalus cynoglossus	--
FRT0411	<i>Limanda limanda</i>	--	--	--	--	--	--	--
FRT0412	<i>Aspitrigla cuculus</i>	--	[Aspitriglia] -	[Chelidonichthys] -	Eutrigla gurnardus	[Aspitrigla] -	Trigla lucerna	[Chelidonichthys] -
FRT0413	<i>Callionymus lyra</i>	--	--	- reticulatus	--	--	[Callionymus] ?	--
FRT0414	<i>Hyperoplus lanceolatus</i>	--	--	--	--	--	--	--
FRT0415	<i>Sardina pilchardus</i>	[Sardinia] -	--	--	Alosa fallax	--	Alosa fallax	--

Taxon	LB1707a	LB1707b	LB1707c	LB1713a	LB1713b	LB1727
FRT0401	<i>Solea solea</i>	--	--	--	--	--
FRT0402	<i>Merlangius merlangus</i>	--	--	--	--	- [merlangius]
FRT0403	<i>Raja clavata</i>	--	--	--	--	- montagui
FRT0404	<i>Pomatoschistus minutus</i>	--	--	--	--	--
FRT0405	<i>Chelon labrosus</i>	Liza ramada	Liza ramada	--	Liza ramada	Liza ramada
FRT0406	<i>Gobius niger</i>	--	--	--	--	--
FRT0407	<i>Raja clavata</i>	--	--	--	--	--
FRT0408	<i>Platichthys flesus</i>	--	--	--	--	Pleuronectes platessa
FRT0409	<i>Rutilus rutilus</i>	- [rutilo]	--	--	--	--
FRT0410	<i>Microstomus kitt</i>	--	--	--	--	--
FRT0411	<i>Limanda limanda</i>	--	--	--	--	--
FRT0412	<i>Aspitrigla cuculus</i>	--	--	[Chelidonichthys] -	[Chelidonichthys] -	--
FRT0413	<i>Callionymus lyra</i>	--	--	--	--	--
FRT0414	<i>Hyperoplus lanceolatus</i>	--	--	--	--	--
FRT0415	<i>Sardina pilchardus</i>	--	--	--	--	--

Table 3. Literature and resources cited by participating laboratories for F_RT04.

LabCode	Literature / Resource (typographic and spelling errors corrected)
LB1701	-
LB1702	Wheeler 1969; Maitland & Herdson 2009
LB1703	Wheeler 1969
LB1705a	Maitland; Bent; http://www.sharktrust.org/content.asp?did=33255 ; EA cheat sheets; Collins
LB1705b	Maitland & Herdson 2009; EA cheat sheets
LB1705c	Maitland & Herdson 2009; Wheeler 1978; Muus & Dahlstrom 1974
LB1706	Wheeler 1969; Coates et al 2009; Reay & Cornell 1988
LB1707a	Wheeler 1969; Whitehead (UNESCO) 1984; EA field guide; Maitland 2000
LB1707b	-
LB1707c	Whitehead et al 1986
LB1713a	-
LB1713b	-
LB1727	Wheeler 1969

Figure 1. The number of differences from the AQC identification of specimens distributed in F_RT04 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.* LB1701a = 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 Unicmarine Ltd.

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

F_RT0401 – *Solea solea* (Common Sole, Dover Sole) (Figure 1a)



Figure 1a (F_RT0401) - L (right - eyed side)

Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Good, Length 20-22cm.

No differences recorded.

F_RT0402 – *Merlangius merlangus* (Whiting) (Figure 2a)



Figure 2a (F_RT0402) – L

Substratum: Mixed. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Poor/Fair, Length 7-9cm.

Two generic and two specific differences: Lab 03 identified as *Gadus morhua* (which has a shorter 1st anal fin and very obvious barbel); Lab 05b identified as *Pollachius pollachius* (which has a longer lower jaw and a distinct curve in the lateral line over the pectoral fin).

Lab 06 incorrectly spelt the genus. Lab 27 incorrectly spelt the species.

F_RT0403 – *Raja clavata* (Thornback Ray, Roker) (Figure 3a)

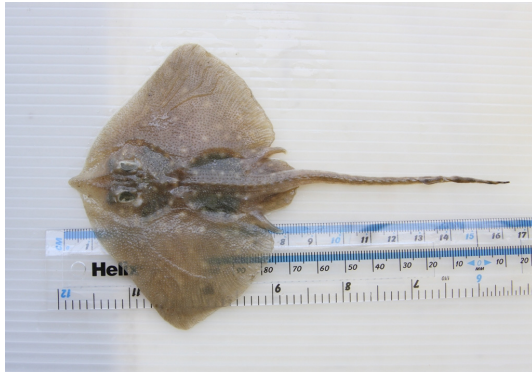


Figure 3a (F_RT0403) – D

Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Good, Length 15-18cm.

Three specific differences: Lab 01 identified as *Raja brachyura* (which has dark pigment spots extending to the edge of the pectoral wings); Lab 05c identified as *Raja batis* (which has a long and pointed snout); Lab 27 identified as *Raja montagui* (which lacks coarse prickles over the entire dorsal surface and has rounded pectoral wings).

F_RT0404 – *Pomatoschistus minutus* (Sand Goby) (Figure 4a)



Figure 4a (RT3304) – L

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

One generic and one specific difference: Lab 03 identified as *Thorogobius ephippiatus* (which has no papillae around the lower border of the eye and orange spots on the head and body).

F_RT0405 – *Chelon labrosus* (Thick-lipped Grey Mullet) (Figure 5a)



Figure 5a (RT3305) – L

Substratum: Mixed. Salinity: Reduced. Depth: Infralittoral. Geography: S. W. England. Condition: Good, Length 4.5-6cm.

Six generic and six specific differences: Labs 02, 07a, 07b, 13b and 27 identified as *Liza ramada* (which has a different melanophore pattern on the ventral side of the head); Lab 05b identified as *Crenilabrus melops* (which has one long dorsal fin, a serrated pre-operculum and is deep-bodied).

Additional Literature: Reay and Cornell (1988)

F_RT0406 – *Gobius niger* (Black Goby) (Figure 6a)



Figure 6a (RT3306) – L

Substratum: Mixed. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Good, Length 5.5-7cm.

Four generic and four specific differences: Lab 03 identified as *Lesueurigobius friesii* (which has a lanceolate caudal fin and numerous yellow spots along the head and body); Labs 05a and 05c identified as *Pomatoschistus microps*; Lab 05b identified as *Pomatoschistus minutus* (both of which have a longer, narrower caudal peduncle and a row of complete papillae along the underside of the eye).

F_RT0407 – *Raja clavata* (Thornback Ray, Roker) (Figure 7a)



Figure 7a (F_RT0407) – D

Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Good, Length 23-27cm.

One specific difference: Lab 05c identified as *Raja montagui* (which lacks coarse prickles over the entire dorsal surface and has rounded pectoral wings).

F_RT0408 – *Platichthys flesus* (Flounder) (Figure 8a)

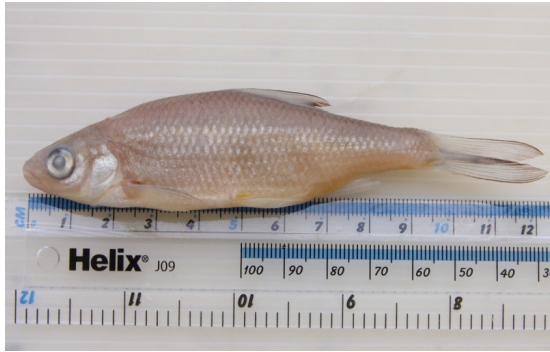


Figure 8a (F_RT0408) – L (left - eyed side)

Substratum: Mixed. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Fair/Good, Length 13-17cm.

One generic and one specific difference: Lab 27 identified as *Pleuronectes platessa* (which lacks short spines between the fin ray bases of the dorsal and anal fins).

F_RT0409 – *Rutilus rutilus* (Roach) (Figure 9a)



Substratum: Mixed. Salinity: Low. Depth: Infralittoral. Geography: Ireland. Condition: Good, Length 11-12cm.

No differences recorded.

Lab 07a incorrectly spelt the species.

Figure 9a (F_RT0409) – L

F_RT0410 – *Microstomus kitt* (Lemon Sole) (Figure 10a)



Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S. W. England. Condition: Poor/Fair, Length 19.5-22cm.

Three generic and three specific differences: Labs 02, 03 and 05c identified as *Glyptocephalus cynoglossus* (which has a more slender body outline and a straight lateral line).

Figure 10a (F_RT0410) – L (right - eyed side)

F_RT0411 – *Limanda limanda* (Dab) (Figure 11a)



Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Fair/Good, Length 16.5-19.5cm.

No differences recorded.

Figure 11a (F_RT0411) – L (right - eyed side)

F_RT0412 – *Aspitrigla cuculus* (Red Gurnard, Cuckoo Gurnard) (Figure 12a)



Figure 12a (F_RT0412) - L

Substratum: Mixed. Salinity: Full. Depth: Circalittoral. Geography: S. W. England. Condition: Poor/Fair, Length 13.5-17.5cm.

Two generic and two specific differences: Lab 05a identified as *Eutrigla gurnardus* (which has sharp spines along the lateral line); Lab 05c identified as *Trigla lucerna* (which has a smooth lateral line and pectoral fins that extend well beyond the anus).

Labs 03, 06, 13a and 13b recorded the synonym *Chelidonichthys cuculus*. Labs 02 and 05b incorrectly spelt the genus.

F_RT0413 – *Callionymus lyra* (Common Dragonet) (Figure 13a)



Figure 13a (F_RT0413) - D

Substratum: Sand. Salinity: High. Depth: Infralittoral. Geography: East Anglia. Condition: Fair, Length 14-16cm.

Two specific differences: Lab 03 identified as *Callionymus reticulatus* (which has three pre-opercular spines and lacks longitudinal pigment stripes on the second dorsal fin set). Lab 05c identified as *Callionymus* (identification to species with a specified confidence level is required for this exercise).

Lab 05c incorrectly spelt the genus.

F_RT0414 – *Hyperoplus lanceolatus* (Greater Sand Eel) (Figure 14a)



Substratum: Sand. Salinity: Full. Depth: Circalittoral. Geography: S. W. England. Condition: Good, Length 27.5-30.5cm.

No differences recorded.

Figure 14a (F_RT0414) – L

F_RT0415 – *Sardina pilchardus* (European Pilchard, Sardine) (Figure 15a)



Substratum: Mixed. Salinity: Full. Depth: Circalittoral. Geography: Spain. Condition: Poor/Fair, Length 17-20cm.

Two generic and two specific differences: Labs 05a and 05c identified as *Alosa fallax* (which has smaller scales, a stronger cleft snout and lacks longer posterior anal fin rays).

Figure 15a (F_RT0415) – L

Lab 01 incorrectly spelt the genus.

Acknowledgements

I would like to thank Rob Hillman (Environment Agency) for donating some excellent specimens for this ring test.

References

- Edlund, A., Sundmark, G. & Thorman, S., 1980. The identification of *Pomatoschistus pictus*, *P. microps* and *P. minutus* (Gobiidae, Pisces). *Sarsia*, **65**, 239-242.
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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](#)**

MBAQC Scheme
<i>Solea solea</i>
Location: Harwich
Gear: Otter Trawl
FullCode #: F_RT04_01

NMBAQC Scheme
<i>Merlangius merlangus</i>
Location: Harwich
Gear: Otter Trawl
FullCode #: F_RT04_02

NMBAQC Scheme
<i>Raja clavata</i>
Location: Harwich
Gear: Otter Trawl
FullCode #: F_RT04_03

NMBAQC Scheme
<i>Pomatoschistus minutus</i>
Location: Harwich
Gear: Beam Trawl
FullCode #: F_RT04_04

NMBAQC Scheme
<i>Chelon labrosus</i>
Location: Camel Estuary
Gear: Beam Trawl
FullCode #: F_RT04_05

NMBAQC Scheme
<i>Gobius niger</i>
Location: Harwich
Gear: Beam Trawl
FullCode #: F_RT04_06

NMBAQC Scheme
<i>Raja clavata</i>
Location: Harwich
Gear: Otter Trawl
FullCode #: F_RT04_07

NMBAQC Scheme
<i>Platichthys flesus</i>
Location: Harwich
Gear: Beam Trawl
FullCode #: F_RT04_08

NMBAQC Scheme
<i>Rutilus rutilus</i>
Location: Ireland
Gear: Beam Trawl
FullCode #: F_RT04_09

NMBAQC Scheme
<i>Microstomus kitt</i>
Location: Plymouth
Gear: Beam Trawl
FullCode #: F_RT04_10

NMBAQC Scheme
<i>Limanda limanda</i>
Location: Harwich
Gear: Beam Trawl
FullCode #: F_RT04_11

NMBAQC Scheme
<i>Aspitrigla cuculus</i>
Location: Plymouth
Gear: Beam Trawl
FullCode #: F_RT04_12

NMBAQC Scheme
<i>Callionymus lyra</i>
Location: Harwich
Gear: Beam Trawl
FullCode #: F_RT04_13

NMBAQC Scheme
<i>Hyperoplus lanceolatus</i>
Location: Cornwall
Gear: Beam Trawl
FullCode #: F_RT04_14

NMBAQC Scheme
<i>Sardina pilchardus</i>
Location: Spain
Gear: Beam Trawl
FullCode #: F_RT04_15