Species

To Cite:
Vijayan S, Selvamurugan S. New state record of *Strophidon sathete* Hamilton, 1822 (Family: Muraenidae) from Odisha, India. *Species* 2024; 25: e12s1639
doi: https://doi.org/10.54905/disssi.v25i75.e12s1639

Author Affiliation:
[1]National Centre for Sustainable Coastal Management (NCSCM), Ministry of Environment, Forest and Climate Change, Anna University Campus, Chennai, Tamil Nadu, India
[2]Translational Health Science and Technology Institute Building (THSTI), Faridabad, India

[*]**Corresponding Author**
National Centre for Sustainable Coastal Management (NCSCM), Ministry of Environment, Forest and Climate Change, Anna University Campus, Chennai, Tamil Nadu, India
Email: svvijay89@gmail.com
ORCID: 0000-0001-9225-0784

Peer-Review History
Received: 26 January 2024
Reviewed & Revised: 30/January/2024 to 30/March/2024
Accepted: 03 April 2024
Published: 06 April 2024

Peer-Review Model
External peer-review was done through double-blind method.

Species
pISSN 2319–5746; eISSN 2319–5754

© The Author(s) 2024. Open Access. This article is licensed under a Creative Commons Attribution License 4.0 (CC BY 4.0)., which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. To view a copy of this license, visit http://creativecommons.org/licenses/by/4.0/.

New state record of *Strophidon sathete* Hamilton, 1822 (Family: Muraenidae) from Odisha, India

Suruliyandi Vijayan[1*], **Selvaraj Selvamurugan**[2]

ABSTRACT

The Muraenidae fishes, usually called moray eels, are shallow-water reef and fissure abiding eels. The morays on the planet which have a place with the 12 genera of the 2 subfamilies: Uropterygiinae and Muraeninae. This gathering of fishes is recognized from other eel families by their bigger mouth, more modest gill openings, and pectoral and pelvic balance non-attendance. Most species have a strong solid body and brown complexion pigmentation. Here, field survey conducted in the month of December 2023. Photographic record from Astaranga, Odisha in India. In this paper deals with slender giant moray (*Strophidon sathete* Hamilton, 1822) with their ecological and distribution status.

Keywords: *Strophidon sathete*, Muraenidae, Slender giant eel, New record, Odisha

1. INTRODUCTION

A genus *Strophidon*, Mcclelland was coined (1844) and it's belonging to (Anguilliformes: Muraenidae). These species belong to the family Murarnidae. This eel family is unique from others in that it has fewer gill holes, a huge mouth, and neither pelvic nor pectoral fins (Chen et al., 1994). The majority of species have robust muscular bodies with skin pigmentation dark. *Strophidon* species group was typically found living on the muddy bottom of the ocean and estuaries (Chen et al., 1994). Occasionally found in inner bays and rivers (Randall et al., 1990; Myers, 1999). During the early eel study undertaken in the Indo-Pacific regions, (Bohlke, 1997), (Bohlke, 2000) found 16 species that were split into two categories: Little brown unpattern morays and elongated brown unpattern morays, each with eight species. Afterwards, Mohapatra et al., (2018) established nine new species of eels. These are divided into two groups: Three new species belong to the little unpattern group, while six new species are part of the elongated unpattern group.

According to Huang et al., (2020), four species of *Strophidon* have been described globally: *S. dorsalis*, *S. sathete*, Hamilton, (1822); *S. tetraporus*, Huang et al., (2020); *S. ui*. Mohapatra et al., (2019) reported the description or documentation of eight brown unpattern morays from Indian seas, they are including viz. *Gymnothorax andamanensis* Mohapatra et al., (2019), *G. Indicus*, *G. mishrai*, *G. odishi* Mohapatra et al., (2018), *G. prolatus*, *G. visakhaensis*, *Strophidon dorsalis* and *S. sathete*, (Hamilton, 1822). A single

moray eel was inspected during our recent sampling expedition along India's southeast coast. The present paper describes a newly record species of *Strophidon sathete* in Astaranga, Puri (Dist.), Odisha.

2. MATERIAL AND METHODS

In December 2023, a field survey was carried out in Astaranga, Odisha. A slender giant moray was seen during the lading survey. The jetty is where fishing area imports place most frequently. The majority of the fishing have been collected from deep ocean regions. Inner bays were collected, along with a fisherman who shared information about this recently found specimen. This new record the *Strophidon sathete* is regarded as least concern (Mohapatra et al., 2019).

Material

One specimen, 179-191 cm in total length (TL), Bay of Bengal of Astaranga (Odisha), 12 December 2023 by Dr. S. Vijayan.

3. DESCRIPTION

Body very elongated, cylindrical, slightly compressed behind anus; head long with pores typical, three superorbital pores, four infraobital pores (Figure 1), six mandibular pores; mouth moderately; snout blunt and short (two times of eye diameter); anterior nostril with a short tube; posterior nostril above eye; lower jaw projecting slightly than upper jaw; in upper jaw, 5-6 intermaxillary teeth on each side, 5 median teeth (Figure 1); maxillary teeth biserial, an outer row of 14 short triangular teeth and an inner row of 5 tall depressible teeth; vomerine teeth uniserial 5 in number in lower jaw; dentary teeth biserial, an anterior inner row of 4-5 large teeth and an outer row of 23 smaller teeth; the origin of dorsal fin far at behind the pectoral pore; dorsal and anal fins confluent with caudal fin; pectoral and pelvic fins absent; anus located before midbody; tail much longer than preanal length.

Figure 1 Dorso lateral view of *Strophidon sathete* snout muscular bodies with skin pigmentation dark

Figure 2 A slender giant moray *Strophidon sathete*, position of infraorbital sensory pores, six mandibular pores and 179-191 cm in total length (TL), Bay of Bengal of Astaranga (Odisha).

Coloration

When fresh, body uniformly brown head, body and fins with unpattern coloration; dorsal, anal and caudal fin dark brown.

Distributions

Australia to Taiwan**,** India, Indo-West Pacific, Japan, Red Sea, South Africa and Bay of Bengal (Present study).

Conservation status

Least Concern (LC) in IUCN red list category (Accessed on 27-03-2024).

***Strophidon sathete* (Hamilton, 1822)**

(Figure 1 & 2) India, *Muraenophis sathete* Hamilton, 1822: (type locality: near Calcutta, India). *Strophidon sathete* Chen et al., (1994): (Taiwan) *Strophidon sathete* Bohlke, (1997): (Indo-Pacific) *Strophidon sathete* Bohlke, (2000): (Western Central Pacific) *Strophidon sathete* Myers, (1999): (Micronesia) *Strophidon sathete* Randall et al., (1990): (South China) *Strophidon sathete* Hatooka, (2013): (Japan).

4. OBSERVATIONS

A single species of *Strophidon sathete*, it's belonging to the family Muraenidae, was seen at Astaranga, Odisha. It was characterized by having unpatented body coloration, thin body, slightly rounded snout, two super-orbital pores, three infraorbital pores, and six mandibular pores. This species is distinguishable from a morphologically similar species, *S. dorsalis* inhabiting the Korean waters by having three infraorbital pores (vs. four in *S. dorsalis*), last infraorbital pore below an anterior part of the eye (vs. below a posterior part of the eye), body depth 1.8-3.1 in total length (vs. 3.1-4.2), and total vertebrae 179-191 (vs. 154-167). We add *Strophidon sathete* to the India fish fauna were added a new record of this species in Odisha (Figure 1 & 2).

The present specimen, belonging to the family Muraenidae, is characterized by having body very elongated, cylindrical, slightly compressed behind anus, dorsal and anal fins confluent with caudal fin, pectoral and pelvic fins absent, anus located before midbody,

tail much longer than preanal length and infraorbital sensory pore located below posterior part of eye. The morphological characteristics of present specimen were compared with those in the previous reports of *Strophidon sathete* Hatooka, (2013), Loh et al., (2015), which revealed that all morphological traits examined were well matched with those of *Strophidon sathete*. That is, *S. sathete* has a sensory pore below posterior part of eye, while *S. dorsalis* also present. We need more survey of moray eel in different types and new species of in this area.

Conflicts of interests:
The authors declare that there are no conflicts of interests.

Funding:
The study has not received any external funding.

Ethical approval
The Animal ethical guidelines are followed in the study for species observation & identification.

Data and materials availability
All data associated with this study are present in the paper.

REFERENCES

1. Bohlke EB. Notes on the identity of elongate unpatterned Indo-Pacific morays, with description of a new species (Muraenidae, Subfamily Muraeninae). Proc Acad Nat Sci Phila 1997; 147:89–109.
2. Bohlke EB. Notes on the identity of small, brown, unpatterned Indo-Pacific moray eels, with descriptions of three new species (Anguilliformes: Muraenidae). Pac Sci 2000; 54(4):395–416.
3. Chen HM, Shao KT, Chen CT. A review of the muraenid eels (Family Muraenidae) from Taiwan with descriptions of twelve new records. Zool Stud 1994; 33(1):44–64.
4. Hatooka K. Muraenidae, moray eels. In: Nakabo T (ed.), Fishes of Japan with pictorial keys to the species, 3rd ed. Tokai Univ. Press, Kanagawa, Japan, 2013; 244–261.
5. Huang W, Mohapatra A, Thu PT, Chen HM, Liao, TY. A review of genus *Strophidon* (Anguilliformes: Muraenidae), with description of a new species. J Fish Biol 2020; 97(5):1462–1480. doi: 10.1111/jfb.14514
6. Loh KH, Shao KT, Ho HC, Lim PE, Chen HM. A new species of moray eel (Anguilliformes: Muraenidae) from Taiwan, with comments on related elongate unpatterned species. Zootaxa 2015; 4060:030–040. doi: 10.11646/zootaxa.4060.1.5
7. Mohapatra A, Kiruba-Sankar R, Praveenraj J, Mohanty SR. A new short brown unpatterned moray eel *Gymnothorax andamanensis* (Muraenidae: Muraeninae) from Andaman waters, India. Zootaxa 2019; 4661(1):189–196. doi: 10.11646/zootaxa.4661.1.11
8. Mohapatra A, Mohanty SR, Smith DG, Mishra SS, Roy S. *Gymnothorax odishi* sp. nov. (Muraenidae: Muraeninae), a short brown unpatterned moray eel from Bay of Bengal, India. Zootaxa 2018; 4420(1):123–130.
9. Myers RF. Micronesian reef fishes: a comprehensive guide to the coral reef fishes of Micronesia, 3rd revised and expanded edition. Coral Graphics, Barrigada, Guam 1999; 330.
10. Randall JE, Allen GR, Steene RC. Fishes of the Great Barrier Reef and Coral Sea. University of Hawaii Press, Honolulu, Hawaii, 1990; 506.