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Fish Reverse Ring Test Bulletin

F_RRT09

2017/2018

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Table 1. Summary of data and specimens received from participating laboratories for the ninth Fish Reverse Ring Test FRRT_09

Please note that one of the participating laboratories submitted fish from the Mediterranean region.

Number of specimens submitted – **235**

Number of taxonomic errors (TE) - **5**

Number of taxonomic discrepancies (TD) (ie. generic name changes, incorrect parentheses or year in authorities *) - **34**

Species Submitted (**)				Nr of Spms	Nr of TE	Nr of TD	PISCES Conservation Ltd. Identification references	
ACTINOPTERYGII								
Anguilliformes	Congridae	<i>Conger conger</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015	
Atheriniformes	Atherinidae	<i>Atherina presbyter</i>	Cuvier, 1829	7	-	1	Henderson 2015	
Beryciformes	Trachichthyidae	<i>Hoplostethus mediterraneus</i>	Cuvier, 1829	1	-	-	Fishbase 2017	
Clupeiformes	Clupeidae	<i>Clupea harengus</i>	Linnaeus, 1758	12	-	1	Henderson 2015	
		<i>Sardina pilchardus</i>	(Walbaum, 1792)	3	-	-	Henderson 2015	
		<i>Sprattus sprattus</i>	(Linnaeus, 1758)	6	-	1	Henderson 2015	
Cypriniformes	Engraulidae	<i>Engraulis encrasicolus</i>	(Linnaeus, 1758)	1	-	1	Henderson 2015	
		Cyprinidae	<i>Abramis bjoerkna (**)</i>	(Linnaeus, 1758)	1	-	-	Maitland 1992
			<i>Gobio gobio</i>	(Linnaeus, 1758)	1	-	1	Maitland 1992
			<i>Phoxinus phoxinus</i>	(Linnaeus, 1758)	1	-	-	Maitland 1992
<i>Rutilus rutilus</i>	(Linnaeus, 1758)		1	-	1	Maitland 1992		
Gadiformes	Gadidae	<i>Gadus morhua</i>	Linnaeus, 1758	1	-	-	Henderson 2015	
		<i>Merlangius merlangus</i>	(Linnaeus, 1758)	5	-	-	Henderson 2015	
		<i>Trisopterus capelanus</i>	(Lacepède, 1800)	1	-	-	Fishbase 2017	
		<i>Trisopterus luscus</i>	(Linnaeus, 1758)	5	-	1	Henderson 2015	
		<i>Trisopterus minutus</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015	
	Lotidae	<i>Ciliata mustela</i>	(Linnaeus, 1758)	4	1	1	Henderson 2015	
		<i>Gaidropsarus mediterraneus</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015	
	Merlucciidae	<i>Merluccius merluccius</i>	(Linnaeus, 1758)	2	-	-	Henderson 2015	

Species Submitted				Nr of Spms	Nr of TE	Nr of TD	PISCES Conservation Ltd. Identification references	
Gasterosteiformes	Gasterosteidae	<i>Gasterosteus aculeatus</i>	Linnaeus, 1758	2	-	-	Henderson 2015	
Gobiesociformes	Gobiesocidae	<i>Diplecogaster bimaculata</i>	(Bonnaterre, 1788)	1	-	-	Henderson 2015	
Lophiiformes	Lophiidae	<i>Lophius piscatorius</i>	Linnaeus, 1758	1	-	1	Henderson 2015	
Osmeriformes	Osmeridae	<i>Osmerus eperlanus</i>	(Linnaeus, 1758)	4	-	1	Henderson 2015	
Perciformes	Ammodytidae	<i>Ammodytes tobianus</i>	Linnaeus, 1758	4	-	-	Henderson 2015	
		<i>Hyperoplus immaculatus</i>	(Corbin, 1950)	1	-	-	Henderson 2015	
		<i>Hyperoplus lanceolatus</i>	(Le Sauvage, 1824)	2	-	-	Henderson 2015	
	Blenniidae	<i>Lipophrys pholis</i>	(Linnaeus, 1758)	1	-	1	Henderson 2015	
	Callionymidae	<i>Callionymus lyra</i>	Linnaeus, 1758	2	-	-	Henderson 2015	
		<i>Callionymus maculatus</i>	Rafinesque, 1810	1	-	-	Fishbase 2017	
		<i>Callionymus reticulatus</i>	Valenciennes, 1837	1	-	-	Henderson 2015	
	Carangidae	<i>Trachurus trachurus</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015	
	Cepolidae	<i>Cepola macrophthalma</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015	
	Gobiidae	<i>Aphia minuta</i>	(Risso, 1810)	4	-	1	Henderson 2015	
		<i>Gobius niger</i>	Linnaeus, 1758	2	-	-	Henderson 2015	
		<i>Gobius paganellus</i>	Linnaeus, 1758	2	-	-	Henderson 2015	
		<i>Gobiusculus flavescens</i>	(Fabricius, 1779)	3	-	1	Henderson 2015	
		<i>Pomatoschistus microps</i>	(Krøyer, 1838)	7	-	1	Henderson 2015	
		<i>Pomatoschistus minutus</i>	(Pallas, 1770)	14	-	3	Henderson 2015	
		<i>Pomatoschistus pictus</i>	(Malm, 1865)	4	-	1	Henderson 2015	
		Labridae	<i>Crenilabrus melops</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015
			<i>Ctenolabrus rupestris</i>	(Linnaeus, 1758)	2	-	-	Henderson 2015
			<i>Labrus bergylta</i>	Ascanius, 1767	2	-	-	Henderson 2015
	<i>Labrus mixtus</i>		Linnaeus, 1758	1	1	-	Henderson 2015	
		<i>Symphodus (Crenilabrus) melops</i>	(Linnaeus, 1758)	1	-	1	Henderson 2015	
Moronidae	<i>Dicentrarchus labrax</i>	(Linnaeus, 1758)	8	-	2	Henderson 2015		

Species Submitted				Nr of Spms	Nr of TE	Nr of TD	PISCES Conservation Ltd. Identification references
Pleuronectiformes	Mugilidae	<i>Chelon labrosus</i>	(Risso, 1827)	2	-	1	Henderson 2015
		<i>Liza aurata (**)</i>	(Risso, 1810)	3	-	3	Henderson 2015
		<i>Liza ramada (**)</i>	(Risso, 1827)	6	1	1	Henderson 2015
	Mugilidae		Jarocki, 1822	1	-	-	Henderson 2015
	Mullidae	<i>Mullus barbatus</i>	Linnaeus, 1758	1	-	-	Fishbase 2017
		<i>Mullus surmuletus</i>	Linnaeus, 1758	3	-	-	Henderson 2015
	Scombridae	<i>Scomber scombrus</i>	Linnaeus, 1758	2	-	1	Henderson 2015
	Sparidae	<i>Pagellus erythrinus</i>	(Linnaeus, 1758)	1	-	-	Fishbase 2017
	Trachinidae	<i>Echiichthys vipera</i>	(Cuvier, 1829)	4	-	-	Henderson 2015
		<i>Trachinus radiatus</i>	Cuvier, 1829	1	-	-	Fishbase 2017
	Uranoscopidae	<i>Uranoscopus scaber</i>	Linnaeus, 1758	1	-	-	Fishbase 2017
	Zoarcidae	<i>Zoarces viviparus</i>	(Linnaeus, 1758)	1	-	1	Henderson 2015
	Bothidae	<i>Arnoglossus laterna</i>	(Walbaum, 1792)	1	-	-	Henderson 2015
	Citharidae	<i>Citharus linguatula</i>	(Linnaeus, 1758)	1	-	-	Fishbase 2017
	Pleuronectidae	<i>Limanda limanda</i>	(Linnaeus, 1758)	7	1	-	Henderson 2015
		<i>Platichthys flesus</i>	(Linnaeus, 1758)	8	-	1	Henderson 2015
		<i>Pleuronectes platessa</i>	Linnaeus, 1758	10	-	1	Henderson 2015
	Scophthalmidae	<i>Psetta maxima (**)</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015
		<i>Zeugopterus punctatus</i>	(Bloch, 1787)	1	-	-	Henderson 2015
<i>Zeugopterus regius</i>		(Bonnaterre, 1788)	2	-	-	Henderson 2015	
Soleidae	<i>Microchirus variegatus</i>	(Donovan, 1808)	1	-	-	Henderson 2015	
	<i>Solea solea</i>	(Linnaeus, 1758)	8	-	1	Henderson 2015	
Salmoniformes	Salmonidae	<i>Coregonus autumnalis</i>	(Pallas, 1776)	1	-	-	Maitland 1992
Scorpaeniformes	Agonidae	<i>Agonus cataphractus</i>	(Linnaeus, 1758)	4	-	-	Henderson 2015
	Cottidae	<i>Cottus gobio</i>	Linnaeus, 1758	1	-	-	Henderson 2015
		<i>Myoxocephalus scorpius</i>	(Linnaeus, 1758)	2	-	-	Henderson 2015
		<i>Taurulus bubalis</i>	(Euphrasen, 1786)	2	-	-	Henderson 2015

Species Submitted				Nr of Spms	Nr of TE	Nr of TD	PISCES Conservation Ltd. Identification references
	Liparidae	<i>Liparis liparis</i>	(Linnaeus, 1766)	1	-	-	Henderson 2015
	Sebastidae	<i>Helicolenus dactylopterus</i>	(Delaroche, 1809)	1	-	-	Fishbase 2017
	Triglidae	<i>Aspitrigla cuculus (**)</i>	(Linnaeus, 1758)	1	-	1	Henderson 2015
		<i>Chelidonichthys lucerna</i>	(Linnaeus, 1758)	3	1	1	Henderson 2015
		<i>Eutrigla gurnardus</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015
Syngnathiformes	Syngnathidae	<i>Entelurus aequoreus</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015
		<i>Nerophis lumbriciformis</i>	(Jenyns, 1835)	1	-	-	Henderson 2015
		<i>Syngnathus acus</i>	Linnaeus, 1758	4	-	-	Henderson 2015
		<i>Syngnathus rostellatus</i>	Nilsson, 1855	9	-	-	Henderson 2015
		<i>Syngnathus typhle</i>	Linnaeus, 1758	1	-	-	Henderson 2015
Zeiformes	Zeidae	<i>Zeus faber</i>	Linnaeus, 1758	3	-	1	Henderson 2015
ELASMOBRANCHII							
Carcharhiniformes	Scyliorhinidae	<i>Scyliorhinus canicula</i>	(Linnaeus, 1758)	1	-	-	Henderson 2015
	Triakidae	<i>Mustelus asterias</i>	Cloquet, 1819	1	-	-	Henderson 2015
Rajiformes	Rajidae	<i>Raja brachyura</i>	Lafont, 1873	1	-	-	Henderson 2015
		<i>Raja clavata</i>	Linnaeus, 1758	1	-	-	Henderson 2015
PETROMYZONTI							
Petromyzontiformes	Petromyzontidae	<i>Lampetra planeri</i>	(Bloch, 1784)	1	-	-	Henderson 2015

(*) We noted a high percentage of incorrectly placed parentheses in species names given by participants (89 %).

In a taxonomic context the species name consists of the genus (starting with a capital letter), the species (all small letters), the authority separated by a comma from the date of publication and finally, where the original author used another generic name than the one currently used, this is highlighted by the use of parentheses.

The correct usage of names is ruled by the International Code for Zoological Nomenclature (ICZN). We recommend also Winston (1999): *Describing Species: Practical Taxonomic Procedure for Biologists*. Columbia University Press, 518 pp.

(**) Species names according to NHM UK species list accessed March 2018.

Note discrepancies with Catalog of Fishes (<https://www.calacademy.org/scientists/projects/catalog-of-fishes>) which currently lists *Blicca bjoerkna* (Linnaeus, 1758) for *Abramis bjoerkna* (Linnaeus, 1758), *Chelon auratus* (Risso, 1810) and *C. ramada* (Risso, 1827) for *Liza aurata* (Risso, 1810) and *L. ramada* (Risso, 1827) resp., *Scophthalmus maximus* (Linnaeus, 1758) for *Psetta maxima* (Linnaeus, 1758), and *Chelidonichthys cuculus* (Linnaeus, 1758) for *Aspitrigla cuculus* (Linnaeus, 1758).

Table 2. Summary of taxonomic errors / discrepancies by participating laboratories for the ninth Fish Reverse Ring Test FRRT_09

Lab Code	Laboratory identification	PISCES Conservation Ltd. identification	Reason for Taxonomic Error (TE) / Taxonomic Discrepancy (TD) / Problem Taxa (unidentified)
2401	<i>Chelidonichthys cuculus</i> (Linnaeus, 1758) <i>Clupea harengus</i> (Linnaeus, 1758) <i>Lophius piscatorius</i> (Linnaeus, 1758) <i>Pleuronectes platessa</i> (Linnaeus, 1758) <i>Raja brachyura</i> (Lafont, 1871) <i>Scomber scombrus</i> (Linnaeus, 1758) <i>Zeus faber</i> (Linnaeus, 1758)	<i>Aspitrigla cuculus</i> (Linnaeus, 1758) (**) <i>Clupea harengus</i> Linnaeus, 1758 <i>Lophius piscatorius</i> Linnaeus, 1758 <i>Pleuronectes platessa</i> Linnaeus, 1758 <i>Raja brachyura</i> (Lafont, 1873) <i>Scomber scombrus</i> Linnaeus, 1758 <i>Zeus faber</i> Linnaeus, 1758	TD – see note p. 6 TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD – incorrect year TD - incorrect use of parentheses TD - incorrect use of parentheses
2408	<i>Labrus bergylta</i>	<i>Labrus mixtus</i> Linnaeus, 1758	TE - Cuckoo wrasse, <i>Labrus mixtus</i> : has small scales - mouth almost reaches eye, colour, and faint dark spot on rear of dorsal fin - difficult specimen. Juvenile.
2411	unidentified <i>Eutrigula gurnardus</i> <i>Buglossidium luteum</i>	<i>Callionymus reticulatus</i> Valenciennes, 1837 <i>Chelidonichthys lucerna</i> (Linnaeus, 1758) <i>Solea solea</i> (Linnaeus, 1758)	This is a small species (max. length approx. 11 cm.), with dark saddles and a reticulated pattern across the back, and 3 backward-pointing spines on the preopercular bone. The 2 nd dorsal fin has 10 soft rays. The common dragonet, <i>C. lyra</i> , is potentially a much larger species, with 3 backward-pointing and one forward-pointing spine on the preopercular bone, and 9 soft rays in the 2 nd dorsal fin (although the final fin ray divides in to 2 at the base, it is counted only as one). TE - Tub gurnard, <i>Chelidonichthys lucerna</i> : pectoral fins long, broad nose, fins coloured. Adult <i>E. gurnardus</i> has sharp scutes on the lateral line, whereas <i>C. lucerna</i> does not. This may not be a reliable feature in juvenile or very large specimens, however. TE - Dover sole, <i>Solea solea</i> : has signal pectoral fin, no black flecks on dorsal and anal fins.
2418	<i>Chelon labrosus</i>	<i>Liza ramada</i> (Risso, 1827)	TE - Thin-lipped grey mullet, <i>Liza ramada</i> : has pectoral fin not reaching the eye, relatively small upper lip, but a young specimen. Toothed bone between corner of mouth and eye.
2419	<i>Trigla lucerna</i>	<i>Chelidonichthys lucerna</i> (Linnaeus, 1758)	TD - name change: NHM UK Species and Catalog of Fishes recommend <i>C. lucerna</i> (L. 1758).

2420	<i>Chelon ramada</i> Mugilidae	<i>Liza ramada</i> (Risso, 1827) (**) Mugilidae	TD – see note p. 6 Unidentifiable at this size and condition
2421	<i>Chelon labrosus</i> Risso, 1827 <i>Ciliata mustela</i> Linnaeus, 1758 <i>Lipophrys pholis</i> Linnaeus, 1758 <i>Liza aurata</i> Risso, 1810 <i>Liza ramada</i> Risso, 1827 <i>Platichthys flesus</i> Linnaeus, 1758 <i>Pomatoschistus minutus</i> Pallas, 1770 <i>Pomatoschistus pictus</i> Malm, 1865 <i>Solea solea</i> Linnaeus, 1758 <i>Symphodus melops</i> Linnaeus, 1758 <i>Trisopterus luscus</i> Linnaeus, 1758	<i>Chelon labrosus</i> (Risso, 1827) <i>Ciliata mustela</i> (Linnaeus 1758) <i>Lipophrys pholis</i> (Linnaeus, 1758) <i>Liza aurata</i> (Risso, 1810) <i>Liza ramada</i> (Risso, 1827) <i>Platichthys flesus</i> (Linnaeus, 1758) <i>Pomatoschistus minutus</i> (Pallas, 1770) <i>Pomatoschistus pictus</i> (Malm, 1865) <i>Solea solea</i> (Linnaeus, 1758) <i>Symphodus (Crenilabrus) melops</i> (Linnaeus, 1758) <i>Trisopterus luscus</i> (Linnaeus, 1758)	TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses and name change: NHM UK Species recommends <i>Symphodus (Crenilabrus) melops</i> (Linnaeus, 1758). TD - incorrect use of parentheses
2423	<i>Dicentrarchus labrax</i> L. 1758 <i>Engraulis encrasicolus</i> L. 1758 <i>Gobius gobio</i> L. 1758 <i>Pomatoschistus microps</i> Kroyer 1838 <i>Pomatoschistus minutus</i> Pallas 1770 <i>Rutilus rutilus</i> L. 1758 <i>Sprattus sprattus</i> L. 1758	<i>Dicentrarchus labrax</i> (Linnaeus, 1758) <i>Engraulis encrasicolus</i> (Linnaeus, 1758) <i>Gobio gobio</i> (Linnaeus, 1758) <i>Pomatoschistus microps</i> (Krøyer, 1838) <i>Pomatoschistus minutus</i> (Pallas, 1770) <i>Rutilus rutilus</i> (Linnaeus, 1758) <i>Sprattus sprattus</i> (Linnaeus, 1758)	TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses
2425	<i>Gaidropsarus mediterraneus</i> <i>Platichthys flesus</i>	<i>Ciliata mustela</i> (Linnaeus 1758) <i>Limanda limanda</i> (Linnaeus 1758)	TE - 5-bearded rockling, <i>Ciliata mustela</i> : has 5 barbels (whereas <i>Gaidropsarus mediterraneus</i> has 3), but has no frill of papillae on the upper lip, which distinguishes <i>C. mustela</i> from <i>C. septentrionalis</i> . Can be difficult to spot in the field. TE - Dab, <i>Limanda limanda</i> : has a very arched lateral line Flounder has small tubercles along the bases of the dorsal and anal fins, and lateral line.

2426	<i>Aphia minuta</i> Risso 1810 <i>Dicentrarchus labrax</i> Linnaeus, 1758 <i>Gobiusculus flavescens</i> Fabricius, 1779 <i>Liza aurata</i> Risso 1810 <i>Osmerus eperlanus</i> Linnaeus, 1758 <i>Pomatoschistus minutus</i> Pallas, 1770 <i>Zoarces viviparus</i> Linnaeus, 1758	<i>Aphia minuta</i> (Risso, 1810) <i>Dicentrarchus labrax</i> (Linnaeus, 1758) <i>Gobiusculus flavescens</i> (Fabricius, 1779) <i>Liza aurata</i> (Risso, 1810) <i>Osmerus eperlanus</i> (Linnaeus, 1758) <i>Pomatoschistus minutus</i> (Pallas, 1770) <i>Zoarces viviparus</i> (Linnaeus, 1758)	TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses TD - incorrect use of parentheses
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References

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Maitland P.S. & Campbell R.N.B. 1992. Freshwater fishes of the British Isles. Harper Collins.

Wheeler A. 1969. The fishes of the British Isles and North West Europe. Macmillan, London.

Databases

FishBase <http://www.fishbase.org/>

Species names and authorities referred to NHM UK Species

<http://www.nhm.ac.uk/our-science/data/uk-species/species/index.html/>