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Fish Reverse Ring Test Bulletin – FRRT12

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APEM

MODULE / EXERCISE DETAILS

Module:	Fish Reverse Ring Test FRRT
Exercises:	FRRT12
Specimen Request Circulated:	13th October 2020
Specimen Submission Deadline:	11th December 2020
Number of Subscribing Laboratories:	9
Number of Submissions Received:	9

Table1. Summary specimens and data received from participating laboratories for the twelfth Fish Reverse Ring Test FRRT12

Number of specimens submitted: **131**
Number of species: **55**
Number of taxonomic errors (TE): **2**
Number of taxonomic discrepancies (TD; *synonym, **other): **4**
Number of problematic taxa submitted (†): **2**

Class	Order	Family	Species	Common name	No. of spms	No. of TE	No. of TD
Elasmobranchii	Carcharhiniformes	Scyliorhinidae	*Scyliorhinus canicula* (Linnaeus, 1758)	lesser-spotted dogfish	1		
		Triakidae	*Mustelus asterias* Cloquet, 1819	starry smooth-hound	2		
	Rajiformes	Rajidae	*Raja clavata* Linnaeus, 1758	thornback ray	2		
Actinopterygii	Clupeiformes	Clupeidae	*Clupea harengus* Linnaeus, 1758	herring	3		
			Sprattus sprattus (Linnaeus, 1758)	sprat	3		
		Engraulidae	*Engraulis encrasicolus* (Linnaeus, 1758)	anchovy	2		
	Cypriniformes	Cyprinidae	*Gobio gobio* (Linnaeus, 1758)	gudgeon	1		
	Osmeriformes	Osmeridae	*Osmerus eperlanus* (Linnaeus, 1758)	smelt	4		
	Gadiformes	Gadidae	*Gadus morhua* Linnaeus, 1758	cod	2		
			Melanogrammus aeglefinus (Linnaeus, 1758)	haddock	1		
			Merlangius merlangus (Linnaeus, 1758)	whiting	4		
			Trisopterus luscus (Linnaeus, 1758)	pout/bib	6		
			Trisopterus minutus (Linnaeus, 1758)	poor-cod	2		
		Lotidae	*Ciliata mustela* (Linnaeus, 1758)	five-bearded rockling	2		
			Gaidropsarus vulgaris (Cloquet, 1824)	three-bearded rockling	1		
	Zeiformes	Zeidae	*Zeus faber* Linnaeus, 1758	John dory	1		
	Syngnathiformes	Syngnathidae	*Syngnathus acus* Linnaeus, 1758	greater pipefish	1		
			†*Syngnathus rostellatus* Nilsson, 1855	Nilsson's pipefish	5	1	
	Scorpaeniformes	Triglidae	*Chelidonichthys cuculus* (Linnaeus, 1758)	red gurnard	2		
			Chelidonichthys lastoviza (Bonnaterre, 1788)	streaked gurnard	2		1**

Class	Order	Family	Species	Common name	No. of spms	No. of TE	No. of TD
			Chelidonichthys lucerna (Linnaeus, 1758)	tub gurnard	2		
			Eutrigla gurnardus (Linnaeus, 1758)	grey gurnard	4	1	
		Cottidae	*Myoxocephalus scorpius* (Linnaeus, 1758)	short-spined sea scorpion	1		
			Taurulus bubalis (Euphrasen, 1786)	sea scorpion	1		
		Agonidae	*Agonus cataphractus* (Linnaeus, 1758)	pogge	4		
		Liparidae	*Liparis liparis* (Linnaeus, 1766)	sea-snail	1		
	Mugiliformes	Mugilidae	*Chelon ramada* (Risso, 1827)	thin-lipped grey mullet	1		1*
	Perciformes	Caproidae	*Capros aper* (Linnaeus, 1758)	boar-fish	1		
		Moronidae	*Dicentrarchus labrax* (Linnaeus, 1758)	seabass	2		
		Carangidae	*Trachurus trachurus* (Linnaeus, 1758)	scad	2		
		Sparidae	†*Pagrus pagrus* (Linnaeus, 1758)	Couch's sea-bream	2		
			Spondyliosoma cantharus (Linnaeus, 1758)	black sea-bream	1		
		Mullidae	*Mullus surmuletus* Linnaeus, 1758	striped red mullet	4		
		Labridae	*Labrus bergylta* Ascanius, 1767	ballan wrasse	1		
			Symphodus bailloni (Valenciennes, 1839)	Baillon's wrasse	1		1*
			Symphodus melops (Linnaeus, 1758)	corkwing wrasse	1		
		Trachinidae	*Echiichthys vipera* (Cuvier, 1829)	lesser weever	1		
			Trachinus draco Linnaeus, 1758	greater weever	1		
		Pholidae	*Pholis gunnellus* (Linnaeus, 1758)	rock gunnel	1		
		Ammodytidae	*Ammodytes tobianus* Linnaeus, 1758	lesser sand-eel	1		
			Hyperoplus immaculatus (Corbin, 1950)	Corbin's sand-eel	1		
			Hyperoplus lanceolatus (Le Sauvage, 1824)	greater sandeel	1		
		Callionymidae	*Callionymus lyra* Linnaeus, 1758	common dragonet	4		
		Gobiidae	*Gobius niger* Linnaeus, 1758	black goby	1		
			Pomatoschistus microps (Krøyer, 1838)	common goby	2		
			Pomatoschistus minutus (Pallas, 1770)	sand goby	8		1**
			Pomatoschistus pictus (Malm, 1865)	painted goby	2		
	Pleuronectiformes	Scophthalmidae	*Scophthalmus rhombus* (Linnaeus, 1758)	brill	1		

Class	Order	Family	Species	Common name	No. of spms	No. of TE	No. of TD
		Bothidae	*Arnoglossus laterna* (Walbaum, 1792)	scaldfish	2		
		Pleuronectidae	*Limanda limanda* (Linnaeus, 1758)	dab	8		
			Microstomus kitt (Walbaum, 1792)	lemon sole	3		
			Platichthys flesus (Linnaeus, 1758)	flounder	5		
			Pleuronectes platessa Linnaeus, 1758	plaice	7		
		Soleidae	*Buglossidium luteum* (Risso, 1810)	solenette	3		
			Solea solea (Linnaeus, 1758)	Dover sole	3		

Species names according to World Register of Marine Species (WoRMS) and FishBase, accessed December 2020

Table 2. Summary of taxonomic errors, discrepancies and problematic taxa for the twelfth Fish Reverse Ring Test FRRT12

	Laboratory identification	APEM Ltd. identification
Taxonomic errors		
F2710	*Syngnathus acus*	*Syngnathus rostellatus* Nilsson, 1855
F2710	*Agonus cataphractus*	*Eutrigla gurnardus* (Linnaeus, 1758)
Problematic taxa		
F2708	*Syngnathus acus*	*Syngnathus rostellatus* Nilsson, 1855
F2714	*Pagrus pagrus* (Linnaeus, 1758)	*Pagrus pagrus* (Linnaeus, 1758)
Taxonomic discrepancies (synonyms)		
F2708	*Liza ramada*	*Chelon ramada* (Risso, 1827)
F2710	*Crenilabrus bailloni*	*Symphodus bailloni* (Valenciennes, 1839)
Taxonomic discrepancies (other)		
F2709	*Pomatoschistus* spp.; Sand Goby (Complex)	*Pomatoschistus minutus* (Pallas, 1770)
F2714	*Chelidonichthys obscurus* (Walbaum, 1792)	*Chelidonichthys lastoviza* (Bonnaterre, 1788)

Taxonomic errors and problematic taxa

This section describes those submitted specimens that were found to have been identified incorrectly or noted as problematic taxa in the original submission. The key identification features to separate these and similar taxa are given.

Syngnathus rostellatus Nilsson, 1855

Submitted specimens have 13 abdominal rings (ridged bony plates between the pectoral fins and start of the dorsal fin); *S. rostellatus* has 13–17 abdominal rings, *S. acus* has 17–21 (Figure 1). Adult *S. acus* have a distinct head profile with a hump behind the eyes, at smaller sizes this feature is less distinctive and the two species have relatively similar head profiles.

Figure 1. *Syngnathus rostellatus* (top) and similar sized *Syngnathus acus* (bottom), detail of abdominal rings

Eutrigla gurnardus (Linnaeus, 1758)

Specimen has a sharply-pointed snout with strong spines on the gill covers and sharply-pointed scutes along the lateral line (Figure 2). *A. cataphractus* has a similar body shape but the strong spine on the gill cover is blunt, the underside of the head has many short barbels and the body is encased in hard bony plates.

Figure 2. ***Eutrigla gurnardus***

Pagrus pagrus (Linnaeus, 1758)

Specimen with four strong canine-like teeth at the front of the jaw, larger than those immediately behind. Round molar teeth at the back and sides of the jaw. Relatively deep bodied with silvery sides and a general rosy colour (Figure 3, top). A larger specimen and photos also submitted by the participant agree with this identification; 4–6 strong front teeth with short fine teeth behind, two rows of flattened molar teeth at the back of the jaw; tail fin tips white with fine dark pink margin in the central section; dorsal fin with 12 spines and 9–10 soft rays; anal fin with 3 spines and 8–9 soft rays (Figure 3, bottom).

Similar species likely to be encountered include *Sparus aurata* (Figure 4) with similar teeth but more soft fin rays in the dorsal (11 spines + 13–14) and anal fin (3 spines + 11–12); smaller scales (73–78 in the lateral line, *P. pagrus* 49–56); silvery golden colouration with a dusky blotch at the origin of the lateral line; tail fin with a black rear margin. *Spondyliosoma cantharus* (Figure 5) has sharply pointed teeth in a single series, no large canine-like teeth or flattened molar teeth; head with a shallow profile. *Pagellus erythrinus* (Figure 6), *P. acarne* (Figure 7) and *P. bogaraveo* all have teeth in the front of the jaw of a uniform size, not much bigger than those immediately behind; more scales in the lateral line (*P. erythrinus* 56–61, *P. acarne* 68–70 and *P. bogaraveo* 75–80). *Diplodus annularis* (Figure 8) has teeth at the sides and back of jaw molar-like but anterior teeth incisor-like, which is also true for other North East Atlantic *Diplodus* species.

Figure 3. *Pagrus pagrus*, small problematic specimen (above) and larger individual (below) caught later in the year.

Figure 4. *Sparus aurata*

Figure 5. ***Spondyliosoma cantharus*****, juvenile (above) and adult (below)**

Figure 6. ***Pagellus erythrinus***

Figure 7. ***Pagellus acarne***

Figure 8. ***Diplodus annularis***

Trisopterus luscus (Linnaeus, 1758)

One *T. luscus* specimen submitted had an unusually short first anal fin with its origin beneath the second dorsal fin (Figure 9, middle). This specimen superficially resembled *T. minutus* or *T. capelanus* (Figure 9, bottom; currently only recorded from the Mediterranean) which both have the origin of the first anal fin behind the first dorsal fin. Fin ray counts for all dorsal and anal fins, except the first anal fin, were within the expected ranges for *T. luscus* (D1 = 12; D2 = 23; D3 = 19; A2 = 19). The first anal fin (A1) had ca. 14-15 rays, and so fewer rays than any of the *Trisopterus* occurring in the North-east Atlantic (27–30 for *T. minutus*; 30–34 for *T. luscus*). There were 20 gill rakers on the first gill arch (*T. minutus* 25–32). The fin ray and gill raker counts indicated that the specimen was a *T. luscus*, albeit with an abnormal first anal fin. Variation in morphology is not entirely uncommon in gadoids, individuals can be found with reduced development of the jaws or snout (Figure 10, *T. minutus* and Figure 11, *Merlangius merlangus*).

Figure 9. *Trisopterus luscus*, typical specimen (top) and atypical specimen (middle); *Trisopterus capelanus* (bottom); arrow indicating start of first anal fin

Figure 10. *Trisopterus minutus*, atypical specimen (reduced snout)

Figure 11. *Merlangius merlangus*, atypical specimen (reduced snout)

Taxonomic discrepancies

This section provides further information on those submitted specimens for which other taxonomic irregularities (e.g. spelling mistakes, synonyms) were noted.

Synonyms

The World Register of Marine Species (WoRMS) and FishBase, accessed December 2020, were used for currently valid species names. Two specimens were submitted with synonyms; *Chelon ramada* (Risso, 1827) and *Symphodus bailloni* (Valenciennes, 1839).

Authority errors

Only 15 specimen names were submitted with an authority. The authority and year were correct for those submitted; however, there were 2 records incorrectly containing parentheses. Authority errors were not counted as taxonomic discrepancies.

Other discrepancies

Two specimens were submitted as "*Pomatoschistus* spp. Sand Goby (Complex)", species names are required for all FRRT specimens submitted unless specified as a problem taxon. In this instance we have counted the lack of species name as a discrepancy and considered the common name given as a correct identification (*P. minutus*).

One specimen was submitted as *Chelidonichthys obscurus* with accompanying photos of the specimen when caught. The specimen sent was identified as *C. lastoviza* but after comparison with the photos supplied it was apparent it was a different specimen to the one identified by the participant (likely to be *C. obscurus*). In this instance we have counted the error as a discrepancy rather than an identification error.

Acknowledgements

We would like to thank all participants that have provided feedback and additional information for their submissions. We are very grateful to participants provided photographs of specimens and allowing there use in this report.

References

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APPENDIX

FRRT12 individual summary reports for participating laboratories with specimen details as provided by participants and taxonomic errors, discrepancies and comments given by APEM

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 24/11/20
Specimens Received - 03/12/20
Laboratory Code - F2701

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Pleuronectes platessa*	-	2 specimens
2	*Platichthys flesus*	-	2 specimens
3	*Syngnathus rostellatus*	-	-
4	*Sprattus sprattus*	-	-
5	*Clupea harengus*	-	-
6	*Gadus morhua*	-	-
7	*Gobio gobio*	-	-
8	*Pomatoschistus microps*	-	-
9	*Ammodytes tobianus*	-	-
10	-	-	No specimen submitted
11	-	-	No specimen submitted
12	-	-	No specimen submitted
13	-	-	No specimen submitted
14	-	-	No specimen submitted
15	-	-	No specimen submitted

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 26/11/20
Specimens Received - 27/11/20
Laboratory Code - F2703

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Chelidonichthys lucerna*; Tub Gurnard	-	-
2	*Capros aper*; Boar Fish	-	-
3	*Mullus surmuletus*; Red Mullet	-	-
4	*Chelidonichthys cuculus*; Red Gurnard	-	-
5	*Trisopterus minutus*; Poor Cod	-	-
6	*Trachurus trachurus*; Horse-Mackerel (Scad)	-	-
7	*Callionymus lyra*; Common Dragonet	-	-
8	*Microstomus kitt*; Lemon Sole	-	-
9	*Gaidropsarus vulgaris*; 3 Bearded Rockling	-	-
10	*Agonus cataphractus*; Pogge	-	-
11	*Limanda limanda*; Dab	-	-
12	*Trisopterus luscus*; Bib	-	-
13	*Pleuronectes platessa*; Plaice	-	-
14	*Trachinus draco*; Greater Weever	-	-
15	*Engraulis encrasicolus*; Anchovy	-	-

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 12/11/20
Specimens Received - 12/11/20
Laboratory Code - F2708

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Melanogrammus aeglefinus*; Haddock	-	-
2	*Eutrigla gurnardus*; Grey gurnard	-	-
3	*Limanda limanda*; Dab	-	-
4	*Dicentrarchus labrax*; Sea bass	-	-
5	*Gadus morhua*; Cod	-	-
6	*Trisopterus luscus*; Bib	-	-
7	*Liza ramada*; Thin-lipped grey mullet	*Chelon ramada* (Risso, 1827)	TD - Synonym
8	*Callionymus lyra*; Common dragonet	-	-
9	*Ciliata mustela*; Five-bearded rockling	-	-
10	*Trisopterus minutus*; Poor cod	-	-
11	*Raja clavata*; Thornback ray	-	-
12	*Microstomus kitt*; Lemon sole	-	-
13	*Myoxocephalus scorpius*; Bull rout	-	-
14	*Pholis gunnellus*; Butterfish	-	-
15	**Syngnathus acus*; Greater pipefish	*Syngnathus rostellatus* Nilsson, 1855; Nilsson's pipefish	13 abdominal rings

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 19/10/20
Specimens Received - 22/10/20
Laboratory Code - F2709

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Trisopterus luscus*; Bib	-	-
2	*Merlangius merlangus*; Whiting	-	-
3	*Mullus surmuletus*; Striped Red Mullet	-	-
4	*Osmerus eperlanus*; Smelt	-	2 specimens
5	*Solea solea*; Common Sole	-	-
6	*Platichthys flesus*; Flounder	-	-
7	*Sprattus sprattus*; Sprat	-	-
8	*Pomatoschistus* spp.; Sand Goby (Complex)	*Pomatoschistus minutus* (Pallas, 1770); sand goby	TD - Species name missing but common name given; 2 specimens
9	*Limanda limanda*; Dab	-	2 specimens
10	*Chelidonichthys cuculus*; Red Gurnard	-	-
11	*Pleuronectes platessa*; Plaice	-	-
12	*Liparis liparis*; Common Seasnail	-	-
13	*Agonus cataphractus*; Pogge	-	-
14	*Microstomus kitt*; Lemon Sole	-	-
15	*Pomatoschistus microps*; Common Goby	-	-
16	*Pomatoschistus pictus*; Painted Goby	-	-

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 13/11/20
Specimens Received - 19/11/20
Laboratory Code - F2710

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Trachurus trachurus*; Horse Mackerel	-	-
2	*Buglossidium luteum*; Solenette	-	-
3	*Zeus faber*; John Dory	-	-
4	*Syngnathus acus*; Greater Pipefish	*Syngnathus rostellatus* Nilsson, 1855; Nilsson's pipefish	TE - 13 abdominal rings
5	*Mullus surmuletus*; Striped Red Mullet	-	-
6	*Arnoglossus laterna*; Scaldfish	-	-
7	*Pleuronectes platessa*; Plaice	-	-
8	*Merlangius merlangus*; Whiting	-	-
9	*Pomatoschistus minutus*; Sand Goby	-	-
10	*Agonus cataphractus*; Hooknose	*Eutrigla gurnardus* (Linnaeus, 1758); grey gurnard	TE - Sharply pointed snout with strong spines on the gill covers
11	*Gobius niger*; Black Goby	-	-
12	*Crenilabrus bailloni*; Baillon's Wrasse	*Symphodus bailloni* (Valenciennes, 1839); Baillon's wrasse	TD - Synonym
13	*Callionymus lyra*; Common Dragonet	-	-
14	*Labrus bergylta*; Ballan Wrasse	-	-
15	*Spondyliosoma cantharus*; Black Sea Bream	-	-

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 01/12/20
Specimens Received - 01/12/20
Laboratory Code - F2711

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Dicentrarchus labrax*; Sea Bass; 238	-	-
2	*Chelidonichthys lucerna*; Tub Gurnard; 170	-	-
3	*Eutrigla gurnardus*; Grey Gurnard; 87	-	-
4	*Trisopterus luscus*; Bib; 105	-	-
5	*Callionymus lyra*; Common Dragonet; 51	-	-
6	*Limanda limanda*; Dab; 58	-	-
7	*Pomatoschistus minutus*; Sand Goby; 71	-	-
8	*Mustelus asterias*; Starry Smooth Hound; 342	-	-
9	*Merlangius merlangus*; Whiting; 164	-	-
10	*Pleuronectes platessa*; Plaice; 153	-	-
11	*Agonus cataphractus*; Hooknose; 98	-	-
12	*Solea solea*; Common Sole; 178	-	-
13	*Platichthys flesus*; Flounder; 206	-	-
14	-	-	No specimen submitted
15	-	-	No specimen submitted

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 14/12/20
Specimens Received - 14/12/20
Laboratory Code - F2712

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Sprattus sprattus*; Sprat	-	-
2	*Mullus surmuletus*; Striped Red Mullet	-	-
3	*Limanda limanda*; Dab	-	2 specimens
4	*Pomatoschistus minutus*; Sand goby	-	2 specimens
5	*Trisopterus luscus*; Pouting	-	-
6	*Osmerus eperlanus*; Smelt	-	2 specimens
7	*Arnoglossus laterna*; Scaldfish	-	-
8	*Buglossidium luteum*; Solenette	-	-
9	*Syngnathus rostellatus*; Lesser pipefish	-	2 specimens
10	-	-	No specimen submitted
11	-	-	No specimen submitted
12	-	-	No specimen submitted
13	-	-	No specimen submitted
14	-	-	No specimen submitted
15	-	-	No specimen submitted

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 12/11/20
Specimens Received - 12/11/20
Laboratory Code - F2713

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Clupea harengus*; Herring	-	-
2	*Limanda limanda*; Dab	-	-
3	*Trisopterus luscus*; Bib	-	-
4	*Eutrigla gurnardus*; Grey gurnard	-	-
5	*Pomatoschistus minutus*; Sand goby	-	-
6	*Solea solea*; Common sole	-	-
7	*Agonus cataphractus*; Pogge	-	-
8	*Pleuronectes platessa*; Plaice	-	-
9	*Platichthys flesus*; Flounder	-	-
10	*Mustelus asterias*; Starry Smooth Hound	-	-
11	*Merlangius merlangus*; Whiting	-	-
12	*Scyliorhinus canicula*; Common dogfish	-	-
13	*Raja clavata*; Thornback ray	-	-
14	*Echiichthys vipera*; Lesser weaver	-	-
15	*Buglossidium luteum*; Solenette	-	-

EXERCISE DETAILS
Fish Reverse Ring Test (F-RRT12)
Return Deadline - 11/12/20
Data Received - 10/12/20
Specimens Received - 11/12/20
Laboratory Code - F2714

Key to codes:
TE - Taxonomic error
TD - Taxonomic discrepancy
* - Problem taxa indicated

Specimen No.	Laboratory identification (scientific name; common name; length in mm)	APEM identification (if different)	Code / Comments
1	*Hyperoplus immaculatus*; Corbin's sandeel	-	-
2	*Hyperoplus lanceolatus*; Greater sandeel	-	-
3	*Engraulis encrasicolus*; Anchovy	-	-
4	*Clupea harengus*; Herring	-	-
5	*Chelidonichthys obscurus*; Long-finned gurnard	*Chelidonichthys lastoviza* (Bonnaaterre, 1788); streaked gurnard	TD - Specimen with blunt snout and body crossed by distinct ridges of skin. Specimen photo supplied closely resembles *C. obscurus* (wrong specimen accidently submitted)
6	*Pomatoschistus pictus*; Painted goby	-	-
7	*Taurulus bubalis*; Sea scorpion	-	-
8	*Symphodus melops*; Corkwing wrasse	-	-
9	*Pagrus pagrus*; Couch's sea bream	-	-
10	*Syngnathus acus*; Greater pipefish	-	-
11	*Chelidonichthys lastoviza*; Streaked gurnard	-	-
12	*Scophthalmus rhombus*; Brill	-	-
13	*Ciliata mustela*; Five-bearded rockling	-	-
14	*Pomatoschistus minutus*; Sand goby	-	-
15	*PROBLEM TAXA; Couch's sea bream?	*Pagrus pagrus* (Linnaeus, 1758); Couch's sea bream	4 strong teeth at the front of the jaw, larger than those behind with molar teeth at the back of the jaw