

First record of *Polydactylus mullani* (Polynemidae) from the Sultanate of Oman

by

Philippe BÉAREZ* (1), Sophie KERNEUR (2) & Hiroyuki MOTOMURA (3)

RÉSUMÉ. - Premier signalement de *Polydactylus mullani* (Polynemidae) à Oman.

Le barbare à tâche noire d'Arabie, *Polydactylus mullani*, est une espèce endémique de la mer d'Arabie, vivant le long des côtes indiennes et pakistanaïses. Sa présence est ici signalée pour la première fois à l'extrémité sud-ouest du golfe d'Oman. Il se pourrait que *P. mullani* ait été confondue jusqu'à présent avec *Polydactylus sextarius*, dans la mesure où, jusqu'en 2001, la première espèce n'était considérée que comme une sous-espèce de la seconde. Cependant, *P. mullani* n'est cité dans aucun des travaux traitant des poissons d'Oman postérieurs à 2001. Le nombre d'espèces de Polynemidae connues en Oman s'élève donc aujourd'hui à trois : *Eleutheronema tetradactylum*, *P. mullani* et *P. plebeius*.

Key words. - Polynemidae - *Polydactylus mullani* - Arabian Sea - Gulf of Oman - New record.

The ichthyofauna of the Sultanate of Oman has been subject to several important studies for these last twenty years (Al-Abdessaalam, 1995; Randall, 1995; Manilo and Bogorodsky, 2003; Al-Jufaili *et al.*, 2010). Nevertheless, much work still remains to be done on fish taxonomy and ecology in this area, especially in the Persian Gulf and Gulf of Oman, as demonstrated by recent new descriptions (e.g., Carvalho and Randall, 2003; Baldwin, 2005; Iwatsuki and Carpenter, 2009) or new records (e.g., Béarez *et al.*, 2008; Jawad and Al-Mamry, 2009).

Al-Abdessaalam (1995) did not report any species of Polynemidae from Oman. Randall (1995) mentioned two species: *Eleutheronema tetradactylum* (Shaw, 1804) and *Polydactylus sextarius* Bloch & Schneider, 1801. Manilo and Bogorodsky (2003) cited only *Polydactylus plebeius* (Broussonet, 1782) as distributed along the coast of Oman. Finally, Al-Jufaili *et al.* (2010) mentioned three species: *E. tetradactylum*, *P. sextarius* and *P. plebeius*. *Polydactylus sextarius* is distributed in the eastern Indian and western Pacific Oceans and does not occur in the western Indian Ocean (Motomura and Iwatsuki, 2001; Motomura, 2004). Therefore, the above-mentioned *P. sextarius* records from the Arabian Sea, including Oman, are most likely to be based on *Polydactylus persicus* Motomura & Iwatsuki, 2001 or *Polydactylus mullani* (Hora, 1926).

The specimen herein described is easily recognized as *P. mullani* because of the combined presence of three diagnostic characters (Motomura and Iwatsuki, 2001; Motomura, 2004): a blackish spot larger than pupil on lateral line above posterior end of operculum; seven pectoral filaments; and second spine of first dorsal fin more robust than other dorsal fin spines. *Polydactylus mullani* is endemic to the northern Arabian Sea, along the Indian and Paki-

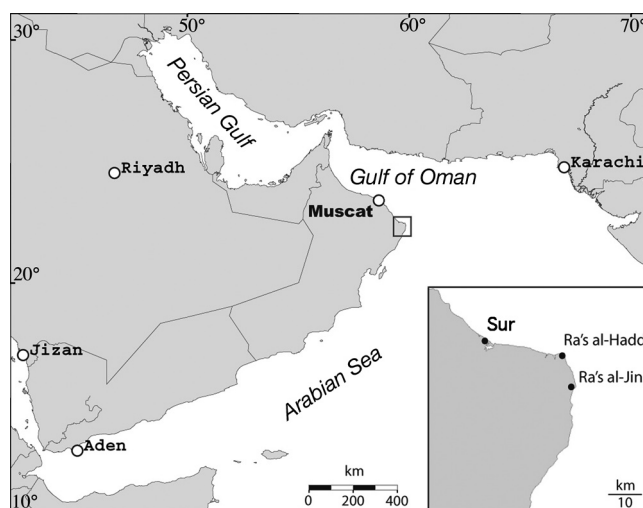


Figure 1. - Map of the study area showing the location of Sur, Oman (created with www.aquarius.geomar.de).

stani coasts. The present report documents a small extension of the range of this species into the southwest part of the Gulf of Oman (Fig. 1), and gives a short description of its sagitta.

Polydactylus mullani (Hora, 1926)

Material examined. - One female obtained at Sur fish market on 29 March 2009 (Fig. 2). The skeleton is housed in the MNHN fish osteological collection under the number ICOS-00314. The otoliths are preserved at the MNHN otolith collection under the number ICOT-001603.

Morphometric data. - 297 mm total length, 228 mm standard length (SL), 77 mm head length, 267 g total weight.

Distribution. - The Arabian blackspot threadfin has a distribution range restricted to the Arabian Sea in the northern Indian Ocean (Motomura and Iwatsuki, 2001). It has been objectively reported from Pakistan and India, approximately between 25 and 20° N.

The present record extends the known range of the Arabian threadfin to the west of the Arabian Sea, at the entrance to the Gulf of Oman.

Sagitta morphology

As in most Acanthopterygii, the largest otoliths in *P. mullani*

(1) UMR 7209, Département "Écologie et gestion de la biodiversité", Muséum national d'Histoire naturelle, 55 rue Buffon, 75231 Paris Cedex 05, France.

(2) 66 avenue du Maréchal de Lattre de Tassigny, 94410 Saint-Maurice, France. [kerneursophie@yahoo.fr]

(3) The Kagoshima University Museum, 1-21-30 Korimoto, Kagoshima 890-0065, Japan. [motomura@kaum.kagoshima-u.ac.jp]

* Corresponding author [bearez@mnhn.fr]



Figure 2. - *Polydactylus mullani*, MNHN ICOS-00314, 297 mm TL, Sur, Oman.

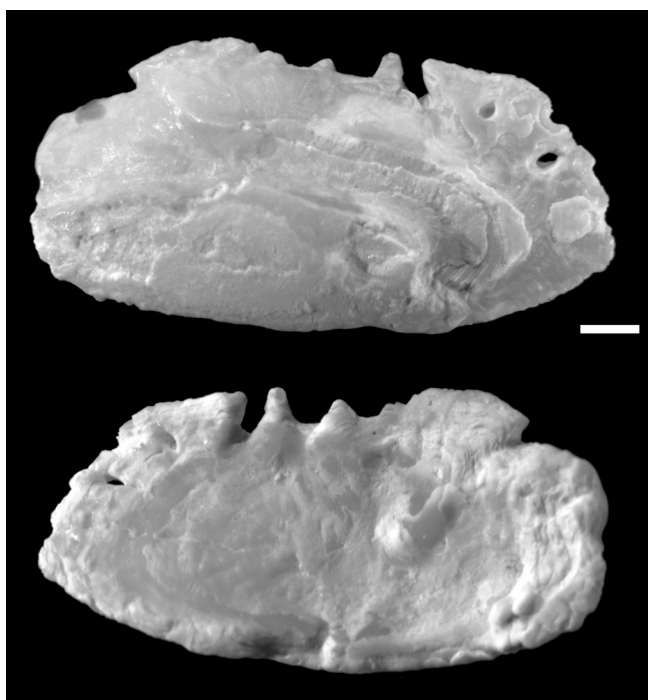


Figure 3. - Right sagitta of *Polydactylus mullani*, MNHN ICOT-001603. Scale bar = 1 mm.

are the sagittae. Measurements of the right sagitta of our specimen (Fig. 3) are as follows: 9.96 mm length, 4.96 mm height; with a weight of 0.0907 g. The shape of the sagitta outline is rectangular. The ventral margin is smooth, while the dorsal margin shows conspicuous indentations. The sulcus is positioned above the longitudinal midline of the sagitta, with an ostium widely open anteriorly. The cauda is distinctly closed and markedly curved posteriorly.

The specimen here considered (228 mm SL) is sensibly bigger than the previous records mentioned in the literature, i.e., 188 mm SL (Motomura, 2004).

With this new record of *Polydactylus mullani* in Omani waters, three species of threadfin, i.e., *E. tetradactylum*, *P. mullani* and *P. plebeius*, are now known in the area. However, if we consider that *Polydactylus persicus* might also be present in the northern part of Oman, around the Musandam Peninsula, the number of polyne- mids present in the Gulf of Oman could rise to four.

Acknowledgements. - We would like to thank the people from Sur for their cordial reception and help to obtain fish specimens. Funding came from a

research grant of the Fyssen Foundation given to Antoine Zazzo. Thanks to Floriane Boullot for taking the picture of the otolith and to Roz Gillis who revised the English text.

REFERENCES

- AL-ABDESSALAAM T.Z.S., 1995. - Marine Species of the Sultanate of Oman. An Identification Guide. 412 p. Ministry of Agriculture and Fisheries, Sultanate of Oman, Publication no. 46/95.
- AL-JUFALI S.M., HERMOSA G., AL-SHUAILY S.S. & AL MUJAINI A., 2010. - Oman Fish Biodiversity. *JKAU: Mar. Sci.*, 21(1): 3-51.
- BALDWIN Z.H., 2005. - A new species of bullhead shark, genus *Heterodontus* (Heterodontiformes: Heterodontidae), from Oman. *Copeia*, 2: 262-264.
- BÉAREZ P., KERNEUR S. & GABSI Z., 2008. - New record of a surgeonfish from Oman with notes on some uncommon rays. *Cybiium*, 32(4): 355-358.
- CARVALHO M.R. de & RANDALL J.E., 2003. - Numbfishes from the Arabian Sea and surrounding gulfs, with the description of a new species from Oman (Chondrichthyes: Torpediniformes: Narcinidae). *Ichthyol. Res.*, 50(1): 59-66.
- IWATSUKI Y. & CARPENTER K.E., 2009. - *Acanthopagrus randalli* (Perciformes: Sparidae), a new black seabream from the Persian Gulf. *Zootaxa*, 2267: 43-54.
- JAWAD L.A. & AL-MAMRY J., 2009. - First record of *Antennarius coccineus* from the Gulf of Oman and second record of *Antennarius indicus* from the Arabian Sea coast of Oman. *Mar. Biodiv. Rec.*, 2: e163.
- MANILO L.G. & BOGORODSKY S.V., 2003. - Taxonomic composition, diversity and distribution of coastal fishes of the Arabian Sea. *J. Ichthyol.*, 43(suppl. 1): S75-S149.
- MOTOMURA H., 2004. - Threadfins of the World (Family Polynemidae). An Annotated and Illustrated Catalogue of Polynemid Species known to date. FAO Spec. Cat. Fish. Purp. 3, pp. 1-117.
- MOTOMURA H. & IWATSUKI Y., 2001. - Review of *Polydactylus* species (Perciformes: Polynemidae) characterized by a large black anterior lateral line spot, with descriptions of two new species. *Ichthyol. Res.*, 48(4): 337-354.
- RANDALL J.E., 1995. - Coastal Fishes of Oman. 439 p. Bathurst: Crawford House Publishing.

Reçu le 24 juin 2011.

Accepté pour publication le 22 août 2011.