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Short Communication

FIRST RECORD OF BARRED MORAY *ECHIDNA POLYZONA* (ANGUILLIFORMES: MURAENIDAE) FROM ANDAMAN AND NICOBAR ISLANDS

ABSTRACT

One specimen each from Rutland Island and Great Nicobar Island has been identified as *Echidna Polyzona* (Richardson, 1845), a member of the Moray eel family Muraenidae. Systematic account for the species and distribution of moray eels in India are discussed. The present report forms the first record of *Echidna polyzona* from Andaman and Nicobar Islands.

Key words: New record, Moray eel, *Echidna*, Muraenidae, Andaman and Nicobar Islands.

INTRODUCTION

The species of the family Muraenidae contains elongate, snake like and robust and scaleless body. Teeth of Moray eels are small, conical, molariform of depressible fangs; head pored common; Pectoral fins absent; gill opening as a mid-lateral pore tail compressed and dorsal fin origin before gill opening (Nelson, 2006 and Froese and Pauly, 2016). Moray eels are cosmopolitan, well distributed in both tropical and temperate seas and very few species found in subtropical regions (Bohlke and McCosker, 2001). These can found in intertidal to greater depth mostly in reef crevices and recessed area, few are regularly found in brackish water and few can adapt in freshwater ecosystem. In the family muraenidae around 201 known species and sub divided into two subfamilies, Muraeninae (morays) contains 165 species and Uropterygiinae (snake morays) contains 36 species (Eschmeyer and Fong, 2016). So far 36 species are reported from Indian waters while 26 species are reported from the Andaman and Nicobar Islands (Jones and Kumaran, 1980; Krishna and Mishra, 1993; Mukharjee, 1995; Rao *et al.,* 2000; Venkataraman *et al.,* 2002; Chatterjee *et al.,* 2000; Mishra and Krishnan, 2003; Ramakrishna *et al.,* 2010; Rajan *et al*., 2013; Barman *et al*., 2000 & 2013; Yennawar *et al.,* 2015). The genus *Echidna* has 11 species from the world oceans whereas 5 species reported from India including 2 species *Echidna nebulosa* (Ahl, 1789) and *Echidna rhodochilus* Bleeker, 1863 of Andaman and Nicobar Islands (Rao *et al.*, 2000 and Rajan *et al.*, 2013). The present paper reports the occurrence of the barred moray eel *Echidna polyzona* Richardson, 1845 from Andaman and Nicobar Islands, which is reported herein as a new distributional record to these islands.

MATERIAL AND METHODS

The small scoop net was used for catching the morays. The specimens were fixed in 5% formalin for further studies. The species level identification was made by using standard taxonomic keys (Weber and de Beaufort, 1916; Allen *et al*., 2010; Jones and Kumaran, 1980).

RESULT

Two specimens of moray eels, one is from the South Andaman and another from Great Nicobar Islands has been identified as *Echidna polyzona* (Richardson, 1845).

SYSTEMATIC ACCOUNT

Phylum CHORDATA

Class ACTINOPTERIGII

Order ANGUILLIFORMES

Family MURAENIDAE Rafinesque, 1815

Genus ***Echidna*** Forster, 1788

Echidna polyzona (Richardson, 1845)

1845. *Muraena polyzona* Richarson, *Ichthyology. Part*-3. *The zoology of the voyage of H.M.S. Sulphur*: 112, Pl. 55(figs. 11-14) (typelocality: not known)

1980. *Echidna polyzona*: Jones and Kumaran, *Fishes of Laccadive Archipelago:* 87, fig. 63.

Material examined: ZSI/ANRC- 15270, 1 ex., (15.8 cm), Rutland Island (Lat: 11°27.307´N and Long: 92°36.098´E), South Andaman, 14-06-2009, 10 m depth (collected by Raghunathan & party); ZSI/ANRC-15275, 1 ex., (21.2 cm) Sastry Nagar (Lat: 06°47.462´N and Long: 93°53.062´E) Great Nicobar, 20-2-2011, intertidal area (collected by Raghunathan & party).

Diagnostic characters: Depth 16.2 and head 7.2, in percentage of total length. Eye 9.0 in percentage of head length. Cleft of mouth is reaching behind eye. Teeth are two series in jaw, conical are present and teeth on premaxillay in a peripheral series surrounding 3 large mesial teeth and continuous with a group of vomerine teeth. Anterior nostril tubular on each side of tip of snout, posterior nostril above anterior fourth of eye with raised rim. Dorsal nearer to gill opening than to rictus. Body with 29 dark brown bars separated by narrow yellowish to white interspaces. Some of the rings incomplete and bifurcating, corner of mouth blackish.

Habitat: Found on reef flats, shallow lagoons, rock crevices and intertidal to depth of about 25 m.

Distribution: *India*: Laccadives (Jones & Kumaran, 1980) and Andaman and Nicobar Islands (present study). *Elsewhere*: Red sea and east coast of Africa; Indonesia; Philippines; Ryukyu Islands; Marshall Island; Hawaii; Tuamotu Islands and Great Barrier Reef.

Remarks: New record to Andaman and Nicobar Islands.

Fig. 1. Preserved specimen of *Echidna polyzona* (Richardson, 1845)

DISCUSSION

Muraenidae has not been studied in great detail so far from the adjacent countries. A total of 71 species are known from Taiwan (Ho *et al.,* 2015); 33 species from Malaysia (Loh *et al.,* 2015); 16 species from Thailand (Froese and Pauly, 2016) and about 15 species are known from the Indonesian seas (Wouthuyzen *et al.,* 2005).

Muraneidae is commonly available from all the coastal regions of India. However, there are no valid reports available for its occurrence in the Gulf of Kuchchh. Jones and Kumaran (1980) and Sluka (2013) reported a total of 24 species from Laccadives, three species from Gulf of Mannar (Yogesh Kumar *et al.,* 2013), 14 species from West Coast (Barman *et al*., 2000; 2012; 2013), 20 species from East Coast (Mishra, 2013; Ray *et al.,* 2014; Ray and Mohapatra, 2015; Mohapatra *et al.,* 2015; 2016) and 26 species from Andaman and Nicobar Islands (Rao *et al*., 1993, 2000; Ramakrishna *et al*., 2010; Rajan *et al.,* 2013). With the addition of this new record, the total number of species from the family Muraenidae has increased to 27 under 8 genera from Andaman and Nicobar Islands.

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