

## A List of Marine Algae Collected in the Vicinity of Oki Marine Biological Station, Shimane University

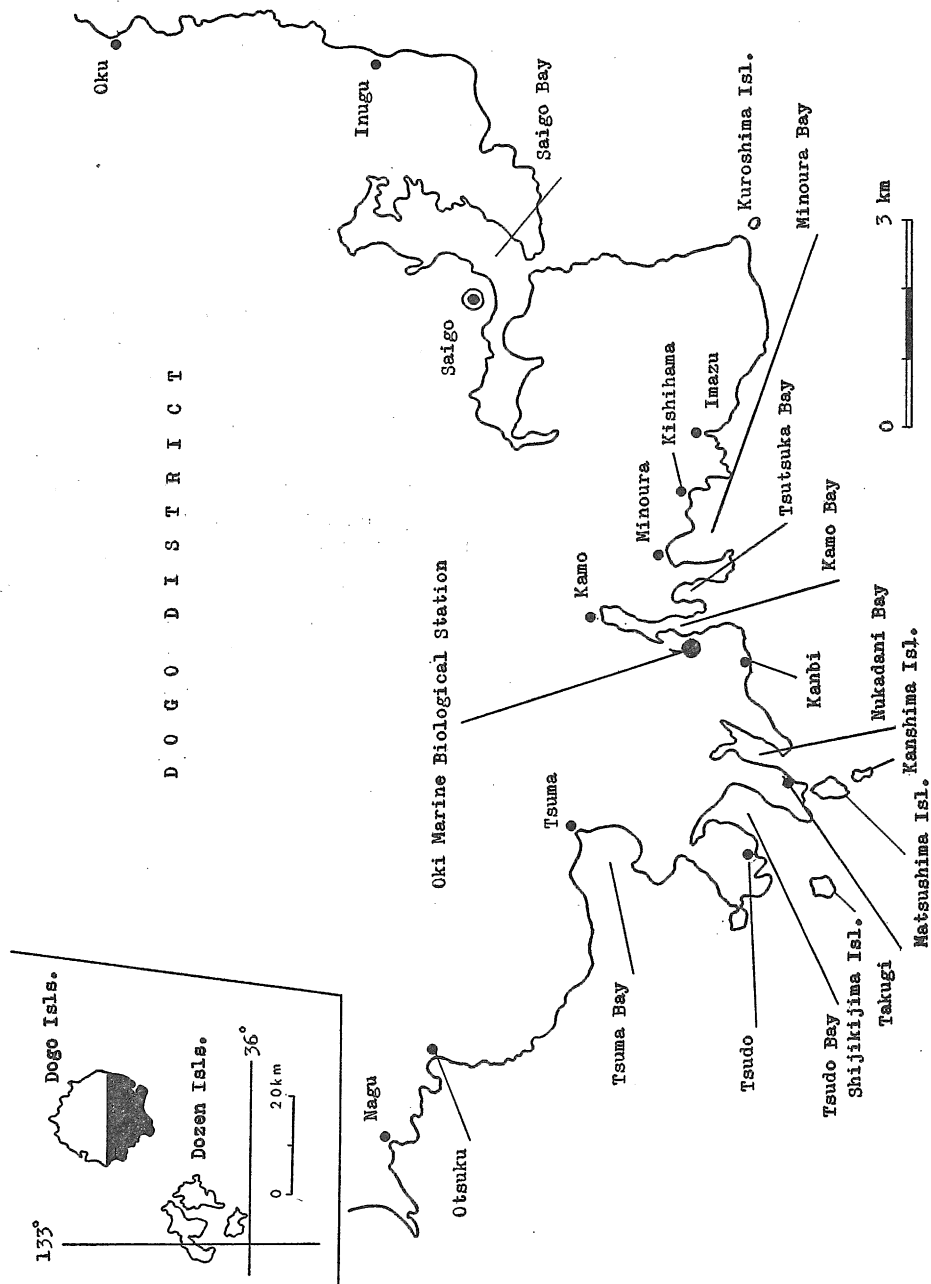
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(Received September 6, 1975)

The Oki Islands are divided into two districts, namely Dozen and Dogo, lying between latitudes 35°59'N. and 36°21'N. and between longitudes 132°56'E. and 133°24'E.. The Islands are washed by Tsushima Warm Current all along the coasts, and their open coasts are often exposed to violent waves during typhoon and monsoon seasons from early autumn to late winter. The Oki Islands has been reported to have 15 species of Cyanophyceae, 37 species and two varieties of Chlorophyceae, 77 species of Phaeophyceae, 125 species, one variety and two forms of Rhodophyceae, two species of sea grass as the marine flora.<sup>1-3)</sup> The list in this report consists of 17 species of Cyanophyceae, 33 species and one variety of Chlorophyceae, 74 species of Phaeophyceae, 102 species, one variety and two forms of Rhodophyceae including the following 14 species which were collected by myself this time and are new records for the Oki Islands. *Sphaeronema lithophila* and *Hypoglossum barbatum* are also new records for the Japan Sea, and *Kallymenia crassiuscula* and *K. sessilis* have this vicinity as northern boundary of their distribution in the Japan Sea furthermore. *Sphaeronema lithophila*, *Phormidium crosbyanum*, *Oscillatoria nigro-viridis*, *Ulothrix flacca*, *U. implexa*, *Monostroma nitidum*, *Schimmelmannia plumosa*, *Kallymenia crassiuscula*, *K. sessilis*, *Antithamnion nipponicum*, *Ceramium paniculatum*, *Hypoglossum barbatum*, *Zostera nana*, *Halophila ovalis*.



Map 1. Coast-line of southern part of Dogo district which lies between Point Nagu and Oku.

## CYANOPHYCEAE

## Pleurocapsales

## Hyellaceae

1. *Xenococcus acervatus* SETCHELL and GARDNER
2. *X. cladophorae* (TILDEN) SETCHELL and GARDNER

## Nostocales

## Oscillatoriaceae

- ◎ 3. *Sphaeronema lithophila* (ERCEGOVIČ) UMEZAKI
4. *Microcoleus wuitneri* FRÉMY
5. *Lyngbya confervoides* C. AGARDH
6. *L. gracilis* (MENEHINI) RABENHORST
7. *L. semiplena* (C. AGARDH) J. AGARDH
- 8. *Phormidium crosbyanum* TILDEN
9. *Spirulina labyrinthiformis* (MENEHINI) GOMONT
10. *S. subsalsa* OERSTED seq. GOMONT
11. *S. tenerrima* KÜTZING
12. *Oscillatoria amphibia* C. AGARDH
- 13. *O. nigro-viridis* THWAITES

## Rivulariaceae

14. *Calothrix parasitica* (CHAUVIN) THURET
15. *Isactis plane* (HARVEY) THURET
16. *Rivularia nitida* AGARDH

## Stigonematales

## Stigonemataceae

17. *Brachytrichia quoyi* (AGARDH) BORNET and FLAHAULT

## CHLOROPHYCEAE

## Ulotrichales

## Ulotrichaceae

- 18. *Ulothrix flacca* (DILLWYN) THURET
- 19. *U. implexa* KÜTZING

## Ulvales

## Monostromaceae

- 20. *Monostroma nitidum* WITTROCK

## Ulvaceae

21. *Ulva conglobata* KJELLMAN
22. *U. rigida* C. AGARDH
23. *U. pertusa* KJELLMAN

24. *Enteromorpha clathrata* (ROTH) GREVILLE
25. *E. compressa* (LINNÉ) GREVILLE
26. *E. intestinalis* (LINNÉ) LINK
27. *E. linza* (LINNÉ) J. AGARDH
28. *E. plumosa* KÜTZING

### Cladophorales

#### Cladophoraceae

29. *Chaetomorpha aerea* (DILLWYN) KÜTZING
30. *C. crassa* (AGARDH) KÜTZING
31. *C. moniligera* KJELLMAN
32. *Cladophora densa* HARVEY
33. *C. wrightiana* HARVEY

#### Anadyomenaceae

34. *Microdictyon japonicum* SETCHELL
35. *Willeella japonica* YAMADA and SEGAWA

### Siphonocladales

#### Valoniaceae

36. *Dictyosphaeria cavernosa* (FORSSKÅL) BOERGESEN

#### Boodleaceae

37. *Cladophoropsis zollingeri* BOERGESEN

### Caulerpales

#### Caulerpaceae

38. *Caulerpa fergusonii* MURRAY
39. *C. okamurai* W. v. BOSSE
40. *C. peltata* LAMOUREUX var. *typica* W. v. BOSSE

### Derbesiales

#### Derbesiaceae

41. *Derbesia marina* (LYNGBYE) KJELLMAN

### Codiales

#### Bryopsidaceae

42. *Bryopsis plumosa* (HUDSON) C. AGARDH

#### Codiaceae

43. *Codium adhaerens* (CABRERA) C. AGARDH
44. *C. coarctatum* OKAMURA
45. *C. contractum* KJELLMAN
46. *C. cylindricum* HOLMES
47. *C. divaricatum* HOLMES
48. *C. fragile* (SURINGAR) HARIOT
49. *C. mamillosum* HARVEY
50. *C. saccatum* OKAMURA
51. *C. tenue* KÜTZING

**PHAEOPHYCEAE****Dictyotales****Dictyotaceae**

52. *Padina arborescens* HOLMES
53. *P. commersonii* BORY
54. *P. crassa* YAMADA
55. *P. japonica* YAMADA
56. *Zonaria diesingiana* J. AGARDH
57. *Dictyota dichotoma* (HUDSON) LAMOUROUX
58. *D. dilatata* YAMADA
59. *D. linearis* (C. AGARDH) GREVILLE
60. *D. maxima* ZANARDINI
61. *Pachydictyon coriaceum* (HOLMES) OKAMURA
62. *Dilophus okamurai* DAWSON
63. *Spathoglossum cornigerum* J. AGARDH
64. *S. pacificum* YENDO
65. *S. solierii* (CHAUVIN) KÜTZING
66. *Dictyopteris divaricata* (OKAMURA) OKAMURA
67. *D. latiuscula* (OKAMURA) OKAMURA
68. *D. membranacea* (STACKHOUSE) BATTERS
69. *D. prolifera* (OKAMURA) OKAMURA
70. *D. undulata* (HOLMES) OKAMURA
71. *Stypopodium zonale* (LAMOUROUX) PAPENFUSS
72. *Distromium repens* (OKAMURA) LEVRING

**Ectocarpales****Ectocarpaceae**

73. *Giffordia mitchellae* (HARVEY) HAMEL
74. *Ectocarpus siliculosus* (DILLWYN) LYNGBYE

**Sphacelariales****Sphacelariaceae**

75. *Sphacelaria variabilis* SAUVAGEAU
76. *Halopteris filicina* (GRATELOUP) KÜTZING

**Cutleriales****Cutleriaceae**

77. *Cutleria adpersa* (ROTH) DE NOTARIS
78. *C. cylindrica* OKAMURA

**Chordariales****Elachistaceae**

79. *Halothrix lumbricalis* (KÜTZING) REINKE

**Leathesiaceae**

- 80. *Petrospongium rugosum* (OKAMURA) SETCHELL and GARDNER
- 81. *Leathesia difformis* (LINNÉ) ARESCHOUGH
- 82. *L. sphaerocephala* YAMADA

**Chordariaceae**

- 83. *Tinocladia crassa* (SURINGAR) KYLIN
- 84. *Sphaerotrichia divaricata* (C. AGARDH) KYLIN
- 85. *Papenfussiella kuromo* (YENDO) INAGAKI

**Acrothricaceae**

- 86. *Acrothrix pacifica* OKAMURA and YAMADA

**Spermatochneaceae**

- 87. *Nemacystus decipiens* (SURINGAR) KUCKUCK

**Ishigeaceae**

- 88. *Ishige okamurai* YENDO

**Sporochnales****Sporochneaceae**

- 89. *Carpomitra cabreræ* (CLEMENTE) KÜTZING
- 90. *Sporochnus scoparius* HARVEY

**Desmarestiales****Desmarestiaceae**

- 91. *Desmarestia tabacoides* OKAMURA
- 92. *D. viridis* (MÜLLER) LAMOUROUX

**Scytosiphonales****Scytosiphonaceae**

- 93. *Hydroclathrus clathratus* (BORY) ROTH
- 94. *Colpomenia bullosa* (SAUNDERS) YAMADA
- 95. *C. sinuosa* (ROTH) DERBÈS and SOLIER
- 96. *Endarachne binghamiae* J. AGARDH
- 97. *Scytosiphon lomentarius* (LYNGBYE) J. AGARDH
- 98. *Petalonia fascia* (MÜLLER) KUNTZE

**Punctariaceae**

- 99. *Punctaria latifolia* GREVILLE

**Laminariales****Chordaceae**

- 100. *Chorda filum* (LINNÉ) LAMOUROUX

**Laminariaceae**

- 101. *Eisenia bicyclis* (KJELLMAN) SETCHELL
- 102. *E. arborea* ARESCHOUGH
- 103. *Ecklonia cava* KJELLMAN
- 104. *E. kurome* OKAMURA
- 105. *E. stolonifera* OKAMURA

**Alariaceae**

106. *Undaria peterseniana* (KJELLMAN) OKAMURA  
 107. *U. pinnatifida* (HARVEY) SURINGAR

**Fucales****Cystoseiraceae**

108. *Myagropsis myagroides* FENSHOLT

**Sargassaceae**

109. *Hizikia fusiforme* (HARVEY) OKAMURA  
 110. *Sargassum confusum* C. AGARDH  
 111. *S. filicinum* HARVEY  
 112. *S. fulvellum* AGARDH  
 113. *S. hemiphyllum* C. AGARDH  
 114. *S. horneri* (TURNER) C. AGARDH  
 115. *S. kjellmanianum* YENDO  
 116. *S. micracanthum* (KÜTZING) YENDO  
 117. *S. nigrifolium* YENDO  
 118. *S. patens* C. AGARDH  
 119. *S. piluliferum* C. AGARDH  
 120. *S. ringgoldianum* HARVEY  
 121. *S. sagamianum* YENDO  
 122. *S. serratifolium* C. AGARDH  
 123. *S. thunbergii* (MERTENS) O. KUNTZE  
 124. *S. tortile* C. AGARDH  
 125. *S. yendoi* OKAMURA and YAMADA

**RHODOPHYCEAE****Bangiophycidae****Goniotrichales****Goniotrichaceae**

126. *Goniotrichum alsidii* (ZANARDINI) HOWE

**Bangiales****Bangiaceae**

127. *Erythrotrichia biseriata* TANAKA  
 128. *E. carnea* (DILLWYN) J. AGARDH  
 129. *E. carnea* (DILLWYN) J. AGARDH f. *tenuis* TANAKA  
 130. *Bangia fusco-purpurea* (DILLWYN) LYNGBYE  
 131. *Porphyra okamurai* UEDA  
 132. *P. yezoensis* UEDA

**Florideophycidae****Nemalionales****Acrochaetiaceae**

133. *Acrochaetium crassipes* BOERGESEN

**Helminthocladiaceae**

134. *Nemalion vermiculare* SURINGAR  
135. *Helminthocladia yendoana* NARITA

**Chaetangiaceae**

136. *Scinaia japonica* SETCHELL  
137. *Pseudogloiophloea okamurai* (SETCHELL) CHIHARA  
138. *Actinotrichia fragilis* (FORRSKÅL) BOERGESEN  
139. *Galaxaura falcata* KJELLMAN  
140. *G. fastigiata* DECAISNE

**Bonnemaisoniaceae**

141. *Ptilonia okadai* YAMADA  
142. *Bonnemaisonia hamifera* HARIOT  
143. *Asparagopsis taxiformis* (DELILE) COLLINS and HERVEY

**Gelidiales****Gelidiaceae**

144. *Gelidium amansii* LAMOUROUX  
145. *G. divaricatum* MARTENS  
146. *G. japonicum* OKAMURA  
147. *G. pusillum* (STACKHOUSE) LE JOLIS  
148. *G. pusillum* (STACKHOUSE) LE JOLIS f. *foliaceum* OKAMURA  
149. *Pterocladia capillacea* (GMELIN) BORNET and THURET

**Cryptonemiales****Rhizophyllidaceae**

150. *Desmia hornemanni* MERTENS  
151. *D. japonica* HARVEY

**Squamariaceae**

152. *Peyssonnelia caulifera* OKAMURA  
153. *P. rubra* (GREVILLE) J. AGARDH

**Corallinaceae**

154. *Lithophyllum okamurai* FOSLIE  
155. *Fosliella zostericola* (FOSLIE) SEGAWA  
156. *Amphiroa aberrans* YENDO  
157. *A. crassissima* YENDO  
158. *A. dilatata* LAMOUROUX  
159. *Corallina pilulifera* POSTELS and RUPRECHT  
160. *Jania rubens* (LINNÉ) LAMOUROUX  
161. *Jania unguolata* YENDO



**Cryptonemiaceae**

- 162. *Grateloupia carnosa* YAMADA and SEGAWA
- 163. *G. divaricata* OKAMURA
- 164. *G. filicina* (WULFEN) J. AGARDH
- 165. *G. livida* (HARVEY) YAMADA
- 166. *G. okamurai* YAMADA
- 167. *G. ramosissima* OKAMURA
- 168. *G. turuturu* YAMADA
- 169. *Carpopeltis affinis* (HARVEY) OKAMURA
- 170. *C. angusta* (HARVEY) OKAMURA
- 171. *C. crispata* OKAMURA

**Gloiosiphoniaceae**

- 172. *Gloiosiphonia capillaris* (HUDSON) CARMICHAEL
- 173. *Schimmelmannia plumosa* (SETCHELL) ABBOTT

**Endocладиaceae**

- 174. *Gloiopeltis furcata* POSTELS and RUPRECHT

**Kallymeniaceae**

- 175. *Callophyllis adhaerens* YAMADA
- Ⓝ176. *Kallymenia crassiuscula* OKAMURA
- Ⓝ177. *K. sessilis* OKAMURA

**Gigartinales****Nemastomaceae**

- 178. *Schizymenia dubyi* (CHAUVIN) J. AGARDH

**Solieriaceae**

- 179. *Solieria robusta* (GREVILLE) KYLIN
- 180. *S. mollis* (HARVEY) KYLIN
- 181. *Meristotheca papulosa* (MONTAGNE) J. AGARDH

**Plocamiaceae**

- 182. *Plocamium leptophyllum* KÜTZING var. *flexuosum* J. AGARDH
- 183. *P. recurvatum* OKAMURA
- 184. *P. telfairiae* HARVEY

**Hypneaceae**

- 185. *Hypnea charoides* LAMOUROUX

**Sphaerococcaceae**

- 186. *Phacelocarpus japonicus* OKAMURA

**Gracilariaceae**

- 187. *Gracilaria bursa-pastoris* (GMELIN) SILVA
- 188. *G. incurvata* OKAMURA
- 189. *G. textorii* SURINGAR
- 190. *G. verrucosa* (HUDSON) PAPPENFUSS
- 191. *Tylotus lichenoides* OKAMURA

**Phylloporaceae**

192. *Gymnogongrus flabelliformis* HARVEY  
 193. *Stenogramma interrupta* (AGARDH) MONTAGNE

**Gigartinaceae**

194. *Gigartina tenella* HARVEY  
 195. *Chondrus ocellatus* HOLMES

**Rhodymeniales****Champiaceae**

196. *Lomentaria catenata* HARVEY  
 197. *Champia bifida* OKAMURA  
 198. *C. parvula* (AGARDH) J. AGARDH

**Ceramiales****Ceramiaceae**

199. *Spermothamnion codicola* YAMADA and TANAKA  
 ○200. *Antithamnion nipponicum* YAMADA and INAGAKI  
 201. *Platythamnion yezoense* INAGAKI  
 202. *Crouania attenuata* (BONNEMAISON) J. AGARDH  
 203. *Wrangelia argus* MONTAGNE  
 204. *Griffithsia tenuis* C. AGARDH  
 205. *G. coacta* OKAMURA  
 206. *Ceramium boydenii* GEPP  
 ○207. *C. paniculatum* OKAMURA  
 208. *C. tenerrimum* (MARTENS) OKAMURA  
 209. *Campylaephora hypnaeoides* J. AGARDH  
 210. *Centroceras clavulatum* (C. AGARDH) MONTAGNE

**Delesseriaceae**

211. *Hemineura schmitziana* DE TONI and OKAMURA  
 212. *Branchioglossum ciliatum* OKAMURA  
 ◎213. *Hypoglossum barbatum* OKAMURA  
 214. *Acrosorium flabellatum* YAMADA  
 215. *A. polyneurum* OKAMURA  
 216. *A. uncinatum* (J. AGARDH) KYLIN  
 217. *Martensia denticulata* HARVEY

**Dasyaceae**

218. *Dasya sessilis* YAMADA  
 219. *Benzaitenia yenoshimensis* YENDO

**Rhodomelaceae**

220. *Polysiphonia tapinocarpa* SURINGAR  
 221. *Chondria crassicaulis* HARVEY  
 222. *C. dasyphylla* (WOODWARD) C. AGARDH  
 223. *Laurencia intermedia* YAMADA

- 224. *L. ckamurai* YAMADA
- 225. *L. pinnata* YAMADA
- 226. *Symphyocladia latiuscula* (HARVEY) YAMADA
- 227. *S. marchantioides* (HARVEY) FALKENBERG
- 228. *Herposiphonia fissidentoides* (HOLMES) OKAMURA
- 229. *H. subdisticha* OKAMURA
- 230. *Leveillea jungermannioides* (MARTENS and HERING) HARVEY

### Monocotyledoneae

#### Helobiales

##### Zosteraceae

- 231. *Zostera marina* LINNE
- 232. *Z. nana* ROTH
- 233. *Phyllospadix japonica* MAKINO

##### Hydrocharitaceae

- 234. *Halophila ovalis* HOOK

### Literature

- 1) HAGIHARA, O., HIROSE, H. and KAJIMURA, M. (1970): On the marine algae of Oki Islands of Shimane Prefecture. Bull. Jap. Soc. Phycol., **18** (3): 154-163.
- 2) HIROSE, H. and KAJIMURA, M. (1973): Additional list of marine algae of Oki Islands. Bull. Jap. Soc. Phycol., **21** (1): 33-38.
- 3) KAJIMURA, M. (1975): Additional list of marine algae of the Oki Islands. Bull. Jap. Soc. Phycol. (in press).