

Range Extension of a Predatory Sea Snail *Sulcerato recondita* (Melvill & Standen, 1903) in India (Gastropoda, Eratoidea)

Abhijna Ghosh¹, Amit Mukhopadhyay¹, Basudev Tripathy², and Sheikh Sajan^{1,*}

¹ Malacology Division, Zoological Survey of India, Prani Vigyan Bhawan, M Block, New Alipore, Kolkata 700053, West Bengal, India.

² Western Regional Centre, Zoological Survey of India, Pune 411044, Maharashtra, India.

* sksajan.sajan@gmail.com

ABSTRACT A predatory sea snail *Sulcerato recondita* (Melvill & Standen, 1903) previously reported from South Africa and Gulf of Oman, is reported for the first time from Gulf of Kachchh in India. The detailed description along with an illustration, and information on distribution of the species is provided herein. The nearest distribution record for *S. recondita* is from Fujairah coast in United Arab Emirates, which is ~ 1500 km from the present location of its reporting in India.

KEY WORDS Caenogastropoda, predatory sea snails, distribution, new record, Gulf of Kachchh, India

INTRODUCTION

Eratoidea, a family of small predatory sea snails is assigned to the superfamily Velutinoidea (Ponder & Lindberg, 2020), with 10 valid genera and having around 155 species, that are widely distributed across the globe (MolluscaBase eds. 2022). The genus *Sulcerato*, with six valid nominal species is reported to have been mostly restricted to Indian and Pacific Oceans. *Sulcerato recondita* (Figure 1) is a distinct species, restricted to Western Indian Ocean, Western Arabian sea and Red Sea (Cate, 1977; Liltved, 2000; Fehse, 2013). However, no species belonging to the genus *Sulcerato* has ever been reported from Indian waters (Ray, 1948; Subba Rao, 2003; Dey, 2016).

As part of the Annual Program of Research, is assigned to the Zoological Survey India (ZSI) by Ministry of Environment, Forest and Climate Change, Government of India. The survey was conducted along the Shore of Pirotan Island in Marine National Park, Gulf of Kachchh, Gujarat during 2016–2017. Seven dead shells were

beach collected and identified as *S. recondita* based on the original descriptions by Bosch *et al.* (1995), and Fehse (2013). The identified shells were deposited in the National Zoological Collection of Zoological Survey of India (NZSI), Kolkata (India) for future reference.

Family Eratoidea Gill, 1871

***Sulcerato recondita* (Melvill & Standen, 1903)**, was described from “Gulf of Oman, lat. 24°58’ N., long. 56°54’ E., 156 fathoms” (Melvill & Standen, 1903: 302), and reported from Gulf of Oman, Israel (Red Sea), KwaZulu-Natal (RSA), Maldives, Mozambique, Reunion, Tanzania (Cate, 1977; Liltved, 2000; Fehse, 2013).

New Record. Gulf of Kachchh, Pirotan Island, Jamnagar district, Gujarat (22° 35’ 54.79” N, 69° 57’ 47.88” E), (NZSI M.35407/10) (*leg.* A. Mukhopadhyay, 26 October 2016). Seven dead shells (See Figure 1).

Keys to the species of Eratoidea found in India:

Shell small, (height 3-4.5 mm) and granules over whole shell with forming short axial riblets, and presence of dorsal longitudinal groove *Eratoena sulcifera* (Gray in Sowerby I, 1832)

Shell small, (height 2-5 mm) relatively minutely pustulated or wrinkled throughout; spire elevated and dorsal sulcus mostly absent, columellar dentition coarser posteriorly obscured *Alaerato angistoma* (Sowerby I, 1832)

Shell small, (height 4.8-5.2 mm) without granulation, apical whorl obtuse, spire nipple like, lower half of the columella lip either weakly denticulate *Sulcerato recondita* (Melvill & Standen, 1903)

Description. Shell small (Shell height 4.8-5.2 mm, Shell width 2.8-3.2 mm), shiny, solidly formed; globose-ovate; body whorl smooth and spotless, apical whorl obtuse, spire nipple like; whorls 5½ in number; body whorl large covers almost entire length of the shell; aperture almost straight and slightly shorter than the length of the shell, narrow and slightly curved; Outer lip slightly extravagant with numerous minute denticulate, lower half of the columella lip either weakly denticulate, or becoming obsolete.

Remarks. Fehse (2013), indicated that, the color varies from white to light green and sometimes light brown and the inflation of the shell and the height of the spire vary.

DISCUSSION

Ray (1948) revised the Cypraeacea specimens housed in the NZSI and reported only *Proterato sulcifera* race *smithi* Schilder, 1933 from Bombay coast. Recently, Dey (2016) reported *Alaerato angistoma* (Sowerby I, 1832) from Maharashtra and *Eratoena sulcifera* (Gray in Sowerby I, 1832) of Eratoidea (=Eratoinae) from Andaman and Nicobar Islands, India. Nevertheless, the study of Velutinoidea (=Cypraeacea) from India is poor due to inadequate collections from throughout the coastal areas. The type locality of *S. recondita* is Gulf of Oman, and reported from Indian Ocean. Interestingly, it is noticed that the faunal composition of Marine National Park, Gujarat

closely resembles that of Persian Gulf, Gulf of Arabian and Red Sea (Dey, 2016; Mukhopadhyay *et al.* 2019). Thus, the presence of *S. recondita* in Gulf of Kachchh Marine National Park is not surprising, and this record extends the known distribution range of the species.

ACKNOWLEDGEMENTS

The authors are grateful to the Director, Zoological Survey of India for providing necessary facilities and allocated funds for the studies through Annual Program of Research, MoEFCC, Government of India. Staff of the Mollusca section of the Zoological Survey of India for their help during the material examined. Sheikh Sajan is supported by a ZSI (Zoological Survey of India) Post-Doctoral Research Fellowship, and also like to thanks his wife Rizwana Firdaush for her kind support.

LITERATURE CITED

- Bosch, D.T., S.P. Dance, R.G. Moolenbeek & P.G. Oliver. 1995.** Seashells of Eastern Arabia. Motivate Publishing, Dubai.
- Cate, C.N. 1977.** A Review of the Eratoidea (Mollusca: Gastropoda). *The Veliger* 19(3):341-366, 366a + 366b.
- Dey, A. 2016.** Catalogue of Marine Mollusca (Polyplacophora and Gastropoda):1-687. Published by the Director, Zoological Survey of India, Kolkata.

- Fehse, D. 2013.** Contributions to the knowledge of the Eratoidea. VIII. Eratoidea of Mozambique and Madagascar. *Neptunea* 12(1):10-21.
- Liltved, W.R. 2000.** Cowries and their relatives of southern Africa. A study of the southern African Cypraeacean and Velutacean gastropod fauna. Gordon Verhoef, Seacomber Publications, 2nd enlarged edition: 1-224, 298 + num. unnumb. text-fig. & Supplement [July 2001] p.225-232.
- Melville, J.C. & R. Standen. 1903.** Descriptions of sixty-eight new Gastropoda from the Persian Gulf, Gulf of Oman, and North Arabian Sea, dredged by Mr. F. W. Townsend, of the Indo-European Telegraph Service, 1901–1903. *Annals and Magazine of Natural History*. (7) 12:289-324, pls 20-23., <https://www.biodiversitylibrary.org/page/29993047>
- MolluscaBase eds. 2022.** MolluscaBase. *Sulcerato* Finlay, 1930. Accessed through: World Register of Marine Species at: <https://www.marinespecies.org/aphia.php?p=taxdetails&id=596967> on 2022-06-17
- Mukhopadhyay, A., B. Tripathy, S. Sajan & A. Ghosh. 2019.** Two new records of minute marine gastropods from Marine National Park, Gulf of Kachchh in India. *Strombus* 25(1-2):5-9.
- Ponder, W.F. & D.R. Lindberg. 2020.** [in Ponder W.F., Lindberg D.R. & Ponder J.M.] *Biology and evolution of the Mollusca*, vol. 2. CRC Press, Boca Raton. xx + 870 pp. <https://doi.org/10.1201/9781351115254>
- Ray, H.C. 1948.** Revision of Cypraeacea in the Collection of the Zoological Survey of India. I. The Families Triviidae, Eratoidea and Pediculariidae. *Records of the Zoological Survey of India*. 46(1-4):183-213. <https://doi.org/10.26515/rzsi/v46/i1-4/1948/162194>
- Subba Rao, N.V. 2003.** Indian Seashells (Part I), Polyplacophora and Gastropoda. *Records of the Zoological Survey of India, Occasional Paper* 192:1-416.

Cite as:

Ghosh, A., A. Mukhopadhyay, B. Tripathy, and S. Sajan. 2023. Range Extension of a Predatory Sea Snail *Sulcerato recondita* (Melville & Standen, 1903) in India (Gastropoda, Eratoidea). *The Festivus* 55(1):37-39. <http://doi:10.54173/F55137>



Figure 1. *Sulcerato recondita*, approximately 4.5 mm in length. First report of this species from India. Beach collection on Pirotan Island in Marine National Park, Gulf of Kachchh, Gujarat, India, as part of Zoological Survey of India.