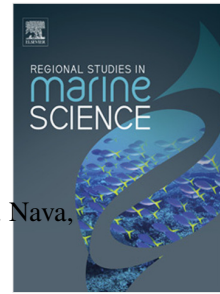


Accepted Manuscript

Size structure and possible bleaching susceptibility of mushroom corals in the Philippines following a bleaching event

Giannina Nicole R. Feliciano, Leah Marie F. Gagalac, Aurelia Maria Cecilia G. Nava, Wilfredo Y. Licuanan



PII: S2352-4855(18)30034-3
DOI: <https://doi.org/10.1016/j.rsma.2018.09.003>
Reference: RSMA 422

To appear in: *Regional Studies in Marine Science*

Received date : 3 February 2018
Revised date : 1 September 2018
Accepted date : 7 September 2018

Please cite this article as: Feliciano G.N.R., Gagalac L.M.F., Nava A.M.C.G., Licuanan W.Y., Size structure and possible bleaching susceptibility of mushroom corals in the Philippines following a bleaching event. *Regional Studies in Marine Science* (2018), <https://doi.org/10.1016/j.rsma.2018.09.003>

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.

1 **Size structure and possible bleaching susceptibility of mushroom corals in the Philippines following**
2 **a bleaching event**

3 Giannina Nicole R. Feliciano ^{a,*}, Leah Marie F. Gagalac ^a, Aurelia Maria Cecilia G. Nava ^b, and Wilfredo
4 Y. Licuanan ^{a,b}

5 ^aBr. Alfred Shields FSC Ocean Research Center, De La Salle University, 2401 Taft Avenue, Malate,
6 1004 Manila, Philippines

7 ^bBiology Department, De La Salle University, 2401 Taft Avenue, Malate, 1004 Manila, Philippines

8 * Corresponding author (E-mail address: grfeliciano1@gmail.com)

9

10 **ABSTRACT**

11 The extent and severity of mass coral bleaching events vary among geographic locations and
12 bleaching response varies among coral genera. Mushroom corals (Fungiidae) are known to occur in the
13 tropical Indo-Pacific, where they can form dense multi-species assemblages. This offers opportunities to
14 study interspecific variation in bleaching susceptibility during mass bleaching events. This study assesses
15 bleaching in discoidal mushroom corals of several genera in shallow (2 to 6 m) areas of Toroso Reef in
16 Talim Bay, Luzon Island, Philippines during the 2010 mass coral bleaching event. Bleaching condition
17 and assemblage size structure were determined through counts and diameter measurements of mushroom
18 corals from transect photographs taken during and after (May and October 2010) the bleaching event.
19 Bleaching occurrences increased between months and the mean diameter of the assemblage was
20 significantly larger in October than in May, where mortality of smaller bleached individuals could have
21 positively skewed the size structure of the assemblage between months. If-then hypotheses, using
22 isometric growth and bleaching condition as variables, were tested to determine possible fates of the
23 assemblage between May and October. While effects of bleaching on an individual level were not
24 deduced in this study, results indicate that unbleached mushroom corals in the May assemblage bleached
25 and grew isometrically, remained unbleached and did not grow, or bleached and recovered but did not
26 grow. These findings contribute to the understanding of how mushroom corals respond to bleaching and

Download English Version:

<https://daneshyari.com/en/article/11033245>

Download Persian Version:

<https://daneshyari.com/article/11033245>

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