

Accepted Manuscript

Clade C *Symbiodinium* in dominant sea anemones off Qeshm and Hengam islands in the northern Persian Gulf Iran

Sanaz Moghaddam, Mohammad Reza Shokri, Hassan Rajabi-Maham

PII: S2352-4855(17)30039-7
DOI: <https://doi.org/10.1016/j.rsma.2018.06.009>
Reference: RSMA 395

To appear in: *Regional Studies in Marine Science*

Received date : 11 February 2017

Revised date : 9 February 2018

Accepted date : 22 June 2018

Please cite this article as: Moghaddam S., Shokri M.R., Rajabi-Maham H., Clade C *Symbiodinium* in dominant sea anemones off Qeshm and Hengam islands in the northern Persian Gulf Iran. *Regional Studies in Marine Science* (2018), <https://doi.org/10.1016/j.rsma.2018.06.009>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Running head: Zooxanthellae in sea anemones of the Persian Gulf

Title: Clade C *Symbiodinium* in dominant sea anemones off Qeshm and Hengam islands in the northern Persian Gulf, Iran

SANAZ MOGHADDAM¹, MOHAMMAD REZA SHOKRI^{*1}, AND HASSAN RAJABI-MAHAM¹

¹Faculty of Life Sciences and Biotechnology, Shahid Beheshti University, G.C., Evin, Tehran 1983963113, IR Iran

*Corresponding author: Tel.: +98 21 2990 2723; Fax: +98 21 2243 1664.

E-mail address: M_Shokri@sbu.ac.ir, Shokri.mr@gmail.com (M. R. Shokri)

ABSTRACT

This study identified symbiont algae coexisting with three sea anemones including bubble-tip (*Entacmaea quadricolor*), carpet (*Stichodactyla haddoni*) and drilling (*Anthopleura artemisia*) anemones off Qeshm and Hengam islands, in the northern Persian Gulf, Iran. Sea anemones were collected from intertidal sandy flat and three meters subtidal areas. The results showed that all sea anemones contained clade C *Symbiodinium*. Advantages provided by clade C, have encouraged sea anemones in intertidal and subtidal areas to harbor clade C rather than clade D that has shown to have negative effects on the energetics of the reef corals by reducing their fitness. Given the prevailing harsh environmental conditions with regard to warm water (exceeding 36°C in summers) and salinity (up to ~50‰) in the Persian Gulf, it seems that both *Symbiodinium* and the sea anemones are locally adapted. The findings from the present study suggest that ambient environmental parameters might play a key role in dictating sea anemones to host a symbiotic alga preferably the type that increases their fitness.

Keywords: Anthozoa, zooxanthellae, *Symbiodinium*, symbiotic dinoflagellate, host specificity

Download English Version:

<https://daneshyari.com/en/article/8872493>

Download Persian Version:

<https://daneshyari.com/article/8872493>

[Daneshyari.com](https://daneshyari.com)