

Note on New Record of Two Species of Scleractinian Corals to Indian Waters from Great Nicobar Island

¹Tamal Mondal, ¹C. Raghunathan and ²Kailash Chandra

¹Zoological Survey of India, Andaman and Nicobar Regional Centre, National Coral Reef Research Institute,
Haddo, Port Blair-744 102, Andaman and Nicobar Islands, India

²Zoological Survey of India, M-Block, New Alipore, Kolkata- 700 053, West Bengal, India

Abstract: Great Nicobar Island is one of the largest islands of Andaman and Nicobar, harbors rich biodiversity. Two species of scleractinian corals viz., *Acroporabranchi* Riegl, 1995 under the family Acroporidae and *Pocillopora molokensis* Vaughan, 1907 under the family Pocilloporidae were recorded as new distributional record to Indian waters from Great Nicobar Island. The present paper deals with the taxonomic features and distribution of these two newly recorded species.

Key words: Scleractinian Coral • New Record • Great Nicobar Island • India

INTRODUCTION

The studies on global scleractinian corals was initiated during 16th century with basic conventional ideas of classification while the gradual revision of classification system is still undergoing to reflects the new molecular results for the better understanding the systematics [1, 2]. Scleractinians are known as the most recent established evolutionary stage of Hexacorallia and form the extremely complex and diverse habitat in marine ecosystem [3-7]. The coral reef ecosystem is defined as biogenic and self-sustained habitat for the aggregation of species diversity [8]. The coral reef ecosystem provides widespread services to the society along with the strengthening and configuring biodiversity directly or indirectly and harbors the significant niche along with the associated faunal communities [9, 10]. Andaman and Nicobar are the scattered mountain chain of 572 oceanic islands located between Bay of Bengal and Andaman Sea in Indian Ocean with a total length of around 900 km as prehistoric continuation of the Arakan Yoma of Burma in north and Achin Head of Sumatra in south before 100 million years ago during Upper Mesozoic Period due to geographical alteration [11-13]. Nicobar group of islands represents a total of 24 islands while Great

Nicobar Island, the southern-most island, is the largest island among them with the landmass of 1044 sq. km. [13, 14]. The continental shelf region of this island provides enormous scope for the scleractinian corals for the sustainable development with diversified species [14]. The present paper dealt with the new record of two species of scleractinian corals in Indian waters from Great Nicobar Island.

MATERIALS AND METHODS

Surveys were conducted during February 2016 to explore the scleractinian coral species at Great Nicobar Island by employing Self-Contained Underwater Breathing Apparatus (SCUBA) diving. *In-situ* pictures of the coral with details of morphological features were taken using Canon Power Shot G15. Identification of species was made in conjunction with Veron and Pichon [15], Veron and Wallace [16], Wallace [17] and Veron [18].

RESULTS

Two species of scleractinian corals were recorded as new to Indian waters from Andaman and Nicobar Islands on the basis of their taxonomical studies and earlier distributional status.

Family: ACROPORIDAE Verrill, 1902

Genus: *Acropora* Oken, 1815

1. *Acropora branchi* Riegl, 1995 (Fig. 1)

Material Examined: Four colonies were observed at B/Quarry in Great Nicobar Island (Lat. 07°00.419'N; Long. 93°56.528'E) at the depth of 9 m on 12.ii.2016.

Description: Colonies are extensively flat due to the highly fused basal plates. Colonies are sometimes single solid plates covered with incipient axial corallites. Otherwise they have short upright branchlets which are usually widely spaced. Axial corallites are indistinct from radial corallites. Radial corallites have thick lips. Colonies are usually green to brown in colour.

Occurrence in A and N Islands: Rare.

IUCN Red List Category and Criterion: Vulnerable, 2016.

Distribution: *India:* Andaman and Nicobar Islands; *Elsewhere:* Australia, Eritrea, Fiji, French Polynesia, Guam, Indonesia, Kiribati, Marshall Islands, Mauritius, Micronesia, Federated States of Myanmar, Nauru,

New Caledonia, Norfolk Island, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Réunion, Saudi Arabia, Solomon Islands, Sri Lanka, Thailand, Tuvalu, Vanuatu, Wallis and Futuna and Yemen.

Family: POCILLOPORIDAE Gray, 1842

Genus: *Pocillopora* Lamarck, 1816

2. *Pocilloporamolokensis* Vaughan, 1907 (Fig. 2)

Material Examined: Eight colonies were observed at B/Quarry in Great Nicobar Island (Lat. 07°00.419'N; Long. 93°56.528'E) at the depth of 4 m on 12.ii.2016.

Description: Colonies are small in structure. The branchlets are short and compact in organization. The branches are radiated towards the down side at the terminal regional of the colony. Verrucae are usually equal in size and mostly found on the upper surfaces of the branches. Colonies are pale brown in colour.

Occurrence in A and N Islands: Rare.

IUCN Red List Category and Criterion: Data Deficient, 2016.

Distribution: *India:* Andaman and Nicobar Islands; *Elsewhere:* United States.



Fig. 1: Colony of *Acropora branchi* Riegl, 1995 at *in-situ* condition



Fig. 2: Colony of *Pocillopora molokensis* Vaughan, 1907 at *in-situ* condition

DISCUSSIONS

Coral reef study in Nicobar Islands was initiated by Sewell [19] and Sewell [20]. However, the mid of 19th century is considered as the initial era of coral reef research though the taxonomical investigation from Nicobar region of India [13, 21, 22]. The ever emerging ecological attributes of coral reef ecosystem took a significant role towards the scientific communities of the world to emphasize studies on the scleractinian taxonomy to know them in a better way while the taxonomic studies of Indian corals were reinitiated by the pioneering works of Pillai [22-24], Scheer and Pillai [25], Reddiah [26], Pillai and Patel [27] and Pillai and Jasmine [28] and the investigation includes the Zoological Survey of India during the late 20th century. Prolonged exploratory studies were carried out in Andaman and Nicobar Islands to document the species along with their health monitoring and it resulted a total of 579 species [29]. A total of 173 species of scleractinian corals under 14 families were recorded from Great Nicobar Island on the basis of recent study [14] while 6 species of scleractinian corals were

recorded as the new distributional record to India waters from this island [30, 31]. Identification of two species such as *Acropora branchi* Riegl, 1995 belongs to the family Acroporidae and *Pocillopora molokensis* Vaughan, 1907 under the family Pocilloporidae will enhance the scleractinian database of Great Nicobar Island andaman and Nicobar Islands and also India to symbolize the healthy and sustainable marine biodiversity. More explorations are required to document the coral reef ecosystem of Great Nicobar Island.

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