Journal of the
Ocean Science Foundation

2018, Volume 30

NOTE

Range extension of *Gymnocranius* cf. *grandoculis* (Teleostei: Lethrinidae) to Oman in the Arabian Gulf

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Abstract

A specimen of *Gymnocranius* cf. *grandoculis* was collected from Khasab City, Musandam region, Oman. The fish represents the first record of the genus from the Arabian Gulf. Color patterns as well as meristic and morphometric characters match to those reported for *Gymnocranius grandoculis*, although new species have been described recently and the taxonomy of Indian Ocean populations has not been resolved.

Key words: fishes, fisheries, biogeography, species range, Indo-Pacific Ocean, emperors, seabream, blue-lined large-eye bream.

Citation: Al-Marzouqi, A.A., Jawad, L.A., Al-Anbory, I. & Al-Senaidi, R. (2018) Range extension of *Gymnocranius* cf. *grandoculis* (Teleostei: Lethrinidae) to Oman in the Arabian Gulf. *Journal of the Ocean Science Foundation*, 30, 43–47.
doi: http://dx.doi.org/10.5281/zenodo.1257704

Recently a number of new records of fish species in the Arabian Gulf have been documented (Randall 1986, 1994, Hare 1990, Debelius 1993, Al-Abdessalaam 1995), and several new fish records have been documented from Omani waters in the past decade (Jawad & Al-Mamry 2009, Jawad *et al*. 2011a, Jawad *et al*. 2011b).

The five genera of the emperors and large-eye breams of Lethrinidae include 39 species (Eschmeyer *et al*. 2018). All but one are from the Indo–Pacific Ocean: the other species is found in the eastern Atlantic (Carpenter & Allen 1989).

The species with the widest distribution is the Blue-lined large-eye bream, *Gymnocranius grandoculis* (Valenciennes, 1830), which has been documented throughout the warm shore waters of the Indian Ocean, except the Arabian Gulf, and extending into the Pacific Ocean to Japan and Australia and across Oceania, except Hawaii (Carpenter & Allen 1989). Randall (1995) did not report any *Gymnocranius* species from Omani waters. Jawad *et al*. (2011b) reported *Gymnocranius griseus* (Schlegel, 1844) from the Arabian Sea coast of Oman (outside the Arabian Gulf). No species of *Gymnocranius* are reported in the Arabian Gulf or Oman by the Global Biodiversity Information Facility GBIF (https://www.gbif.org/). We report here the first record of *Gymnocranius* cf. *grandoculis* in the Arabian Gulf.

Recently there have been changes to the taxonomy of *Gymnocranius*, with 4 new species recently described, three from New Caledonia alone, and at least one allied to *G. grandoculis* (Borsa *et al*. 2010, 2013, Chen *et al*. 2017). The taxonomy of the genus in the Indian Ocean has not been revised for many decades and it is likely additional species remain to be described, especially in the *G. grandoculis* complex, where the characters defining the species have not been resolved. As a result, we cannot be certain of the status of the species to which our specimen belongs and we therefore label it *Gymnocranius* cf. *grandoculis*.

The adult specimen of *Gymnocranius* cf. *grandoculis* (Fig. 1) was caught from the coastline of the city of Khasab, Musandam region, Arabian Gulf coast of Oman (26.2192º, 56.2492º) (Fig. 2). The fish measured 554 mm SL and 660 mm TL, somewhat smaller than the 640 mm SL maximum reported for the species by Myers (1999). The specimen was caught using a fishing trap at a depth of 35–40 m on 24 February 2017. The fish was fixed in 10% formalin and later preserved in 70% ethanol for deposit in the fish collection of the Omani Marine Science and Fisheries Centre, Ministry of Agriculture and Fisheries, Muscat, Sultanate of Oman.

Standard length (SL), from the tip of the snout to the base of the caudal fin, was used for proportional measurements, and total length (TL) for the maximum length of the specimen. Measurements were made with dial calipers to the nearest 1 mm. Morphometric and meristic details were recorded following Carpenter & Allen (1989) and are presented in Table 1.

Figure 1. *Gymnocranius* cf. *grandoculis*, 660 mm TL, Musandam, Oman, Arabian Gulf, image reversed (A.A. Al-Marzouqi).

The morphological characters of the specimen of *G. grandoculis* are in general agreement with those given for the species by Carpenter & Allen (1989). It is characterized by an oblong body shape, with depth usually 2.4–2.5 in SL; a steep forehead profile; a relatively small mouth, with posterior part of the jaws not reaching the anterior edge of the eye; two pairs of canines at front of each jaw, other teeth villiform; a moderately forked caudal fin; 5½ scale rows between the lateral line and the base of the middle dorsal-fin spines; and the absence of scales in the inner surface of pectoral-fin axil. The body is silvery with dark scale margins, especially above the lateral line; fins are mostly yellowish; and characteristic horizontal blue wavy lines across the snout and cheek when live or fresh.

TABLE 1

Morphometric and meristic characters of
G*ymnocranius* cf. *grandoculis* from the Arabian Gulf
(measurements in mm)

Morphometric characters	
Total length (TL)	660
Standard length (SL) (% in TL)	554 (83.0)
Head length (HL) (% in SL)	151(27.3)
Preorbital length (Pre. O.) (% in HL)	70 (46.4)
Postorbital length (Post. O.) (% in HL)	115 (76.2)
Eye diameter (ED) (% in HL)	47 (31.1)
Upper-jaw length (UJL) (% in HL)	70 (46.4)
Predorsal-fin length (Pre.D.F.L.) (% in SL)	202 (36.5)
Postdorsal-fin length (Post.D.F.L.) (% in SL)	407 (73.5)
Prepectoral-fin length (Pre.P.F.L.) (% in SL)	165 (29.8)
Pectoral-fin length (P.F.L.) (% in SL)	120 (21.7)
Prepelvic-fin length) (Pre.Pel.F.L.) (% in SL)	190 (34.3)
Preanal-fin length (Pre.A.F.L.) (% in SL)	310 (55.8)
Postanal-fin length (Post.A.F.L.) (% in SL)	405 (73.1)
Caudal-peduncle depth (C.P.D.) (% in SL)	57 (10.3)
Caudal-peduncle length (C.P.L.) (% in SL)	62 (11.2)
Body depth (B.D.) (% in SL, B.D. in SL)	213 (38.5, 2.6)
Caudal-fin length (C.F.L.) (% in SL)	50 (9.02)
Meristic characters	
Number of dorsal-fin spines	X
Number of dorsal-fin rays	10
Number of anal-fin spines	III
Number of anal-fin rays	10
Number of scales in the lateral line	48

Figure 2. Map of Arabian Gulf region with collection location of Musandam indicated.

This range extension completes the Indian Ocean distribution documented for the species, since the Arabian Gulf was the only region without records. It is unclear whether the species is native to the Gulf since sampling is relatively poor in the area. It is also possible that this is a recent colonization due to climate change or some other recent environmental change.

Acknowledgments

We thank the Ministry of Agriculture and Fisheries, Oman; the Ministry of Agriculture and Fisheries Wealth (MOAFW), the Omani Marine Science and Fisheries Centre, and the Directorate of Agriculture and Fisheries Developmental Fund for giving us the opportunity to work on the fishes of the Omani coast. The note was reviewed by two anonymous reviewers.

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