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ON THE OCCURRENCE OF THE CURRENTLY LARGEST RECORDED *PAGELLUS ERYTHRINUS* (SPARIDAE) IN THE TYRRHENIAN SEA (ITALY)

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ABSTRACT

This paper presents an update of the maximum size of Pagellus erythrinus*, based on a comprehensive list of georeferenced occurrences up to January 2026. An exceptionally large specimen of* P. erythrinus *was captured using a commercial gillnet at a depth of 65 m on a muddy-rocky seabed off Civitavecchia (Rome). This specimen measured 660 mm in total length and had a wet weight of 4,082 g. The species has been recorded across a wide depth range (1–300 m) in over twenty intermittent localities in the Atlantic Ocean and the Mediterranean Sea between 1983 and 2026. This study confirms the largest specimen of* P. erythrinus *recorded to date. This ichthyological note contributes a key parameter for life-history studies and fisheries science.*

Key words: common pandora, maximum length, maximum weight, central Mediterranean Sea

SEGNALAZIONE DELL'ESEMPLARE ATTUALMENTE PIÙ GRANDE DI *PAGELLUS ERYTHRINUS* (SPARIDAE) RITROVATO NEL MAR TIRRENO (ITALIA)

SINTESI

L'articolo presenta un aggiornamento della dimensione massima di Pagellus erythrinus*, basato su un elenco completo di occorrenze georeferenziate aggiornato a gennaio 2026. Un esemplare eccezionalmente grande di* P. erythrinus *è stato catturato con una rete da posta commerciale a una profondità di 65 m su un fondale fangoso-roccioso al largo di Civitavecchia (Roma). L'esemplare misurava 660 mm di lunghezza totale e presentava un peso umido di 4.082 g. La specie è stata registrata in un ampio intervallo di profondità (1–300 m) in oltre venti località discontinue nell'oceano Atlantico e nel mar Mediterraneo tra il 1983 e il 2026. Lo studio conferma l'esemplare più grande di pagello fragolino finora documentato. La presente nota ittiologica fornisce un parametro chiave per gli studi sulla storia vitale e per la scienza della pesca.*

Parole chiave: pagello fragolino, lunghezza massima, peso massimo, Mediterraneo centrale

INTRODUCTION

The common pandora, *Pagellus erythrinus* (Linnaeus, 1758), is a benthopelagic, schooling marine fish that typically inhabits inshore waters with rocky, gravelly, muddy, or sandy substrates at depths between 40 and 200 m in the Mediterranean Sea (Golani *et al.*, 2006; Froese & Pauly, 2025). An omnivorous species, but mostly feeding on a large variety of benthic invertebrates and small fish (Bauchot & Hureau, 1986), *P. erythrinus* is protogynous hermaphroditic, in which sex change possibly occurs at a fork length (FL) between 12.8 and 20.3 cm FL (Froese & Pauly, 2025). While the species may exhibit two spawning periods in the southern Mediterranean, none have been reported in the Black Sea or northern European waters (Bauchot & Hureau, 1986).

P. erythrinus is distributed throughout the Mediterranean and is commonly encountered in the eastern Atlantic, from Brittany to the Cape Verde Islands, as well as around Madeira and the Canary Islands; it occurs less frequently in Scandinavia or off Mauritania (Bauchot & Hureau, 1986; Golani *et al.*, 2006) and is rare in the Black Sea. Published information on *P. erythrinus* in the Tyrrhenian Sea is limited, although the species plays an important role in the demersal fish community of the upper continental shelf, particularly in the southern area (10–100 m), with peak abundance between 10 and 50 m (Busalacchi *et al.* 2010, 2014).

The common pandora is a fish of commercial importance. While large quantities are captured by bottom trawls, the larger specimens are primarily caught using gillnets and trammel nets (Golani *et al.*, 2006), as well as bottom-set longlines (Vianson *et al.*, 2025).

This study reports an updated maximum size for *P. erythrinus*, based on the recent capture of an extraordinarily large specimen in the northern Tyrrhenian Sea, central Mediterranean.

MATERIAL AND METHODS

On 25 January 2026, an exceptionally large specimen of *Pagellus erythrinus* (Fig. 1) was captured in a commercial gillnet with a 40 mm mesh size, 12 miles off Civitavecchia (42°01′ N, 11°08′ E) at a depth of 65 m, on a muddy and rocky substrate (Fig. 2). The fish was immediately sold to a fishmonger in Rome (Famiglia Galluzzi – Pescheria dal 1894), who kindly photographed it alongside a tape measure and weighed it at our request. Morphometric measurements were recorded to the nearest millimetre, and weight was recorded in grams.

Fig. 1: An exceptionally large *Pagellus erythrinus* ***(660 mm TL; 4,082 g) caught off Civitavecchia, Tyrrhenian Sea (courtesy of Edoardo Galluzzi).***
Sl. 1: Izjemno velik *Pagellus erythrinus* ***(660 mm TL; 4,082 g), ulovljen pri Civitavecchii v Tirenskem morju (z dovoljenjem Edoarda Galluzzija).***

Fig. 2: Sampling site (yellow pin) of** Pagellus erythrinus **captured off Civitavecchia, Tyrrhenian Sea.
Sl.2: Mesto vzorčenja (rumena značka) vrste** Pagellus erythrinus**, ujete ob Civitavecchii v Tirenskem morju.

RESULTS AND DISCUSSION

The specimen was measured to the nearest millimetre and species identification followed Bauchot and Hureau (1986), Golani *et al*. (2006), and Froese & Pauly (2025). Morphometric measurements of *P. erythrinus* were estimated based on the tape measure placed alongside the fish in the photograph. The following percentages of TL were derived from the photographic scale: standard length, 84.1%; fork length, 89.8%; head length, 23.9%; pre-orbital length, 8.0%; pre-anal length, 52.3%; pre-pectoral length, 24.4%; pre-dorsal length, 32.6%; maximum body depth, 21.7%; and eye diameter, 4.1%.

Pagellus erythrinus typically reaches a maximum size of 60 cm TL, a common standard length (SL) of 20–25 cm, and the maximum published weight recorded for the species is 3,200 g (Bauchot & Hureau, 1986; Froese & Pauly, 2025). The specimen reported herein is considerably larger (660 mm TL and 4,082 g wet weight), surpassing all previously documented records. In fact, according to the data compiled in this study (see the size range column in Tab. 1), a specimen of this size has never been observed among the 30,717 specimens examined.

Records of the species, documented at depths ranging from 1 to 300 m and across more than twenty intermittent localities in the Atlantic and Mediterranean between 1983 and 2026 (see Tab. 1), indicate a population of a broad size range in this region. A review of the referenced studies in Table 1, along with the length–weight relationship data for the common pandora in FishBase, provides concrete size information. Accordingly, this study confirms the largest *P. erythrinus* specimen recorded to date.

Busalacchi *et al*. (2014) reported that in the southern Tyrrhenian Sea, *P. erythrinus* prefer the upper continental shelf (10–100 m depth). The capture depth in this study (65 m) falls within this range. While studies on the reasons for this preference are limited, it is generally observed that larger fish tend to inhabit deeper waters, with coastal fish often undergoing ontogenetic migrations towards these depths (Somarakis & Machias, 2002). The fact that the specimen was caught in a relatively deep area also supports this pattern. Setting aside its genetic makeup, the fish appears to have accessed the resources necessary for thriving in the wild. Its habitat may also have provided effective protection from predators, including fishermen.

Tab. 1: Successive records of *Pagellus erythrinus* ***throughout the Atlantic and Mediterranean Sea (BS: beach seine; GN: gillnet; LL: longline; T: trawl; TN: trammel net; TR: trap).***
Tab. 1: Zaporedni zapisi o vrsti *Pagellus erythrinus* ***po vsem Atlantiku in Sredozemskem morju (BS: obmorska potegalka; GN: zabodna mreža; LL: parangal; T: vlečna mreža; TN: trislojna mreža; TR: past).***

Sampling locations	Depth (m)	Method of detection*	Date	n	Size range (TL, mm)	References
Ionian Sea, Greece	?	T, BS	Jun. 1983-Apr. 1985	2710	43-322 FL	Papaconstantinou *et al.* (1988)
Cretan shelf, Greece	26-177	T	Aug. 1988-Apr. 1991	1190	50-230 FL	Somarakis & Machias (2002)
Canary Islands, Atlantic	12-136	TR, LL, T	Jan. 1991-Sep. 1993	957	75-371	Pajuelo & Lorenzo (1998)
SW coast of Portugal, Atlantic	?	GN, TN, LL	Aug. 1992-Dec. 1993	749	180-520	Gonçalves *et al.* (1997)
S. Tyrrhenian Sea, Italy	10-100	T	1994-2008	2166	55-480	Busalacchi *et al.* (2014)
S. Portuguese region, Atlantic	?	?	1995-2000	386	120-448	Coelho *et al.* (2010)
Algarve coast, Portugal	?	GN, TN, LL, T, TR	1998-2000	1075	130-357	Santos *et al.* (2002)
Edremit Bay, NE Aegean Sea	5-80	T	Nov. 1999-Oct. 2000	676	77-228 FL	Hoşsucu & Türker Çakır (2003)
Mersin Bay, NE Mediterran.	20-100	T	May 1999-Apr. 2000	1787	14-186	Cicek *et al.* (2006)
Izmir Bay, NE Aegean Sea	30-70	T	Jan. 2002-Jun. 2007	2654	62-278	Metin *et al.* (2011)
NW Sicily, Italy	10-200	T	Sum. 2004-Spr. 2005	2033	55-375	Giacalone *et al.* (2010)
Izmir Bay, NE Aegean Sea	30-70	T	Jun. 2005-May 2006	1014	65-269	Ilkyaz *et al.* (2008)
Adriatic Sea, Italy	?	T	2005-2006	1148	50-217	Stagioni *et al.* (2015)
Egyptian Mediterranean	?	T	Apr. 2007-May 2008	2670	60-300	Mehanna & Fattouh (2009)
Korinthiakos Gulf, Greece	50-300	GN, TN	Jun. 2008-Aug. 2009	773	108-380	Moutopoulos *et al.* (2013)
Catalan coast, France	1-80	?	Feb. 2007-Jul. 2010	717	135-580	Crec'hriou *et al.* (2013)
Egypt, E Mediterran.	?	T	Apr. 2008-Jul. 2010	1326	42-301	Mehanna & Farouk (2021)
Monastir Bay, Tunisia	?	?	Sep. 2011-Aug. 2012	640	110-300	Ali Ben Smida *et al.* (2014)
Gökova Bay, SE Aegean Sea	35-40	TN	Jan. 2016-Dec. 2016	945	59-302	Yapıcı & Filiz (2019)
Tripoli, Lebanon	4-90	LL, GN, BS	Feb. 2015-Dec. 2017	2152	75-400	Lteif *et al.* (2020)
Sicily, Italy	?	T	2012-2019	847	90-440	Falsone *et al.* (2022)
N. Sinai, Egypt	?	T	Jan.-Dec.2021	1512	110-279	Hegab *et al.* (2025)
W. Aegean Sea, Greece	?	T	2021-2024	589	109-340	Theocharis *et al.* (2025)
N. Tyrrhenian Sea, Italy	65	GN	25 Jan. 2026	1	660	Present study

Only two previous studies have reported specimens of the common pandora exceeding 500 mm TL: Gonçalves *et al*. (1997) recorded a *P. erythrinus* measuring 520 mm, while Crec'hriou *et al*. (2013) reported a specimen measuring 580 mm TL. The maximum age reported for *P. erythrinus* from otolith readings is 21 years (Abecasis *et al*., 2008; Coelho *et al*., 2010) for specimens measuring 400 mm and 448 mm TL, respectively. Although the exact ages of fish larger than 500 mm are currently unknown, it can be inferred that they likely far exceed 21 years.

In conclusion, maximum size is an important parameter in life history studies and fisheries science (Borges, 2001). This study suggests that *P. erythrinus* specimens in the northern Tyrrhenian Sea are larger than those reported from southwestern Portugal, the coasts of French Catalonia, and other Mediterranean populations. At present, and in the absence of reports suggesting otherwise, this appears to be unique among the world's seas.

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O POJAVLJANJU TRENUTNO NAJVEČJEGA EVIDENTIRANEGA PRIMERKA VRSTE *PAGELLUS ERYTHRINUS* (SPARIDAE) V TIRENSKEM MORJU (ITALIJA)

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POVZETEK

*Avtorja poročata o največjem zabeleženem primerku ribona (*Pagellus erythrinus*) na podlagi obsežnega seznama georeferenciranih pojavljanj te vrste do januarja 2026. Izjemno velik primerek vrste* P. erythrinus *je bil ujet s komercialno zabodno mrežo na globini 65 m na blatno-skalnem morskem dnu pri Civitavecchii (Rim). Ta primerek je meril v dolžino 660 mm in imel mokro težo 4.082 g. Vrsta je bila med letoma 1983 in 2026 zabeležena v širokem globinskem razponu (1–300 m) na več kot dvajsetih občasnih lokacijah v Atlantskem oceanu in Sredozemskem morju. Ta študija potrjuje največji doslej zabeleženi primerek vrste* P. erythrinus. *Ta ihtiološka beležka prispeva ključni parameter za študije življenjskega sloga in ribiško znanost.*

Ključne besede: ribon, maksimalna dolžina, maksimalna teža, osrednje Sredozemsko morje

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