

**MARINE MACROBENTHIC ALGAE OF TAWI-TAWI, PHILIPPINES:
SPECIES COMPOSITION, DISTRIBUTION,
DIVERSITY AND ABUNDANCE**

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APPROVAL SHEET

This thesis entitled “**MARINE MACROBENTHIC ALGAE OF TAWI-TAWI, PHILIPPINES: SPECIES COMPOSITION, DISTRIBUTION, DIVERSITY AND ABUNDANCE**” prepared and submitted by **ROSALINDA M. PUIG-SHARIFF** in fulfilment of the requirements for the degree of MASTER OF SCIENCE IN MARINE BIOLOGY has been examined and is recommended for acceptance and approval for ORAL EXAMINATION.

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ABSTRACT

A study on Species composition, distribution, diversity and abundance of marine macrobenthic algae in Tawi-Tawi was carried out between November 2013 to September 2014 at the littoral zones of seven localities of Tawi-Tawi province, namely; Bongao, Sanga-Sanga, Sibutu, Simunul, Sitangkai, Tandubas and South Ubian. A total of 79 species were identified which is distributed as follows; 35 species of Phylum Chlorophyta, 31 species of Phylum Rhodophyta and 13 species of Phylum Ochrophyta in all sites. Of these, 34 species are new records for the Tawi-Tawi marine macrobenthic algae composed of 10 species of chlorophytes, 9 species of ochrophytes and 15 species of rhodophytes. While there were 79 species identified in this study, this is less diverse compared to the report of Silva (1987) where 103 species were listed but this is 17 % more diverse than what Trono (1997) reported. There was also a difference in the species composition. About 60 % of the species, mostly red algae reported by Silva (1987), and 32 % by Trono (1997) were absent in this study. Jaccard Similarity Index shows that majority of species were not equally represented in each of the site. The most similar study sites were between Sanga-Sanga and Bongao. As to their distribution only nine (9) species were shared across all study sites namely: *Boergesenia forbesii* (Harvey) Feldmann, *Boodlea composita* (Harvey) Brand, *Caulerpa sertularoides* (S.G. Gmelin) Howe, *Ulva clathrata* (Roth) C. Agardh, *Valonia ventricosa* C. Agardh, *Gracilaria coronopifolia* J. Agardh, *Gracilariopsis heteroclada* (Zhang & Xia), *Kappaphycus alvarezii* (Doty) Doty, and *Palisada perforata* (Bory de Saint-Vincent). The relative abundance in terms of percent (%) cover of the macrobenthic algae in the seven (7) study sites of Tawi-Tawi varied among sites. The most widely distributed and relatively abundant species of marine macrobenthic algae during this study was *Palisada perforata*. It dominated in four out of seven sampling sites based on percent (%) cover. Generalized Linear Model (GLM) showed that out of seven sites only two had significant relationship between the mean percent cover and study sites. These two study sites were Sibutu ($p=0.0311$) and Simunul ($p=0.0328$).

TABLE OF CONTENTS

	Page Number
TITLE PAGE	i
APPROVAL SHEET	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF APPENDICES	xiii
CHAPTER I: INTRODUCTION	1
Objectives of the Study	3
Significance of the Study	4
Review of Related Literature	5
Scope and Limitations of the Study	8
CHAPTER II: MATERIALS AND METHODS	
A. Study Site	10
B. Collection, Sorting, and Preservation of Specimens	16
C. Identification and Classification	18
D. Determination Species Abundance	18
E. Determination of Salinity and Temperature	19
F. Statistical Analysis	19

CHAPTER 111: RESULTS AND DISCUSSION	
Species Composition and Distribution	21
Taxonomy of Marine Macrobenthic Algae from Tawi-Tawi	
Phylum Chlorophyta	26
Phylum Ochrophyta	61
Phylum Rhodophyta	75
Diversity	104
Abundance	110
CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS	116
LITERATURE CITED	118
APPENDICES	123
CURRICULUM VITAE	138

List of Tables

Table No.	Title	Page No.
1	Indices of the degree of macroalgae cover (Saito and Atobe, 1970)	19
2	Species composition and distribution of marine macrobenthic algae in Tawi-Tawi, Philippines from November 2013 to September 2014.	21
3	New records of marine macrobenthic algae and their distribution at Tawi-Tawi, Philippines.	25
4	Shannon and Simpson diversity index of macrobenthic algae in seven study sites in Tawi-Tawi.	106
5	Similarity indices of macrobenthic algae among study sites.	107
6	Average salinity (ppt) and temperature (°C) of the different study sites taken at different times between July 2014 to September 2014.	110
7	Relative percent (%) cover per m ² of marine macrobenthic algae in seven study sites of Tawi-Tawi	111

List of Figures

Figure No.	Title	Page No.
1	Map of Tawi-Tawi, Philippines with sampling sites designated by red numbers.	10
2	Aerial view of Bongao Island. Tawi-Tawi, Philippines.	11
3	Portion of the intertidal area of Bongao, Tawi-Tawi.	11
4	Sanga-Sanga intertidal area with huge rocks at the upper portion.	12
5	Portion of intertidal zone in Sibutu with houses built along the upper intertidal area.	13
6	Stilt houses built in the intertidal zone of Simunul, Tawi-Tawi, Philippines.	14
7	View of Sitangkai Island from a distance.	15
8	Stilt houses in Sitangkai built at the intertidal area.	15
9	Plant Press.	18
10	Herbarium sheet with plant specimen.	18
11	<i>Ulva clathrata</i> (Roth) C. Agardh, floating along with other algal species in intertidal area.	28
12	<i>Ulva intestinalis</i> Linnaeus, natural habit.	29
13	<i>Ulva lactuca</i> Linnaeus, habit.	30
14	<i>Ulva reticulata</i> Forsskål, on sandy substrate with <i>Palisada perforata</i> in shallow water of Sanga-Sanga, Bongao, Tawi-Tawi.	31
15	<i>Anadyomene plicata</i> C.Agardh, habit.	32
16	<i>Chaetomorpha crassa</i> (C.Agardh) Kützing, on rocky substrate in shallow water of Bongao, Tawi- Tawi.	33

17	<i>Boergesenia forbesii</i> (Harvey) Feldmann, attached to a solid substrate at lower intertidal zone.	34
18	<i>Boodlea composita</i> (Harvey) F.Brand, growing with seagrass at lower intertidal area.	35
19	<i>Dictyosphaeria cavernosa</i> (Forsskål) Børgesen.	36
20	<i>Dictyosphaeria versluysii</i> Weber-van Bosse, natural habit.	37
21	<i>Valonia aegagropila</i> C.Agardh, natural habit.	38
22	<i>Valonia fastigiata</i> Harvey ex J.Agardh, herbarium specimen.	39
23	<i>Valonia ventricosa</i> J.Agardh, natural habit.	40
24	<i>Caulerpa lentillifera</i> J.Agardh, habit (herbarium specimen).	41
25	<i>Caulerpa chemnitzia</i> (Esper) J.V.Lamouroux, habit.	43
26	<i>Caulerpa racemosa</i> (Forsskål) J.Agardh, found in calm, relatively turbid waters on sandy to muddy substrate.	44
27	<i>Caulerpa serrulata</i> (Forsskål) J.Agardh, on rocky substrate among other macrobenthic algae.	45
28	<i>Caulerpa sertularioides</i> (S.G.Gmelin) M.A.Howe, habit.	46
29	<i>Caulerpa cupressoides</i> (Vahl) C.Agardh	47
30	<i>Caulerpa</i> sp. 1, a) natural habit, b) habit (herbarium specimen).	47
31	<i>Codium bartlettii</i> C.K.Tseng & W.J.Gilbert, habit.	48
32	<i>Codium edule</i> P.C.Silva, habit.	49
33	<i>Halimeda discoidea</i> Decaisne, a) habit, b) growing on reef edge exposed to strong water movement.	50
34	<i>Halimeda incrassata</i> (J. Ellis) J. Lamouroux, habit (herbarium specimen)	51
35	<i>Halimeda macroloba</i> Decaisne	52
36	<i>Halimeda macrophysa</i> Askenasy, a) habit, b), in lower intertidal area	53

37	<i>Halimeda opuntia</i> (Linnaeus) J.V.Lamouroux, habit.	54
38	<i>Halimeda simulans</i> M.A.Howe, habit	55
39	<i>Avrainvillea erecta</i> (Berkeley) A.Gepp & E.S.Gepp, habit.	56
40	<i>Chlorodesmis fastigiata</i> (C.Agardh) S.C.Ducker, natural habit.	57
41	<i>Tydemania expeditionis</i> Weber-van Bosse, attached to rocks in lower intertidal area.	57
42	<i>Bornetella oligospora</i> Solms-Laubach, natural habit.	58
43	<i>Bornetella sphaerica</i> (Zanardini) Solms-Laubach, natural habit.	59
44	<i>Halicoryne wrightii</i> Harvey, growing in shallow intertidal area.	60
45	<i>Acetabularia dentata</i> Solms-Laubach, attached to rocks in shallow water	60
46	<i>Dictyota mertensii</i> (Martius) Kützing, a) herbarium specimen b) natural habit.	62
47	<i>Lobophora variegata</i> (J.V.Lamouroux), a) herbarium specimen, b) natural habit	63
48	<i>Padina boryana</i> Thivy, a)herbarium specimen, b) natural habit.	64
49	<i>Padina australis</i> Hauck, natural habit.	64
50	<i>Colpomenia sinuosa</i> (Mertens ex Roth) Derbès & Solier, herbarium specimen and natural habit.	65
51	<i>Hydroclathrus clathratus</i> (C. Agardh) Howe, natural habit.	66
52	<i>Hormophysa cuneiformis</i> (J.F.Gmelin) P.C.Silva, natural habit.	68
53	<i>Sargassum dotyi</i> Trono, habit.	69
54	<i>Sargassum ilicifolium</i> (Turner) C.Agardh, habit.	70
55	<i>Sargassum polycystum</i> C.Agardh, habit.	71
56	<i>Sargassum turbinarioides</i> Grunow, natural habit..	72
57	<i>Turbinaria conoides</i> (J.Agardh) Kützing, natural habit..	73
58	<i>Turbinaria ornate</i> (Turner) J.Agardh, a) habit, b) in shallow intertidal area	74

59	<i>Actinotrichia fragilis</i> , attached to rock in intertidal area.	76
60	<i>Galaxaura rugose</i> J.V.Lamouroux, in shallow water attached to rock.	78
61	<i>Gelidiella acerosa</i> (Forsskål) Feldmann & G.Hamel, a) herbarium specimen, b) natural habit.	79
62	<i>Halymenia dilatata</i> Zanardini,, a) herbarium specimen, b) natural habit.	80
63	<i>Halymenia durvillei</i> Bory de Saint-Vincent, natural habit.	81
64	<i>Amphiroa fragilissima</i> (Linnaeus) J.V.Lamouroux,, attached to rock in shallow water	82
65	<i>Mastophora rosea</i> C.Agardh) Setchell,, forming purple clumps on rocks in wave-exposed areas.	83
66	<i>Portieria hornemannii</i> (Lyngbye) P.C.Silva, habit	84
67	<i>Titanophora weberae</i> , natural habit.	85
68	<i>Gracilaria coronopifolia</i> , J.Agardh, a) habit, b) among seagrasses species in shallow intertidal area.	86
69	<i>Gracilaria gigas</i> Harvey, habit	87
70	<i>Gracilaria salicornia</i> , (C.Agardh) E.Y.Dawson a) in calm water on sandy- corally substrate, b) cystocarpic plant.	88
71	<i>Gracilaria textorii</i> (Suringar) De Toni, attached to rock on lower intertidal area.	89
72	<i>Gracilaria</i> sp. 1, on sandy substrate in intertidal zone.	89
73	<i>Gracilaria</i> sp. 2, on sandy-corally substrate in upper intertidal area.	90
74	<i>Gracilaria</i> sp. 3, a) habit, b) in shallow intertidal area among seagrasses.	91
75	<i>Gracilaria</i> sp. 4, habit.	91
76	<i>Gracilaria</i> sp. 5, a) habit, b) cystocarpic plant attached to rock on lower intertidal area of Pahut, Bongao, Tawi-Tawi.	92

77	<i>Gracilariopsis heteroclada</i> J.F.Zhang & B.M.Xia, (a) habit, (b) in clump.	93
78	<i>Eucheuma denticulatum</i> (N.L.Burman) F.S.Collins & Hervey, at lower intertidal zone.	94
79	<i>Kappaphycus alvarezii</i> (Doty) Doty, a) cystocarpic plant, b) on sandy- coral substrate at the lower intertidal zone of Bongao.	95
80	<i>Hypnea cornuta</i> (Kützting) J.Agardh, (a) habit, (b) portion of branch with stellate branchlet.	97
81	<i>Hypnea pannosa</i> J.Agardh, habit.	97
82	<i>Hypnea valentiae</i> (Turner) Montagne, habit.	98
83	<i>Hypnea</i> sp. 1, natural habit	99
84	<i>Acanthophora spicifera</i> (M.Vahl) Børgesen, natural habit.	100
85	<i>Laurencia cartilaginea</i> Yamada, habit.	101
86	<i>Laurencia</i> sp. 1, habit.	101
87	<i>Palisada perforata</i> (Bory de Saint-Vincent) K.W. Nam, (a) natural habit, (b) portion of branch.	102
88	<i>Tolypiocladia glomerulata</i> (C.Agardh) F.Schmitz, natural habit.	103
89	<i>Rhodymenia</i> sp., habit.	104
90	Number of species of marine macrobenthic algae in Tawi-Tawi in earlier reports.	105
91	Total number of species of marine macrobenthic algae in Tawi-Tawi from November 2013 to September 2014.	106

Appendices

	Title	Page No.
A	Marine macrobenthic algae found in Tawi-Tawi	123
B	Glossary of Technical Terms	133