

First record of *Pontinus kuhlii* in Maltese waters

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The presence of the offshore rockfish, Pontinus kuhlii (Scorpaeniformes, Scorpaenidae), is reported for the first time in Maltese waters (Strait of Sicily). One specimen was caught offshore Gozo (Maltese archipelago) in October 2013 by bottom longline. The eastward range expansion within the Mediterranean of this Atlantic species is discussed.

Keywords: Scorpaenidae, *Pontinus kuhlii*, immigrant, Strait of Sicily, Mediterranean Sea, offshore rockfish

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INTRODUCTION

Pontinus kuhlii (Bowdich, 1825) is a subtropical benthic fish which lives on rocky bottoms of the continental shelf and beyond, commonly at depths ranging from 100 to 450 m, but is also found at more shallow or greater depths (Goode & Bean, 1896; Tortonese, 1975). It is distributed in the eastern Atlantic, from the Gulf of Guinea to Portugal, including the Azores, Madeira, Canary Islands and Cape Verde (Schneider, 1992). One record of the species from South Africa is considered doubtful (Eschmeyer, 1969). In the Mediterranean, this species was first recorded in Sicilian waters by Sauvage (1878), who classified it as *Sebastes (Sebastichthys) bibroni*. Unfortunately, this author did not specify the exact geographical location where the specimen had been caught within Sicilian waters, although the distribution maps for this species published subsequently by other authors locate this record off south-eastern Sicily (Hureau & Litvinenko, 1986; Merella *et al.*, 1998; Mercader & Garcia-Rubies, 2010). After a century since this initial Mediterranean record of *P. kuhlii*, the second Mediterranean specimen for the same species was collected at Cabo de Palos Bank, in Spain, by Massutí & Massó (1975) and subsequently also in the Balearic Islands (Riera *et al.*, 1995; Merella *et al.*, 1998; Manent & Abella, 2005), western Sardinia (Pais *et al.*, 2005), the northern Tyrrhenian Sea in Tuscany (Voliani & Serena, personal communication) and northern Tunisia (Mercader & Garcia-Rubies, 2010). Herein, the first record of *P. kuhlii* in Maltese waters is reported.

MATERIALS AND METHODS

In October 2013, one specimen of *Pontinus kuhlii* was caught approximately two nautical miles off the south-western coast of Gozo, Malta (Strait of Sicily, 36°0.440'N 14°14.383'E;

Figure 1). The specimen was collected in early morning (about 5:00 a.m.) by bottom longline, at about 50 m of depth, from a rocky seabed. The fisherman who caught it did not preserve the specimen but one of the authors of the present paper (Alan Deidun) had the opportunity to briefly examine it and to take a number of photographs of the same specimen.

RESULTS

The fresh specimen (Figure 2) exhibited a reddish colour dorsally, paling ventrally, with yellow patches and striations along maxillary, preoperculum, operculum and along body sides; the fins were pale red, the dorsal one with evident yellow spots on the interspine membrane and red spots on its soft part; smaller dark red spots were also present along different parts of the body; the mouth cavity was pale rose. The specimen had a total length (TL) of 26.5 cm and was characterized by a large head, with relatively small eyes in a dorsal position

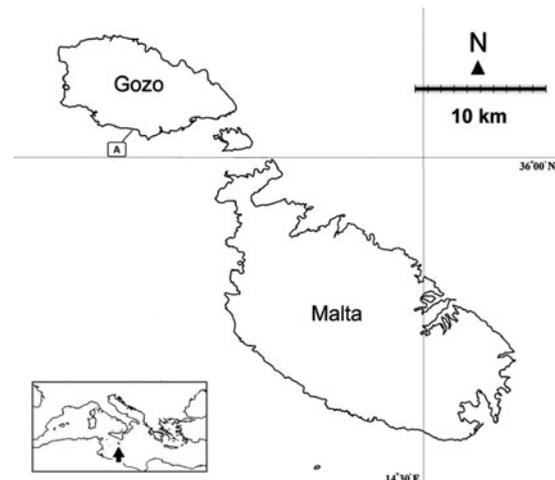


Fig. 1. Location (A) off the south-western coast of Gozo (Maltese archipelago), where the specimen of *Pontinus kuhlii* was fished.

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Fig. 2. Specimen of *Pontinus kuhlii* caught offshore Gozo.

(about 6 times in the head), bearing 4 suborbital spines, whilst the preoperculum and the operculum carried 4 and 2 spines respectively. Well-developed spines were present on top of the head. Dorsal fin has 12 spines, the first short and robust, with the second and the third being the longest. Pectoral rays unbranched. Caudal fin truncated at the posterior margin.

DISCUSSION

The description of our specimen is consistent with that of the other specimens caught for the same species in the Mediterranean and agrees with the general description of this species (Goode & Bean, 1896; Eschmeyer, 1969; Hureau & Litvinenko, 1986). *Pontinus kuhlii* is the only species of the genus *Pontinus* Poey, 1860 occurring in the Mediterranean and is distinguished from the other scorpaenids by the unbranched pectoral fin rays, the absence of an occipital pit, the presence of dorsal fin with 12 spines and the great prominence of the second and third dorsal spines. Within the Mediterranean Basin, *P. kuhlii* is considered as an Atlantic immigrant, with two other scorpaenid species of Atlantic origin within the same Basin being *Trachyscorpia cristulata echinata* (Koehler, 1896) and *Scorpaena stephanica* (Cadenat, 1943). *Pontinus kuhlii* is considered rare in the Mediterranean but, since it commonly inhabits rocky bottoms at great depths and these are rarely explored by fishermen, its occurrence within the same Basin could be underestimated.

The scarce information on the biology and ecology of *P. kuhlii* does not allow us to draw any conclusion on the settlement status of this species in our geographical area. The specimens collected previously in the Mediterranean range from 20 to 37.5 cm in length, although the species may reach a maximum TL of 55 cm (Catarino *et al.*, 2013); based on the age-length relationship developed for the same species in the Canary Islands by López Abellán *et al.* (2001), these specimen lengths all correspond presumably to an adult size and to an age exceeding six years; according to the same relationship, our specimen would fall on average within the 8–9 years old category, with the full possible age range spanning between seven and twelve years.

Considering that the provenance of Sauvage's *P. kuhlii* specimen in Sicilian waters is not fully specified, the present paper represents the first documented record of this species in the Strait of Sicily and its confirmed occurrence in this geographical area is testimony to its range expansion from the

western to the eastern Mediterranean Basin. Its migration pattern within the Basin is similar to that of other incoming Atlantic species which recently crossed over to the eastern Mediterranean through the Strait of Sicily, such as the lesser amberjack *Seriola fasciata* (Andaloro *et al.*, 2005), the African hind *Cephalopholis taeniops* (Deidun *et al.*, 2011), the saddled snake eel *Pisodonophis semicinctus* (Bodilis *et al.*, 2012) and the Sally lightfoot crab *Percnon gibbesi* (Cannicci *et al.*, 2008). These species are part of the increasing influx of tropical and sub-tropical species from the eastern Atlantic into the Mediterranean, which, along with an even greater inverse influx of tropical species of Indo-Pacific and Erythrean affinity through the Suez Canal, is a phenomenon which is receiving increasing scientific attention and which is likely due to the recent changes in hydroclimatic conditions of the same Basin (Ben Rais Lasram & Mouillot, 2009; Andaloro *et al.*, 2012).

Since *P. kuhlii* is being recorded for the first time from Maltese waters, it is being assigned a popular name in Maltese, which is currently missing—*Skorfna tal-qiegh*, which translates into 'deepwater rockfish'.

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REFERENCES

- Andaloro F., Falautano M., Sinopoli M., Passarelli F.M., Pipitone C., Addis P., Cau A. and Castriota L. (2005) The lesser amberjack *Seriola fasciata* (Bloch, 1793) (Perciformes: Carangidae) in the Mediterranean: a recent colonist? *Cybium* 29, 141–145.
- Andaloro F., Falautano M., Perzia P., Maricchiolo C. and Castriota L. (2012) Identification and distribution of non-indigenous species in the Mediterranean Sea: the Italian challenges. *Aliens: The Invasive Species Bulletin* 32, 13–19.
- Ben Rais Lasram F. and Mouillot D. (2009) Increasing southern invasion enhances congruence between endemic and exotic Mediterranean fish fauna. *Biological Invasions* 11, 697–711.
- Bodilis P., Cheminée A., Miniconi R., Arceo H. and Francour P. (2012) Occurrence of the Atlantic species, *Pisodonophis semicinctus* (Osteichthyes: Ophichthidae), along the Mediterranean coast. *Journal of Applied Ichthyology* 28, 652–654.
- Bowdich T.E. (1825) *Excursions in Madeira and Porto Santo, during the autumn of 1823, while on his third voyage to Africa; by the late T. Edward Bowdich, Esq.* London: G.B. Whittaker, 278 pp.
- Cannicci S., Garcia L. and Galil B.S. (2008) Racing across the Mediterranean—first record of *Percnon gibbesi* (Crustacea: Decapoda: Grapsidae) in Greece. *Marine Biodiversity Records* 1, e32. doi: <http://dx.doi.org/10.1017/S1755267206003009>.
- Catarino D., Stefanni S. and Menezes G. (2013) Size distribution and genetic diversity of the offshore rockfish (*Pontinus kuhlii*) from three Atlantic archipelagos and seamounts. *Deep-Sea Research II*. doi: <http://dx.doi.org/10.1016/j.dsr2.2013.02.010>.
- Deidun A., Castriota L. and Arrigo S. (2011) A tale of two Atlantic fish migrants: records of the lesser amberjack *Seriola fasciata* and the African hind *Cephalopholis taeniops* from the Maltese Islands. *Journal of the Black Sea/Mediterranean Environment* 17, 223–233.

- Eschmeyer W.N.** (1969) A systematic review of the scorpionfishes of the Atlantic Ocean (Pisces: Scorpaenidae). *Occasional Papers of the California Academy of Sciences* 79, 1–143.
- Goode G.B. and Bean T.H.** (1896) *Oceanic ichthyology, a Treatise on the Deep-sea and Pelagic Fishes of the World, Based Chiefly upon the Collections Made by the Steamers Blake, Albatross, and Fish Hawk in the Northwestern Atlantic*. Washington, DC: Government Printing Office, 553 pp.
- Hureau J.-C. and Litvinenko N.I.** (1986) Scorpaenidae. In Whitehead P.J.P., Bauchot M.-L., Hureau J.-C., Nielsen J. and Tortonese E. (eds) *Fishes of the north-eastern Atlantic and the Mediterranean. Volume 3*. Paris: UNESCO, pp. 1211–1229.
- López Abellán L.J., Santamaría M.T.G. and Conesa P.** (2001) Age and growth of *Pontinus kuhlii* (Bowdich, 1825) in the Canary Islands. *Scientia Marina* 65, 259–267.
- Manent P. and Abella J.** (2005) Primera cita de *Pontinus kuhlii* (Bowdich, 1825) (Osteichthyes, Scorpaenidae) en aguas de Menorca (Mediterráneo Occidental). *Bolletí de la Societat d'Història Natural de les Balears* 48, 39–42.
- Massutí M. and Massó C.** (1975) La pesca selectiva en el talud continental. Bancos de pesca I: el banco de Capo palos. *Boletín del Instituto Español de Oceanografía* 183, 1–26.
- Mercader L. and Garcia-Rubies A.** (2010) Premier signalement de *Pontinus kuhlii* (Scorpaenidae) en Tunisie (Méditerranée sud-occidentale). *Cybium* 34, 227–228.
- Merella P., Alemany F. and Grau A.** (1998) New data on the occurrence of *Pontinus kuhlii* (Bowdich, 1825) (Osteichthyes: Scorpaenidae) in the Western Mediterranean. *Scientia Marina* 62, 177–179.
- Pais A., Chessa L.A. and Delrio G.** (2005) Northernmost occurrence of the offshore rockfish, *Pontinus kuhlii* (Scorpaeniformes: Scorpaenidae), in the Mediterranean Sea. *Acta Ichthyologica et Piscatoria* 35, 143–145.
- Riera F., Grau A.M., Pastor E. and Pou S.** (1995) Faunistic and demographical observations in Balearic ichthyofauna. Meridionalization or subtropicalization phenomena. In *La Méditerranée, variabilités climatiques, environnement et biodiversité*. Montpellier: Actes du colloque Scientifique OKEANOS, pp. 213–220.
- Sauvage H.-E.** (1878) Description de poissons nouveaux ou imparfaitement connus de la collection du Muséum d'Histoire Naturelle. Famille des Scorpénidées, des Platycéphalidées et des Triglidées. *Nouvelles Archives du Muséum d'Histoire Naturelle Series 2*, 109–157.
- Schneider W.** (1992) *Guide de terrain des ressources marines commerciales du Golfe de Guinée*. Rome: FAO, 268 pp.
- and
- Tortonese E.** (1975) *Fauna d'Italia. Osteichthyes (Pesci ossei). Parte Seconda*. Bologna: Calderini, 636 pp.

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