

A Revised List of the British Marine Algae.

BY

E. M. HOLMES, F.L.S.

AND

E. A. L. BATTERS, B.A., LL.B., F.L.S.

SINCE the publication of Harvey's classical *Phycologia Britannica*, a very large number of species have been added to the British Marine Flora, and great progress has been made in the study of the modes of growth and reproduction of the various groups. Nevertheless, much still remains to be done before it will be possible to satisfactorily determine the systematic position, or even the right to specific rank, of many 'species.' Consequently, any classification that may be adopted at the present time must be regarded, to a certain extent, as a provisional one.

In preparing the following list it has been our object to bring it as nearly as possible into accordance with the most recent investigations, and to utilise, as far as possible, the terminology most generally accepted by algologists. An attempt has been made to give some degree of uniformity to the names adopted for the different groups, so that the nature of the group may be indicated by the terminal syllables of the name; but the alterations thus made are, we believe, insufficient to cause any inconvenience. It has not seemed to us desirable to indicate at present the characters distinguishing the different groups, such details being reserved for a handbook on the subject, which is already in progress, and which we hope to publish at a later date. Our aim has been rather

[*Annals of Botany*, Vol. V. No. XVII. December 1890.]

to enumerate in the form of a list, available as a check-list, all the British species which have up to the present time been identified.

There are still many species existing in our own and other herbaria which have not yet been examined, and which will probably hereafter still further enlarge the present list. In the form of an appendix we have given a list of species found on the Baltic and French coasts, which may not unreasonably be expected to occur on our own shores. Descriptions, or figures, or references to these will be found in the following works :—

Bornet et Flahault, *Revision des Nostocacées hétérocystées*. (Ann. Sc. Nat. vii série, Bot., tom. iii. iv. v. and vii.) Paris, 1886–1888.

Crouan, *Florule du Finistère*. Paris, 1867.

Hauck, *Die Meeresalgen Deutschlands und Oesterreichs*. Leipzig, 1885.

Kjellman, *The Algae of the Arctic Sea*. Stockholm, 1883.

Reinke, *Algenflora der Westlichen Ostsee*. Kiel, 1889.

Stromfelt, H. G. *Om Algvegetationen vid Islands Kuster*.

The authority given for the name of a species is in every case that of the botanist who first employed the name as it stands, not that of the author who first described the species under another name. We hold that the changes which have taken place in the nomenclature of a plant should be indicated in the list of synonyms which are usually appended to it in most descriptive works. The only deviation from this rule will be, to give in parentheses the old name under which the plant was described in *Phycologia Britannica*, or, if omitted in that work, in the last work on British Marine Algae in which it occurred. This plan will, we trust, render a reference to other works, and to herbaria, less toilsome.

The mode of classification adopted has been to proceed from the lower to the higher forms, those being regarded as the lowest in which the vegetative organs are the most simple or least differentiated, and in which the reproductive organs are either unknown, or belong to a low type of

development. In cases where the reproductive organs are of a higher type, and the vegetative organs of a very simple structure, as in *Vaucheria*, the plant will rank higher than one in which the vegetative system is highly developed, and the reproductive system very slightly so, as in *Desmarestia* and *Laminaria*. A preliminary attempt to give the distribution of species in the British Islands has been made, founded on published records, or on species seen by ourselves in herbaria. As it is desirable to indicate the part of the British Islands in which each species occurs, we have divided the British coasts into fourteen sections, which are as follows:—

1. From the Shetland Islands to the Sound of Mull.
2. From the Sound of Mull to the Solway Firth.
3. From the Shetland Islands to Aberdeen.
4. From Aberdeen to the Tweed.
5. From Solway Firth to Holyhead.
6. From Holyhead to the Scilly Islands.
7. From the Tweed to Cromer.
8. From Cromer to Dover.
9. From the Scilly Islands to Dover.

IRELAND.

10. From Malin Head to Roundstone Bay.
11. From Roundstone Bay to Bantry Bay.
12. From Malin Head to Dublin Bay.
13. From Dublin Bay to Wexford Harbour.
14. From Bantry Bay to Wexford Harbour.

In each case the locality first-named will be included in that section, but the second will not, the second locality being the starting-point for the next section. Where a general record without localities has been published, the initial letter of the country only will be given, thus—E. S. I. When a specimen for the district has been seen by us, it is indicated by a note of exclamation following the number. It is hoped that a foundation may thus be laid for working out the distribution of Marine Algae on our shores, this branch of the subject having as yet received too little attention.

Our grateful acknowledgments are due to the following distinguished algologists for frequent help afforded in the identification of critical species, and for valuable suggestions and friendly criticism:—Professor Dr. J. G. Agardh, Dr. E. Bornet, Dr. W. G. Farlow, the late Dr. F. Hauck, Mons. M. Gomont, Dr. F. R. Kjellman, Dr. O. Nordstedt, Major Reinbold, Professor Dr. J. Reinke, and Professor Dr. F. Schmitz; also to Professor E. Perceval Wright, M.D., for permitting reference to Harvey's type specimens. It may be useful to state that in the course of our investigations we have found that the type specimens of the following authors are deposited in the hereinstated herbaria:—

Dr. W. Arnott, Glasgow University.
Rev. M. J. Berkeley, Kew Herbarium.
W. Borrer, Kew Herbarium.
Miss Cutler, British Museum Herbarium.
Dr. R. K. Greville, Botanic Gardens, Edinburgh.
Mrs. J. E. Gray, Cambridge University.
Mrs. Griffiths, Linnean Society, London, &c.
Professor W. H. Harvey, Trinity College, Dublin.
R. Henedy, Anderson College, Glasgow.
Dr. G. Johnston, Berwick-on-Tweed.

CLASS THALLOPHYTA.

SUBCLASS ALGAE.

Series I.—CYANOPHYCEAE.

Cohort I.—CHROOCOCCINAE.

Order I.—CHROOCOCCACEAE.

Gloeocapsa Näg.

G. crepidinum, Thur. 4! 5! 9!

Polycystis Kütz.

P. pallida, Farlow. 4!

Order II.—CHAMAESIPHONACEAE.

Dermocarpa Crn.

D. prasina, Born. 4! 7! 9!

f. *olivacea*, Holm. et Batt. 9!

var. *incrustans*, Holm. et Batt. 4!

D. violacea, Crn. 4!

ar *rosea*, Holm. et Batt. 4!

D. Leibliniae, Born. 4! 9!

D. Schousboei, Born. 4! 5! 8!

Hyella Born. et Flah.

H. caespitosa, Born. et Flah. 4! 9!

Order III.—HORMOSPORACEAE.

Hormospora Bréb.

H. ramosa, Thw. 4! 8!

Cohort II.—NOSTOCHINAE.

Section I.—HOMOCYSTEAE.

Order I.—OSCILLARIACEAE.

Tribe I.—Oscillarieae.

Spirulina Turp.¹

S. pseudotenuissima, Crn. 4! 5!

S. tenuissima, Kütz. 4! 5. 6. 8! 9! (*S. oceanica*, Crn.

Holm. Fasc. No. 73).

¹ The *Spirulina Hutchinsiae* from Cumbræ, in the Trinity College Herbarium, Dublin, is stated by M. Gomont to be *S. major*, Kütz. Harvey, Syn. p. 200, No. 379, remarks, under *S. Hutchinsiae*, Kütz., 'Unknown to me' (1857).

CYANOPHYCEAE (*continued*).

Spirulina major, Kütz. (*S. tenuissima*, Batt. Alg. Berw., pl. vii. f. 4). 2! 4!

Oscillaria Bory.

- O. brevis*, Rab. 4!
- O. colubrina*, Thur. 4!
- O. Corallinae*, Gom. 1! 9! (*Oscillatoria litoralis*, ¹Phyc. Brit. partim, et *O. capucina* Holm. Fasc. No. 69).
- O. infectoria*, Tassi. 4!
- O. intermedia*, Crn. 4!
- O. insignis*, Thw. 6! 7!
- O. laetevirens*, Crn. 4!
- O. nigroviridis*, Thw. 4!
- O. percursa*, var. *marina*, Kütz. 4!
- O. subuliformis*, Thw. 4! 6. 9!
- O. tenuis*, C. Ag. 4!

Phormidium Kütz.

- Ph. papyraceum*, Gom. (*Oscillatoria spiralis*, Phyc. Brit.).
- Ph. antliarium*, Gom. 4!

Tribe II.—*Lyngbyeae*.

Lyngbya C. Ag.

- L. semiplena*, J. Ag. 4! 6! 8! 9. (*Calothrix caespitula*, Phyc. Brit. et *L. luteofusca*, J. G. Ag. Holm. Fasc. No. 67).
- L. aestuarii*, Liebm. 4! 9! (*L. ferruginea*, Phyc. Brit.).
- L. majuscula*, Harv. 4! 9!
- f. *crispa*, Holm. et Batt. 9!
- L. spectabilis*, Thur. in herb. 5!

Symploca Kütz.

- S. hydroides*, Kütz. 4! 9! (*C. semiplena*², Phyc. Brit.).
- S. fasciculata*, Kütz. 4! 9!

¹ The type of *O. litoralis*, Carm. examined by M. Gomont proves to be *Lyngbya aestuarii*, Liebm. with a few filaments of *O. Corallinae*, Gom.

² The specimens collected at Sidmouth by the Rev. R. Creswell under the name of *Calothrix pannosa*, Ag., as also those distributed by Harvey under the MS. name of *C. lamellata*, are referable to this species.

CYANOPHYCEAE (*continued*).

Tribe III.—Vaginarieae.

Hydrocoleum Gom.

H. lyngbyaceum, Kütz. 9!

var. *rupestris*, Kütz. 4! (*Microcoleus nigrescens*, Thur.
MS. Batt. Alg. Berw. p. 18).

Microcoleus Desm.

M. chthonoplastes, Thur. (*M. anguiformis*, Phyc. Brit.).
4! 6. 7! 9!

Schizothrix Gom.

S. Cresswellii, Harv. 9!

S. lardacea, Gom. 9!

Section II.—HETEROCYSTEAE.

Order II.—RIVULARIACEAE.

Tribe I.—Leptochaeteae.

Amphithrix Kütz.

A. violacea, Born. et Flah. 2!

Tribe II.—Mastichotricheae.

Calothrix C. Ag.

a. Basilares.

C. confervicola, C. Ag. 4! 7! 9!

var. *a. purpurea*, Born. et Flah. 9!

C. consociata, Born. et Flah. 8!

C. scopulorum, C. Ag. 4! 7! 9!

C. pulvinata, C. Ag. 4! 9! 11. 14. (*C. hydroides*,
et *C. pannosa*, Phyc. Brit.).

C. parasitica, Thur. 9!

β. Intercalares.

C. aeruginea, Thur. 4! 9!

C. crustacea, Thur. 4! 9!

C. fasciculata, C. Ag. 2. 4! 7! 9! 11.

Isactis Thur.

I. plana, Thur. 4! 9! (*Rivularia plana*, Harv. in Hook.
Brit. Fl. pt. I. p. 394).

var. *fissurata*, Born. 9!

Rivularia J. Ag.

R. Biasoletiana, Menegh. 4! 9! (*Schizosiphon War-*
reniae, Phyc. Brit.).

CYANOPHYCEAE (*continued*).

Rivularia atra, Roth.

var. *a. hemisphaerica*, 4! 7! 9!

var. *β. confluens*, Farl. 4! 9!

R. nitida, C. Ag. (*R. plicata*, Phyc. Brit.) 2. 4! 5! 9.

10. 11. 14.

R. bullata, Berk. (*R. nitida*, Phyc. Brit.) 1. 2. 5. 9. 11.

R. polyotis, Born. et Flah. 9!

R. australis, Harv. 9!

Order III.—**SIROSIPHONACEAE**.

Mastigocoleus Lagerh.

M. testarum, Lagerh. 4! 9!

Order IV.—**SCYTONEMACEAE**.

Microchaete Thur.

M. grisea, Thur. 4! 9!

Order V.—**NOSTOCACEAE**.

Nostoc Vauch.

N. Linckia, Born. 6. 8. (*Monormia intricata*, Phyc. Brit.).

Anabaena Bory.

A. variabilis, Kütz. 5. 6. 8! (*Sphaerozyga Thwaitesii*, Phyc. Brit.).

A. torulosa, Lagerh. 1. 4! 5! 6. (*Sphaerozyga Carmichaelii*, Phyc. Brit.).

Nodularia Mert.

N. Harveyana, Thur. 4! 6! (*Spermosira Harveyana*, Phyc. Brit.).

N. spumigena, Mert.

var. *β. litorea*, Born. et Flah. 5! 6! (*Spermosira litorea*, Phyc. Brit.).

Series II.—**CHLOROPHYCEAE**.

Cohort I.—**PROTOCOCCINAE**.

Order I.—**PROTOCOCCACEAE**.

Tribe I.—**Endosphaereae**.

Chlorochytrium Cohn.

Ch. immersum, Masee. 7!

Ch. inclusum, Kjellm. 9!

CHLOROPHYCEAE (*continued*).

Chlorocystis Rke.

Ch. Cohnii, Rke. 12. (*Chlorochytrium Cohnii*, Wright,
R. I. Acad. Trans. XXVI. p. 355).

Tribe II.—Characieae.

Sykidion E. P. Wright.

S. Dyeri, E. P. Wright 12.

Characium A. Br.

Ch. strictum, A. Br. 4!

Codiolum A. Br.

C. gregarium, A. Br. 6! 9!

var. longipes, Holm. et Batt. 4! (*Codiolum longipes*,
Holm. Fasc. No. 33).

Cohort II.—CONFERVINAE.

Order I.—BLASTOSPORACEAE.

Schizogonium Kütz.

S. disciferum, Holm. et Batt. 4! (*Ulothrix discifera*,
Holm. Exsicc. No. 99).

Prasiola C. Ag.

P. stipitata, Suhr. 2! 4! 5! 9! (*Prasiola marina*, Holm.
Fasc. No. 21).

Order II.—ULVACEAE.

Pringsheimia Rke.

P. scutata, Rke. 4!

Monostroma Thur.

M. Wittrockii, Born. 4! 6! 9!

M. latissimum, Wittr. 9!

M. laceratum, Thur. 6! 9!

M. Grevillii, J. Ag. 1. 4! 7. (*Ulva Lactuca*, Phyc. Brit.,
et *Enteromorpha Cornucopiae*, Phyc. Brit.).

M. Lactuca, J. Ag. 9!

M. Blyttii, Wittr. 4!

Capsosiphon Gobi.

C. aureolus, Gobi. 4!

Diplonema Kjellm.

D. confervoides, Holm. et Batt. 4! 5! 9!

CHLOROPHYCEAE (*continued*).

Enteromorpha Link.

a. Clathratae.

- E. clathrata*, J. Ag. 5. 7. 9!
- E. Hopkirkii*, M'Calla. 4! 7! 9! 12.
- E. Ralfsii*, Harv. 4! 7! 9!
- E. pulcherrima*, Holm. et Batt.¹ (*E. erecta*, Phyc. Brit.).
- E. erecta*, J. Ag. 9! 14! (*Conferva paradoxa*, Dillw. Brit. Conf.).

β. Crinitae.

- E. percursa*, C. Ag.
- γ. ramosa*, J. Ag. 4! 5! 7. 9. 12. (*E. percursa*, Phyc. Brit.).
- E. lingulata*, J. Ag. 1!
- E. crinita*, J. Ag. 9!
- E. ramulosa*, Harv. 4! 7! 9!

δ. Intestinales.

- E. Linkiana*, Grev. 1.
- E. prolifera*, J. Ag. 4! 9! (*E. compressa*, *β. prolifera*, Grev. Alg. Brit. p. 180).
- E. compressa*, Grev.
- f. constricta*, J. Ag. 9!
- f. complanata*, J. Ag. 9!
- E. Linza*, J. Ag.
- f. lanceolata* 2. 4! 7. 8. 9! (*Ulva Linza*, Phyc. Brit.).
- E. intestinalis*, Link. 1. 4. 7. 9.
- f. cylindrica*, J. Ag. 9!
- f. clavata*, J. Ag. 9!
- f. cornucopia*, J. Ag. 4!
- f. gyrata*, J. Ag. 9!
- f. maxima*, J. Ag. 9!
- E. micrococca*, Kütz.
- var. *β. tortuosa*, J. Ag. 9.
- E. canaliculata*, Batt. 4!
- E. minima*, Näg. 4! 8!

¹ *E. pulcherrima* is a plant that does not appear to be well known to European algologists. It is a very distinct species and adheres closely to paper when dry. It occurs in the Kew Herbarium under the name of *C. paradoxa* in Miss Hutchins' writing, but does not agree with Dillwyn's figure or with the description of his *C. paradoxa*.

CHLOROPHYCEAE (*continued*).

Ulva L.

U. latissima, J. Ag., E. S. I.

U. rigida, J. Ag. 9!

Order III.—**ULOTHRICHACEAE**.

Ulothrix Kütz.

U. implexa, Kütz. 4! 5! (*Lyngbya Cutleriae*,¹ Phyc. Brit.).

Order IV.—**CHAETOPHORACEAE**.

Tribe I.—**Chaetophoreae**.

a. *Trichophoreae*.

Bolbocoleon Pringsh.

B. piliferum, Pringsh. 9!

Ochlochaete Thw.

O. Hystrix, Thw. 9²!

β. *Atricheae*.

Entoderma Lagerh.

E. viride, Lagerh. 9!

E. Wittrockii, Wille. 4!

Epicladia Rke.

E. Flustrae, Rke. 4! 8! 9!

Order V.—**CLADOPHORACEAE**.

Urospora Aresch.

U. penicilliformis, Aresch. 4! 6! 8. 9! (*Conferva Youngana*, Phyc. Brit.).

U. collabens, Holm. et Batt. 8. (*Conferva collabens*, Phyc. Brit.).

U. bangioides,³ Holm. et Batt. 6! 9.

¹ Miss Cutler appears to have collected two plants as *Lyngbya Cutleriae*, see Batters' List Mar. Alg. of Berwick-on-Tweed, p. 36. Since the publication of that work Harvey's type specimen has been unexpectedly found and proves to be *U. implexa*, Kütz.

² *Ochlochaete Hystrix*, Thw. was not found in frutification, and has not been detected in the original locality since its first discovery, so that it is not certain whether it should be placed in *Chaetophoraceae* or *Coleochaetaceae*.

³ *Urospora bangioides* has, we understand, been found by Mr. R. J. Harvey Gibson to produce the peculiar tailed spores of Areschoug's genus, but these have not yet been observed in the other species which we have provisionally placed here, in consequence of their similarity of habit and growth to *U. penicilliformis*.

CHLOROPHYCEAE (*continued*).

Urospora flacca, Holm. et Batt. 4! 9! (*Lyngbya flacca* et *L. Carmichaelii*, Phyc. Brit.).

U. speciosa, Holm. et Batt. 4! (*Lyngbya speciosa*, Phyc. Brit.).

Chaetomorpha Kütz.

a. Tortuosae.

Ch. tortuosa, Kütz. 4! 6. 8. 9! (*Conferva tortuosa*, Phyc. Brit.).

Ch. implexa, Kütz. 2.

Ch. litorea, Holm. et Batt. 1. 5. 9! (*Conferva litorea*, Phyc. Brit.).

Ch. linum, Kütz. 2! 4! 6. 7! 8. 9! 11. (*Conferva sutoria*, Phyc. Brit.).

Ch. crassa, Kütz. (*Conferva linum*, Phyc. Brit.). 12!

β. Strictae.

Ch. Melagonium, Kütz. 4! 7. 9! 10. (*Conferva Melagonium*, Phyc. Brit.).

f. *typica*, Kjellm. 4!

f. *rupincola*, Aresch. 4!

Ch. aerea, Kütz. 4! 7. 9! (*Conferva aerea*, Phyc. Brit.).

Ch. chlorotica, Kütz. 1! (*C. cannabina*, Traill in Trans. Bot. Soc. Edinb.).

Rhizoclonium Kütz.

Rh. riparium, 1. 4! 6. 7. 8. 9! 11.

f. *Casparyi*, Holm. et Batt. 6.

Rh. flavicans, Rab. 9! (*Conferva arenicola*, Phyc. Brit.).

Rh. tortuosum, Kütz. 4! 9! (*Conferva implexa*, Phyc. Brit.).

Rh. rigidum, Gobi. 4!

Rh. Kochianum, Kütz. 4! 9! 11.

Rh. arenosum, Kütz. 1. 14. (*Conferva arenosa*, Phyc. Brit.).

Cladophora Kütz.

a. Cartilagineae.

C. prolifera, Kütz. 9!

C. pellucida, Kütz. 5! 9!

f. *comosa*, Kütz. 9!

f. *cristata*, Kütz. 11.

CHLOROPHYCEAE (*continued*).

Cladophora Hutchinsiae, Harv. 2. 4! 7. 9! 11.

f. *divaricata*, Harv. 9.

f. *diffusa*, Holm. et Batt. 3. 6. 9! (*Cladophora diffusa*, Phyc. Brit.).

C. utriculosa, Kütz.

var. *falcata*, Holm. et Batt. 9. 11. (*C. falcata*, Phyc. Brit.).

var. β . *laetevirens*, Hauck. 4! 9! (*Cladophora laetevirens*, Phyc. Brit.).

C. rupestris, Kütz. 4! 8. 9! 11.

var. *nuda*, Holm. et Batt. 12. (*Cladophora nuda*, Phyc. Brit.).

var. *distorta*, Harv. 11.

C. flexuosa, Griff. 9!

C. glaucescens, Griff. 1. 4! 9!

β . *Pulvinatae*.

C. repens, J. Ag. 9!

C. Brownii, Harv. 9! 13.

C. retroflexa, Crn. 9! 11!

C. Macallana, Harv. 9! 11.

C. rectangularis, Harv. 9! 11!

var. *subnuda*, Kütz.

var. *hispida*, Kütz.

γ . *Flavescentes*.

C. hirta, Kütz. (*Conferva flexuosa*, E. B. et Holm. Fasc. No. 56). 4! 8!

C. fracta, Kütz.

var. *patens*, Holm. et Batt. 9! (*C. refracta*, Roth, Holm. Exsicc. No. 91).

var. *marina*, Hauck. 4! 9!

var. *Magdalenae*, Holm et Batt. (*Cladophora Magdalenae*, Phyc. Brit.).

C. expansa, Kütz. 7! 9!

C. flavescens, Kütz. 7! 9!

δ . *Crystallinae*.

C. albida, Kütz. 4! 9! 10. 11. 13.

var. *refracta*, Holm. et Batt. 6. 9! 12. 14. (*Cladophora refracta*, Phyc. Brit.).

CHLOROPHYCEAE (*continued*).

Cladophora Rudolphiana, Kütz. 9. 11.

C. Balliana, Harv. 12.

C. crystallina, Kütz. 9!

C. trichocoma, Kütz. 11.

ε. *Radicantes*.

C. arcta, Kütz. 1. 2. 4! 5. 6. 7! 9!

f. *vaucheriaeformis*, Harv. 4! 9!

f. *centralis*, Harv. 4!

C. arctiuscula, Kütz. 4! 9!

C. lanosa, Kütz. 2. 4! 9!

f. *uncialis*, Thur. 1. 4! 6. 7. 9! 12. 13.

Order VI.—**GOMONTIACEAE**.

Gomontia Born. et Flah.

G. polyrrhiza, Born. et Flah. 4!

Cohort III.—**SIPHONINAE**.

Order I.—**BRYOPSIDACEAE**.

Bryopsis Lamour.

B. hypnoides, Lamour. 9!

B. plumosa, C. Ag. 4! 9!

f. *subsimplex*, Holm. et Batt. 6! 9!

Order II.—**DERBESACEAE**.

Derbesia Sol.

D. tenuissima, Crn. (*Vaucheria marina*, Phyc. Brit.). 9!

Order III.—**VAUCHERIACEAE**.

Vaucheria DC.

V. dichotoma, Lyngb.

f. *marina*, C. Ag. 9! (*Vaucheria submarina*, Phyc. Brit.).

V. Thuretii Woron.¹ 1. 4! 5. 7. 9! (*Vaucheria velutina*, Phyc. Brit. partim).

V. synandra, Woron. 5.

¹ Harvey's plate gives one magnified filament with a stalked oogonium and another with a sessile one. The former is almost certainly *V. sphaerospora*, but the other may be *V. Thuretii*, although there are no antheridia figured, these being usually present on the same, or a branch of the same, thread.

CHLOROPHYCEAE (*continued*).

Vaucheria sphaerospora, Nordst. 1. 4! 9! 12.

f. *synoica*, Nordst. 5.

f. *dioica*, Rosenv. 1. 5. 8. 9! (*Vaucheria velutina*,
Phyc. Brit. partim).

var. *subsimplex*, Holm. et Batt. 9! (*Vaucheria piloboloides*, Holm. Fasc. No. 50).

V. litorea, Hofm. Bang. et C. Ag. 3. 5. 6. 9! 12.

Order IV.—CODIACEAE.

Codium Stackh.

C. adhaerens, C. Ag. 9!

f. *amphibium*, Holm. et Batt. 9! 11.

C. tomentosum, Stackh. 5! 9!

C. elongatum, C. Ag. 1.¹

C. Bursa, C. Ag. 9! 12.

Series III.—PHAEOPHYCEAE.

Cohort I.—ECTOCARPINAE.

Order I.—DESMARESTIACEAE.

Desmarestia Lamx.

D. viridis, Lamx. 1-14.

D. aculeata, Lamx. 1-14.

D. ligulata, Lamx. 1. 4! 7! 8. 9!-14.

D. Dudresnayi, Lamx. 9! 10.

Order II.—DICTYOSIPHONACEAE.

Dictyosiphon Grev.

D. foeniculaceus, Grev. 1-14.

f. *hispida*, Kjellm. 4!

f. *flaccida*, Kjellm. 4!

D. hippuroides, Kütz. 2! 4! 7!

D. Chordaria, Aresch. 4!

D. Mesogloea, 4! 7!

Order III.—PUNCTARIACEAE.

Litosiphon Harv.

L. pusillus, Harv. 1-14.

L. Laminariae, Harv. 1-7! 9! 10.

¹ Mentioned by J. G. Agardh in Till Algeries Systematik as occurring on the Irish coast.

PHAEOPHYCEAE (*continued*).

Stictyosiphon Kütz.

S. Griffithsianus, Holm. et Batt. (*Ectocarpus brachiatus*, Phyc. Brit.). 2. 4! 8. 9! 14.

S. sub-articulatus, Hauck. 4! 6! 7! (*Phloeospora sub-articulata*, Holm. Fasc. No. 19).

S. tortilis, Rke. 4! 7! (*Phloeospora tortilis*, Holm. Fasc. No. 20).

Striaria Grev.

S. attenuata, Grev. 2. 3. 5. 6. 8. 9!

Desmotrichum Kütz.

D. undulatum,¹ Rke. 1! 2!

Punctaria Grev.

P. plantaginea, Grev. 1-14.

P. latifolia, Grev. 1. 2. 3. 5. 9!-13.

f. *Zosteræ*, Le Jol. (*P. tenuissima*, Phyc. Brit.). 4! 9!

Order IV.—**ASPEROCOCCACEAE**.

Myriotrichia Harv.

M. clavaeformis, Harv. 1-14.

f. *filiformis*, Farlow. 1-14. (*M. filiformis*, Phyc. Brit.).

Asperococcus Lamx.

A. echinatus, Grev. 1-14.

f. *vermicularis*, Griff. 1-14.

A. bullosus, Lamx. (*A. Turneri*, Phyc. Brit.). 1. 2. 5. 9-14.

A. compressus, Griff. 6! 9!

Order V.—**ECTOCARPACEAE**.

Streblonema Derb. et Sol.

S. investiens, Thur. 9!

S. fasciculatum, Thur. 4! 9!

S. velutinum, Thur. (*Elachista velutina*, Phyc. Brit.). 1-14.

S. simplex, Holm. et Batt. (*Ectocarpus simplex*, Holm. Fasc. 8). 9!

¹ This plant has been found by one of us (E. B.) to be mixed with *Punctaria tenuissima*, Grev. in Greville's own specimens, but it is not clear from Greville's description that he recognised it.

PHAEOPHYCEAE (*continued*).

Ectocarpus Lyngb.

- E. repens, Rke. (*E. reptans*, Holm. Fasc. No. 35). 9!
- E. parvulus,¹ Kütz.
- E. terminalis, Kütz. 4! 5! 9!
- E. Holmesii, Batt. 4! 9!
- E. pusillus, Harv. 4! 9!
- E. irregularis, Kütz. 9!
- E. caespitulus, Kjellm. 4! 9! (*E. caespitulus*, J. Ag.,
Holm. Fasc. No. 62).
- E. insignis, Crn. 4! 9!
- E. Lebelii, Crn. 9!
- E. fenestratus, Berk. 9!
- E. Crouani, Thuret. 6! 9!
- E. Sandrianus, Zan. 9!
- E. virescens, Thuret. 6! 9!
- E. secundus, Kütz. 9!
- E. hiemalis, Crn. 9!
- E. longifructus, Harv. 1. 9!
- E. arctus, Kütz. (*E. confervoides*, f. *arcta*, Holm. Fasc.
No. 64). 9!
- E. confervoides, Le Jol. 1-14.
 - f. siliculosa, Kjellm.
 - f. spatulata, Kjellm. 9!
 - f. patens, Holm. et Batt. 9! (*E. siliculosus*, β . *longipes*,
Phyc. Brit.).
 - f. penicillata, C. Ag. 9!
 - f. typica, Kjellm. 7!
- E. acanthophorus, Kütz. 9!
- E. fasciculatus, Harv. 1-14
 - f. glomerata, Holm. et Batt. 9!
 - f. draparnaldioides, Crn. 9!
- E. granulosus, C. Ag. 1-14.
 - f. tessellata, Harv.
- E. ovatus, Kjellm. 9!
- E. Hincksiae, Harv. 1. 7. 9! 12.
- E. tomentosus, Lyngb. 1-14.

¹ Determined by J. Agardh from specimen No. 211 in Hohenacker's Alg. Mar. sicc.

PHAEOPHYCEAE (*continued*).

Species requiring confirmation.

Ectocarpus brachiatus, Crn. (*Conserva brachiata*, E. B.).

E. crinitus, Carm. 1. 6.

E. Landsburgii, Harv. 2! 11.

E. distortus, Harv. 1!

Sorocarpus Pringsh.

S. uvaeformis, Pringsh. 9!

Isthmoplea Kjellm. 1-6. 9!

I. sphaerophora, Kjellm. (*Ectocarpus sphaerophorus*, Phyc. Brit.). 1-4! 9!

Pylaiella Bory.

P. litoralis, Kjellm. (*Ectocarpus litoralis*, Phyc. Brit.). 1-14.

f. vernalis, Kjellm. 9!

f. ramellosa, Holm. et Batt. 6!

f. ferruginea, Kjellm. 9!

f. firma, Kjellm. 9!

f. compacta, Kjellm. 4! 9!

f. amphibia, Holm. et Batt. 6! (*Ectocarpus amphibiis*, Phyc. Brit.).

Order VI.—ARTHROCLADIACEAE.

Arthrocladia Duby.

A. villosa, Duby. 1. 2. 4! 5. 7. 9! 13.

Order VII.—ELACHISTACEAE.

Myriactis Kütz.

M. pulvinata, Kütz. (*Elachista attenuata*, Phyc. Brit.). 9! 10. 11.

Elachista Duby.

E. stellulata, Aresch. 9!

E. stellaris, Aresch. 1. 6! 9!

E. Areschougii, Crn. 4!

E. scutulata, Duby. 1-14.

E. flaccida, Aresch. 1. 4! 6. 9!-12.

E. Grevillii, Arnott. 2. 4! 9.

E. fucicola, Fries. 1-14.

PHAEOPHYCEAE (*continued*).

Elachista Haydeni, Harv. 7!

E. curta, Harv. 6.

Halothrix Rke.

H. lumbricalis, Rke. 9!

Giraudia Derb. et Sol.

G. sphacelarioides, Derb. et Sol. 9!

Order VIII.—SPHACELARIACEAE.

i. *Sphacelariaceae crustaceae.*

Battersia Rke.

B. mirabilis, Rke. 4!

ii. *Sphacelariaceae genuinae.*

Sphacelaria Lyngb.

S. radicans, Harv. 1. 4! 5. 7. 9!

S. olivacea, Pringsh. 1. 4!

S. racemosa, Grev. 4!

S. tribuloides, Menegh. 4! 9!

S. cirrhosa, C. Ag. 1-14.

f. *nana*, Griff. 4! 9!

f. *patentissima*, Grev. 9!

f. *fusca*, Holm. et Batt. 1. 5! 6! 9! (*S. fusca*, Phyc. Brit.).

S. caespitula, Lyngb. 4!

S. plumula, Zan. (*S. pseudoplumosa*, Holm. Fasc. No. 24).
9!

S. plumigera, Holm. (*S. plumosa*, Phyc. Brit.). 1. 4!
7! 8. 9!

Chaetopteris Kütz.

Ch. plumosa, Kütz. 1. 2! 4! 6! (*Cladostephus plumosus*,
Holm. Fasc. No. 1).

Cladostephus C. Ag.

C. spongiosus, C. Ag. 1-14.

C. verticillatus, C. Ag. 1-14.

Halopteris Kütz.

H. filicina, Kütz. (*Sphacelaria filicina*, Phyc. Brit.).
6! 9! 10. 12. 13.

f. *patens* Harv. (*Sphacelaria Sertularia*, Phyc. Brit.).
9! 10. 14.

PHAEOPHYCEAE (*continued*).

Stypocaulon Kütz.

S. scoparium, Kütz. (*Sphacelaria scoparia*, Phyc. Brit.).

1-14.

f. *scoparioides*, Holm et Batt. 9! (*S. scoparioides*, Holm. Fasc. No. 97).

Order IX.—MYRIONEMACEAE.

Myrionema Grev.

M. strangulans, Grev. 1-14.

f. *punctiformis* (*M. punctiforme*, Phyc. Brit.). 4! 6! 9!

Ascocyclus Magnus.

A. Lichtensteinii, Holm. et Batt. 4!

A. Leclancherii, Magn. (*Myrionema Leclancherii*, Phyc. Brit.). 1-14.

A. reptans, Rke. 4! 9!

A. orbicularis, Rke. 9!

Ralfsia Berk.

a. Stragularia.

R. spongiocarpa, Batt. 4!

R. clavata, Crn. 2. 4! 9!

β. Euralfsia.

R. verrucosa, Aresch. (*R. deusta*, Phyc. Brit.). 1-14.

Order X.—CHORDARIACEAE.

Spermatochnus Kütz.

S. paradoxus, Rke. (*Stilophora Lyngbyei*, Phyc. Brit.).

1. 2! 9! 10.

S. Lejolisii, Rke.? 9! (*Stilophora Lejolisii*, Grevillea, xii. p. 142).

Stilophora J. Ag.

S. rhizodes, J. Ag. 1. 2! 6. 8. 9! 10. 12.

Chordaria C. Ag.

Ch. divaricata, C. Ag. 1. 12.

Ch. flagelliformis, C. Ag. 1-14.

Mesogloea C. Ag.

M. vermiculata, Le Jol. 1. 2. 4! 6. 9! 10. 11. 13.

Castagnea Derb. et Sol.

C. virescens, Thur. (*Mesogloea virescens*, Phyc. Brit.). 1-14.

PHAEOPHYCEAE (*continued*).

- Castagnea Zosteræ, Thur. (*M. virescens*, β . *zostericola*, Phyc. Brit.). 9!
- C. contorta, Thur. 9! (*Mesogloea gracilis*, Berk.?).
- C. Griffithsiana, J. Ag. 9! 10. (*Mesogloea Griffithsiana*, Phyc. Brit.).
- Myriocladia** J. Ag.
M. Lovenii, J. Ag. 9!
- Petrospongium** Näg.
P. Berkeleyi, Näg. (*Leathesia Berkeleyi*, Phyc. Brit.). 6! 9!
11. 14.
- Leathesia** J. E. Gray.
L. difformis, Aresch. (*L. tuberiformis*, Phyc. Brit.) 1-14.
L. crispa, Harv. 3.

Cohort II.—LAMINARINAE.

Order I.—SCYTOSIPHONACEAE.

- Phyllitis** Kütz.
Ph. filiformis, Batt. 4!
Ph. zosterifolia, Rke. (*Phyllitis Fascia*, Holm. Fasc. No. 43). 4!
Ph. Fascia, Kütz. (*Laminaria Fascia*, Phyc. Brit.). 1-14.
- Scytosiphon** C. Ag.
S. lomentarius, J. Ag. (*Chorda lomentaria*, Phyc. Brit.). 1-14.

Order II.—CHORDACEAE.

- Chorda** Stackh.
Ch. Filum, Stackh. 1-14.
f. Thrix, Hook. 4! 9!
Ch. tomentosa, Lyngb. (*C. filum*, β . *tomentosa*, Phyc. Brit.). 4! 6. 7! 9! 12.

Order III.—LAMINARIACEAE.

- Laminaria** Lamx.
L. saccharina, Lamx. 1-14.
f. caperata, Farlow.
f. Phyllitis, Le Jol. (*L. Phyllitis*, Phyc. Brit.). 4! 7!
L. hieroglyphica, J. Ag. 1. 3. 4!

PHAEOPHYCEAE (*continued*).

Laminaria digitata, Edm. 1-14.

f. *stenophylla*, Harv. 1. 4! 6. 9! 12.

f. *valida*, Foslie. 4!

f. *typica*, Foslie. 4!

f. *ensifolia*, J. Ag.

L. hyperborea, Foslie (*L. digitata*, Phyc. Brit. pro parte).

1. 3. 4! 7! 9!

Saccorhiza De la Pyl.

S. bulbosa, De la Pyl. (*Laminaria bulbosa*, Phyc. Brit.).

1-14.

Alaria Grev.

A. esculenta, Grev. 1. 2. 3. 4! 5. 6. 7! 9! 10. 11. 12.

Cohort III.—SPOROCHNINAE.

Order.—SPOROCHNACEAE.

Sporochnus Kütz.

S. pedunculatus, C. Ag. 1. 2. 4. 5. 9! 10. 12.

Carpomitra Kütz.

C. Cabrerae, Kütz. 9! 11.

Cohort IV.—CUTLERINAE.

Order.—CUTLERIACEAE.

Aglaozonia Zan.

A. reptans, Kütz. (*Zonaria parvula*, Phyc. Brit.). 4! 9! 10.

Zanardinia Nardo.

Z. collaris, Crn. (*Zonaria collaris*, Phyc. Brit.). 9!

Cutleria Grev.

C. multifida, Grev. 1. 2. 7. 9! 10. 11.

f. *angustifrons*, Holm. et Batt. 9!

Cohort V.—FUCINAE.

Order.—FUCACEAE.

Fucus Dcne. et Thur.

F. anceps, Ward et Harv. 11!

F. distichus, Linn. 1! 4!

F. ceranoides, Linn. 1-14.

F. platycarpus, Thur. 1-11.

PHAEOPHYCEAE (*continued*).

Fucus vesiculosus, Linn. 1-14.

f. *sphaerocarpa*, J. Ag.

f. *laterifructa*, Grev.

f. *spiralis*, Linn. 4! 7. 8! 9!

f. *baltica*, J. Ag. 4! 8! 9!

f. *nana*, Batt. 4.

F. serratus, Linn. 1-14.

f. *latifolia*, Turn. 1!

Ascophyllum Stackh.

A. nodosum, Le Jol. (*Fucus nodosus*, Phyc. Brit.). 1-14.

f. *scorpioides*, Hauck. 7! 8!

A. Mackaii, Holm. et Batt. (*Fucus Mackaii*, Phyc. Brit.).

1! 2. 10.

Pelvetia Dcne et Thur.

P. canaliculata, Dcne et Thur. (*Fucus canaliculatus*, Phyc. Brit.). 1-14.

Bifurcaria Stackh.

B. tuberculata, Stackh. (*Pycnophycus tuberculatus*, Phyc. Brit.). 9! 10. 14.

Himanthalia Lyngb.

H. lorea, Lyngb. 1-14.

Halidrys Lyngb.

H. siliquosa, Lyngb. 1-14.

f. *gracilis*, Holm. et Batt. 4! 9!

Cystoseira C. Ag.

C. ericoides, C. Ag. 2! 7! 9! 10. 11. 14.

C. granulata, C. Ag. 5! 6! 9!

C. discors, C. Ag. (*C. foeniculaceus*, Phyc. Brit.). 6! 9!
10. 11.

C. fibrosa, C. Ag. 9! 10. 11. 14.

Cohort VI.—TILOPTERIDINAE.

Order.—TILOPTERIDACEAE.

Tilopteris Kütz.

T. Mertensii, Kütz. (*Ectocarpus Mertensii*, Phyc. Brit.).

1-4! 7. 9!

PHAEOPHYCEAE (*continued*).

Cohort VII.—**DICTYOTINAE**.

Order.—**DICTYOTACEAE**.

Dictyota Lamx.

D. dichotoma, Lamx. 1-14.

f. *implexa*, J. Ag. (*D. dichotoma*, f. *intricata*, Phyc. Brit.). 1-14.

f. *latifrons*, Holm. et Batt. 9!

D. ligulata, J. Ag. 9!

Taonia J. Ag.

T. atomaria, J. Ag. 4! 5. 6! 8! 9! 10. 11.

f. *divaricata*, Holm. et Batt. 9!

Padina Adans.

P. pavonia, Gaillon. 9!

Dictyopteris Lamx.

D. polypodioides, Lamx. (*Haliseris polypodioides*, Phyc. Brit.). 9! 10. 11. 14.

Series IV.—**RHODOPHYCEAE**.

Cohort I.—**PORPHYRINAE**.

Order.—**PORPHYRACEAE**.

Goniotrichum Kütz.

Goniotrichum elegans, Le Jol. (*Bangia elegans*, Phyc. Brit.). 4! 9! 12.

Bangia Lyngb.

B. fusco-purpurea, Lyngb. 1-14.

f. *crispa*, Holm. et Batt. (*Bangia crispa*, Holm. Fasc. No. 104). 9!

f. *Lejolisii*, Holm. et Batt. 9!

Erythrotrichia Aresch.

E. carnea, J. Ag. (*Bangia ceramicola*, Phyc. Brit.). 1. 2. 4! 9!

Porphyra C. Ag.

P. ciliaris, Crn. (*Bangia ciliaris*, Phyc. Brit.). 1! 7! 9!

P. coccinea, J. Ag. 1! 4!

RHODOPHYCEAE (*continued*).

Porphyra leucosticta, Thur. 1-9!

P. linearis, Grev. (*P. vulgaris*, Phyc. Brit. pro parte).
1-9!

P. laciniata, C. Ag. 1-14.

f. *typica*.

f. *umbilicalis*.

P. amethystea, Kütz. 4!

P. abyssicola, Kjellm. 1!

Diploderma Kjellm.

D. miniatum, Kjellm. 1! 4! 13.

D. amplissimum, Kjellm. 13!

Cohort II.—**NEMALIONINAE.**

Order.—**HELMINTHOCLADIACEAE.**

Tribe I.—**Chantransieae.**

Chantransia Fries.

Ch. Daviesii, Thur. (*Callithamnion Daviesii*, Phyc. Brit.).
1-14.

Ch. corymbifera, Thur. 9!

Ch. virgatula, Thur. (*Callithamnion virgatulum*, Phyc. Brit.). 1-14.

Ch. secundata, Thur. 1-9!

Ch. luxurians, Thur. 6. 9!

Tribe II.—**Nemalieae.**

Nemalion Targioni-Tozzetti.

N. lubricum, Duby. 6! 9!

N. multifidum, J. Ag. 1. 2. 5. 6! 9! 10. 11!

Helminthocladia J. Ag.

H. purpurea, J. Ag. (*Nemalion purpureum*, Phyc. Brit.).
9! 11.

H. Hudsoni, J. Ag. 9!

Helminthora J. Ag.

H. divaricata, J. Ag. (*Dudresnaya divaricata*, Phyc. Brit.).
1. 9! 13.

RHODOPHYCEAE (*continued*).

Order II.—**CHAETANGIACEAE**.

Tribe.—**Scinaieae**.

Scinaia Bivona.

S. furcellata, Bivona (*Ginnania furcellata*, Phyc. Brit.)

1. 2. 9!

f. *subcostata*, J. Ag. 1!

Order III.—**GELIDIACEAE**.

Tribe I.—**Binderelleae**.

Choreocolax Reinsch.

Ch. Polysiphoniae, Reinsch. 4! 9!

Tribe II.—**Harveyelleae**.

Harveyella Schmitz et Rke.

H. mirabilis, Schmitz et Rke 4! 9!

Tribe III.—**Wrangelieae**.

Atractophora Crn.

A. hypnoides, Crn. 9!

Naccaria Endlicher.

N. Wigghii, Endlicher. 2. 7. 8! 9! 10. 11. 13.

Tribe IV.—**Gelideae**.

Pterocladia J. Ag.

P. capillacea, Bornet (*Gelidium corneum*, var. *capillaceum*, Phyc. Brit.). 9.

Gelidium Lamx.

G. corneum, Lamx. 1-14.

f. *abnormis*, Grev.

f. *aculeata*, Grev.

f. *clavata*, Grev.

f. *clavifera*, Grev.

f. *conferta*, Grev.

f. *flexuosa*, Harv.

f. *latifolia*, Grev.

f. *pulchella*, Grev.

f. *sesquipedalis*, Grev.

f. *uniformis*, Grev.

G. crinale, J. Ag. (*G. corneum*, var. *crinale*, Phyc. Brit.).

1. 4! 5. 9!

RHODOPHYCEAE (*continued*).

Cohort III.—GIGARTININAE.

Order I.—GIGARTINACEAE.

Tribe I.—Gigartineae.

Chondrus J. Ag.

Ch. crispus, Stackh. 1-14.

f. virens, Turn.

f. stellata, Turn.

f. aequalis, Turn.

f. filiformis, Turn.

f. patens, Turn.

f. sarniensis, Turn.

Gigartina Stackh.

G. Teedii, Lamx. 9!

G. acicularis, Lamx. 9! 11. 13.

G. pistillata, Stackh. 9!

G. mamillosa, J. Ag. 1-14.

f. linearis, Turn.

f. prolifera, Turn.

f. echinata, Turn.

f. incurvata, Turn.

Tribe II.—Tylocarpeae.

Phyllophora Grev.

Ph. rubens, Grev. 1-4! 9!

Ph. Brodiaei, J. Ag. 1. 4! 5! 7! 12.

f. angustissima, C. Ag. 1!

Ph. Traillii, Holm. et Batt. 4! 5. 9!

Ph. palmettoides, J. Ag. 9!

Ph. membranifolia, J. Ag. 1-14.

Stenogramme Harv.

S. interrupta, Mont. 9! 10. 14!

Gymnogongrus Mart.

G. Griffithsiae, Mart. 1. 2. 9! 10. 12.

G. norvegicus, J. Ag. (*Chondrus norvegicus*, Phyc. Brit.).

1. 2. 6! 7. 9!

Ahnfeltia Fries.

A. plicata, Fries (*Gymnogongrus plicatus*, Phyc. Brit.).

1-14.

RHODOPHYCEAE (*continued*).

Actinococcus Kütz.

A. roseus, Kütz. 1. 4! 5! 6! 7!

Tribe III.—Callymenieae.

Callophyllis Kütz.

C. laciniata, Kütz. (*Rhodymenia laciniata*, Phyc. Brit.). 9!

Callymenia J. Ag.

C. reniformis, J. Ag. 1. 2. 9! 10. 11. 13.

C. microphylla, J. Ag. 9!

Order II.—RHODOPHYLLIDACEAE.

Tribe I.—Cystoclonieae.

Cystoclonium Kütz.

C. purpurascens, Kütz. (*Hypnea purpurascens*, Phyc. Brit.). 1-14.

Catenella Grev.

C. Opuntia, Grev. 1-14.

Euthora J. Ag.

E. cristata, J. Ag. (*Rhodymenia cristata*, Phyc. Brit.). 1. 4! 7!

Tribe II.—Rhodophyllideae.

Rhodophyllis Kütz.

Rh. bifida, Kütz. (*Rhodymenia bifida*, Phyc. Brit.). 1. 2. 4. 5. 7! 8. 9! 11. 14.

f. latifrons, Holm. et Batt. 9!

Rh. appendiculata, J. Ag. (*Rh. bifida*, var. *ciliata*, Phyc. Brit.). 9!

Cohort IV.—RHODYMENINAE.

Order I.—SPHAEROCOCCACEAE.

Tribe I.—Sphaerococceae.

Sphaerococcus Grev.

Sp. coronopifolius, Grev. 2. 6. 9! 11. 14.

Tribe II.—Gracilarieae.

Gracilaria Grev.

G. confervoides, Grev. 1-14.

RHODOPHYCEAE (*continued*).

Gracilaria divergens, J. Ag. 9 !

G. compressa, Grev. 9 !

G. multipartita, J. Ag. 9.

Calliblepharis Kütz.

C. ciliata, Kütz. (*Rhodymenia ciliata*, Phyc. Brit.). 1. 2. 7 !
8 ! 9 ! 11. 14.

f. *angusta*, Holm. et Batt. 8 !

C. jubata, Kütz. (*Rhodymenia jubata*, Phyc. Brit.). 1. 2. 7.
9 ! 14.

f. *divaricata*, Holm. et Batt. 9 !

f. *dilatata*, Holm. et Batt. 9 !

Order II.—**RHODYMENIACEAE.**

Tribe I.—**Rhodymenieae.**

Rhodymenia J. Ag.

Rh. palmetta, Grev. 1. 2. 5. 6. 9 ! 10. 11. 14.

f. *Elisiae*, Kütz. 9 !

f. *bifida*, Turn. 9 !

f. *crassiuscula*, Turn. 9 !

f. *flabelliformis*, Kütz. 9 !

f. *divaricata*, Kütz. 9 !

Rh. palmata, Grev. 1–14.

f. *typica*, Kjellm. 4 ! 9 !

f. *marginifera*, Harv. 9 !

f. *sarniensis*, Grev. 4 ! 9 !

f. *simplex*, J. Ag. 9 !

f. *sobolifera*, J. Ag. 4 ! 9 !

f. *laciniata*, Holm. et Batt. 4 ! 9 !

Rh. nicaeensis, Holm. (*R. palmetta*, var. *nicaeensis*,
Phyc. Brit.). 6. 8. 9 !

Cordylecladia J. Ag.

C. erecta, J. Ag. (*Gracilaria erecta*, Phyc. Brit.). 4 ! 6 !
9 ! 11.

Lomentaria Lyngb.

L. articulata, Lyngb. (*Chyloccladia articulata*, Phyc. Brit.).
1–14.

RHODOPHYCEAE (*continued*).

Lomentaria clavellosa, Gaill. (*Chrysomenia clavellosa*, Phyc. Brit.). 1-14.

L. rosea, Thur. (*Chrysomenia rosea*, Phyc. Brit.). 1! 4! 6! 9!

Champia Lamx.

Ch. parvula, Harv. (*Chylocladia parvula*, Phyc. Brit.). 1. 4! 6. 9!

Chylocladia Grev.

Ch. kaliformis, Grev. 1. 2. 6. 9! 10. 11. 14.

f. *patens*, Kütz. 9!

f. *squarrosa*, Harv. 9!

Ch. ovalis, Hook. 1. 2. 3. 6. 9! 10. 11. 14.

Ch. reflexa, Lenorm. 9!

Tribe II.—Plocamieae.

Plocamium Lyngb.

Pl. coccineum, Lyngb. 1-14.

f. *angustifrons*, Le Jol. 1-14.

f. *latifrons*, Le Jol. 1-14.

f. *uncinata*, C. Ag. 4! 9!

Order III.—DELESSERIACEAE.

Tribe I.—Nitophylleae.

Nitophyllum Grev.

N. uncinatum, J. Ag. 1. 9!

N. Gmelini, Harv. 6! 9! 11.

N. laceratum, Grev. 1-14.

f. *uncinata*, Grev. 9!

f. *Smithii*, Kütz. 4! 9!

N. reptans, Crn. 4! 9!

N. punctatum, Grev. 1-14.

f. *ocellata*, J. Ag. 1. 4! 6. 9!

f. *crispata*, Harv. 1. 4! 9.

f. *Pollexfenii*, Harv. 1!

f. *fimbriata*, Harv. 1. 4! 6. 9!

N. venulosum, Zan. 9. (*N. thysanorhizans*, Holm. Grevillea, 1874, p. 2, pl. 12, and 1875, pl. 37, figs. 5-7).

N. Bonnemaisionii, Grev. 1. 3. 4! 5. 6. 9!

f. *crassinervis*, Batt. 4!

N. Hilliae, Grev. 4! 9! 14.

RHODOPHYCEAE (*continued*).

Nitophyllum literatum, J. Ag. 9 !

N. versicolor, Harv. 1. 6 ! 14.

Tribe II.—Delesserieae.

Delesseria Lamx.

D. alata, Lamx. 1-14.

D. angustissima, Griff. 1. 3 !

D. Hypoglossum, Lamx. 1. 2. 4 ! 5. 6. 7 ! 8. 9 ! 10. 11.
14.

f. *crispa*, Crn. 9 !

D. ruscifolia, Lamx. 1. 2. 4 ! 8-9 ! 10. 11. 14.

D. sinuosa, Lamx. 1-14.

D. sanguinea, Lamx. 1-14.

Order IV.—BONNEMAISONIACEAE.

Bonnemaisonia C. Ag.

B. asparagoides, C. Ag. 1-14.

f. *teres*, Harv.

Order V.—RHODOMELACEAE.

Tribe I.—Rhodomeleae.

Bostrychia Mont.

B. scorpioides, Mont. 4 ! 5. 9 ! 10. 11. 13 (*Helicothamnion*
scorpioides, Phyc. Brit.).

Rhodomela C. Ag.

Rh. subfusca, C. Ag. 1-14.

f. *gracilior*, J. Ag. 4 !

Rh. lycopodioides, C. Ag. 1-14.

f. *typica*, Kjellm. 1-14.

f. *laxa*, Kjellm. 1. 4 !

Odonthalia Lyngb.

O. dentata, Lyngb. 1. 2. 3. 4 ! 5. 7 ! 10.

Tribe II.—Laurencieae.

Laurencia Lamx.

L. obtusa, Lamx. 1. 2. 4 ! 9 ! 14.

f. *genuina*, Hauck. 9 !

f. *crucifera*, Hauck. 9 !

L. hybrida, Lenorm. 1-14.

L. pinnatifida, Lamx. 1-14.

RHODOPHYCEAE (*continued*).

Tribe III.—Amansieae.

Halopithys Kütz.

- H. pinastroides, Kütz. (*Rytiphloea pinastroides*, Phyc. Brit.). 5. 9!

Tribe IV.—Polysiphonieae.

Chondria Harv.

- Ch. tenuissima, C. Ag. (*Laurencia tenuissima*, Phyc. Brit.). 9! 14.
Ch. dasyphylla, C. Ag. (*Laurencia dasyphylla*, Phyc. Brit.). 1-14.
Ch. caerulescens, J. Ag. 9!

Polysiphonia Grev.

a. Oligosiphoniae ecorticatae.

- P. sertularioides, J. Ag. 4! 9! (*Polysiphonia pulvinata*, Phyc. Brit.).
P. Rhunensis, Bornet. 6! 9!
P. foetidissima, Cocks. 9!
P. fibrata, Harv. 1-14.
P. urceolata, Grev. 1-14.
f. typica, J. Ag. 1-14.
f. patens, J. Ag. 4! 9!
f. formosa, J. Ag. (*P. formosa*, Phyc. Brit.). 1. 4! 9!
f. comosa, J. Ag. 4!
P. divaricata, Kütz. 4.

β. Oligosiphoniae corticatae.

- P. subulata, J. Ag.
f. Griffithsiana, J. Ag. (*P. Griffithsiana*, Phyc. Brit.). 9.
P. Richardsoni, Hook. 2!
P. spinulosa, Grev. 2!
f. major (*P. Carmichaeliana*, Phyc. Brit.).
P. elongella, Harv. 1. 2. 5. 6. 9! 14.
P. elongata, Grev. 1-9! 11. 14.
f. denudata, J. Ag. 4!
f. rosea, J. Ag. 9!
P. violacea, Wyatt. 1. 2. 4! 5. 9! 14.
P. fibrillosa, Grev. 4! 9!

RHODOPHYCEAE (*continued*).

γ. Polysiphoniae ecorticatae.

- P. variegata*, J. Ag. 9!
- P. furcellata*, Harv. 9!
 - f. forcipata*, J. Ag. (*P. turgidula*, Holm. Fasc. No. 7). 9!
 - f. patula*, J. Ag. (*P. furcellata*, Phyc. Brit.). 9!
- P. fastigiata*, Grev. 1-14.
- P. ceramiaeformis*, Crn. 9!
- P. simulans*, Harv. 9!
- P. atro-rubescens*, Grev. 1-14.
- P. subulifera*, Harv. 2. 9! 11! 13.
- P. obscura*, J. Ag. 9!
- P. nigrescens*, Grev. 1-14.
 - f. affinis*, Harv. (*P. affinis*, Phyc. Brit.).
- P. parasitica*, Grev. 1. 2! 4! 6. 9! 14.
- P. byssoides*, Grev. 9!

δ. Polysiphoniae corticatae.

- P. Brodiaei*, Grev. 1-9! 11. 14.
 - f. typica*, Holm. et Batt. 9!
 - f. densa*, Holm. et Batt. 9!
- P. thuyoides*, Harv. (*Rytiphloea thuyoides*, Phyc. Brit.). 4!
 - 5. 6! 9! 11.
- P. fruticulosa*, Spreng. (*Rytiphloea fruticulosa*, Phyc. Brit.).
 - 2. 5. 6! 9! 11. 14,

Pterosiphonia Falk.

- P. complanata*, Schmitz, MS. 9! 11.

Tribe V.—Dasyeae.

Dasya C. Ag.

- D. venusta*, Harv. 9!
- D. arbuscula*, C. Ag. 1. 2. 5. 9! 11. 14.
- D. ocellata*, Harv. 9! 11. 14.
- D. punicea*, C. Ag. 9!
- D. media*, Harv. MS. 1!
- D. coccinea*, C. Ag. 1-14.
 - f. tenuis*, J. Ag. 1! 9! 14.
 - f. patens*, J. Ag. (*D. coccinea*, *f. squarrosa*, Phyc. Brit.).
- D. Cattloviae*, Harv. 9.

RHODOPHYCEAE (*continued*).

Order IV.—**CERAMIACEAE**.

Tribe I.—**Spermothamnieceae**.

Sphondylothamnion Näg.

S. multifidum, Näg. (*Wrangelia multifida*, Phyc. Brit.).

2. 6. 9! 11. 14.

f. *pilifera*, C. Ag. 9!

Spermothamnion Aresch.

S. Turneri, Aresch. (*Callithamnion Turneri*, Phyc. Brit.).

1-14.

f. *intricata*, Holm. et Batt. (*Callithamnion intricatum*, J. Ag.).

f. *repens*, Le Jol. 2. 6. 4! 9!

S. flabellatum, Bornet. (*Callithamnion strictum*, C. Ag.).

4! 9!

Ptilothamnion Thuret.

P. pluma, Thur. (*Callithamnion pluma*, Phyc. Brit.).

2. 4! 6. 9! 11. 14.

Tribe II.—**Griffithsieae**.

Griffithsia C. Ag.

G. corallina, C. Ag. 1-14.

G. setacea, C. Ag. 1-14.

G. Devoniensis, Harv. 9!

G. barbata, C. Ag. 9!

Halurus Kütz.

H. equisetifolius, Kütz. (*Griffithsia equisetifolia*, Phyc. Brit.). 1-14.

f. *simplicifilum*, Harv. (*Griffithsia simplicifilum*, Phyc. Brit.). 7. 11!

Tribe III.—**Monosporeae**.

Bornetia Thur.

B. secundiflora, Thur. (*Griffithsia secundiflora*, Phyc. Brit.). 9!

Monospora Solier.

M. pedicellata, Solier. (*Callithamnion pedicellatum*, Phyc. Brit.). 1. 2. 5. 6. 9! 11. 14.

f. *comosa*, Holm. et Batt. 9!

M. clavata, J. Ag. 9!

RHODOPHYCEAE (*continued*).

Pleonosporium Näg.

P. Borreri, Näg. (*Callithamnion Borreri*, Phyc. Brit.).

1. 8. 9! 13.

f. fasciculata, Holm. et Batt. (*Call. fasciculatum*, Phyc. Brit.). 8!

Tribe IV.—Callithamnieae.

Rhodochorton Näg¹.

Rh. Rothii, Näg. (*Callithamnion Rothii*, Phyc. Brit.).

1-14.

Rh. floridulum, Näg. (*Callithamnion floridulum*, Phyc. Brit.). 1-14.

Rh. intermedium, Kjellm. 4!

Rh. mesocarpum, Kjellm. (*Callithamnion mesocarpum*, Phyc. Brit.). 2.

Rh. membranaceum, Magn. 4! 9!

Rh. sparsum, Kjellm. 2. 4! 9!

Callithamnion Lyngb.

a. Eucallithamnion.

C. tenuissimum, Kütz. 9!

C. interruptum, C. Ag. 9!

C. polyspermum, C. Ag. 1-14.

C. roseum, Harv. 1-14.

C. tripinnatum, C. Ag. 9. 11.

C. affine, Harv. 2.

β. Phlebothamnion.

C. Hookeri, C. Ag. 1-14.

C. Brodiaei, Harv. 4! 9!

C. fruticulosum, J. Ag. 9!

C. arbuscula, Lyngb. 1. 2. 3! 4! 5. 11.

C. tetragonum, C. Ag. 1. 2. 5. 6. 9! 11. 14.

f. brachiata, J. Ag. (*C. brachiatum*, Phyc. Brit.). 1. 2. 5. 6. 9! 11. 14.

C. tetricum, C. Ag. 9! 11. 14.

¹ In the absence of cystocarpic fruit, which is unknown at present, the position of this genus is doubtful; it is placed here only for the sake of convenience.

RHODOPHYCEAE (*continued*).

γ. Poecilothamnion.

C. corymbosum, Lyngb. 1-14.

C. granulatum, C. Ag. (*C. spongiosum*, Phyc. Brit.). 1-14.

δ. Seirospora.

C. seirospermum, Griff. 1! 2. 3. 9!

f. *miniata*. 9!

f. *versicolor*, Holm. et Batt. 9!

C. byssoides, Arn. 1. 9, 14.

f. *seirosporifera*, Holm. et Batt. (*C. hormocarpum*, Holm.). 9.

Tribe V.—Compsothamnieae.

Compsothamnion Schmitz.

C. thuyoides, Schmitz (*Callithamnion thuyoides*, Phyc. Brit.). 6. 8. 9. 11. 14.

C. gracillimum, Schmitz (*Callithamnion gracillimum*, Phyc. Brit.). 4. 5. 6. 9.

Tribe VI.—Ptiloteae.

Plumaria Schmitz.

P. elegans, Bonnem. 1-14.

Ptilota C. Ag.

P. plumosa, C. Ag. 1! 2. 3. 4! 7! 10. 11.

Tribe VII.—Crouanieae.

Antithamnion Näg.

A. cruciatum, Näg. (*Callithamnion cruciatum*, Phyc. Brit.). 2! 5! 6. 9! 14.

f. *pumila*, Harv. 9!

A. plumula, Thur. (*Callithamnion plumula*, Phyc. Brit.). 1-14.

f. *crispa*, J. Ag. 4! 9!

f. *spinescens*, Strömf. 4!

A. floccosum, Kleen. (*Callithamnion floccosum*, Phyc. Brit.). 1. 2. 4!

A. barbatum, Holm. et Batt. (*Callithamnion barbatum*, Phyc. Brit.). 4! 6! 9!

Crouania J. Ag.

C. attenuata, J. Ag. 9!

RHODOPHYCEAE (*continued*).

Tribe VIII.—Spiridieae.

Spyridia Harv.

S. filamentosa, Harv. 6! 9!

Tribe IX.—Ceramieae.

Ceramium Lyngb.

a. Inermes.

C. gracillimum, Harv. 9! 11.

C. fastigiatum, Harv. 4. 9! 11.

C. tenuissimum, J. Ag. (*C. nodosum*, Phyc. Brit.). 5.
6. 9!

f. arachnoidea, C. Ag. 9!

C. Deslongchampsii, Chauv. 1. 2. 4! 5. 6. 7. 9! 11. 14.

C. strictum, Harv. 4! 6. 9! 11.

f. divaricata, Holm. et Batt. (*C. diaphanum*, Crn.). 9!

C. diaphanum, Roth. 4! 9!

C. circinatum, J. Ag. (*C. decurrens*, Phyc. Brit.). 9!

C. rubrum, C. Ag. 1-14.

f. pedicellata, J. Ag. 4! 9!

f. prolifera, J. Ag. (*C. botryocarpum*, Phyc. Brit.). 4! 9!

f. secundata, J. Ag. 4! 9!

f. corymbosa, J. Ag.

f. microcladioides, Holm. et Batt. (*C. Microcladia*,
Cocks.). 4! 7! 9!

β. Armatae.

C. echionotum, J. Ag. 1. 9!

C. acanthonotum, Carm. 1-14.

f. transcurrens, Holm. et Batt. 9!

C. ciliatum, Ducluz. 9! 10. 11.

C. flabelligerum, J. Ag. 4! 5. 9!

Microcladia Grev.

M. glandulosa, Grev. 9!

Cohort V.—**CRYPTONEMINAE.**

Order I.—**GLOEOSIPHONIACEAE.**

Gloeosiphonia Carm.

G. capillaris, Carm. 1. 2. 3. 4! 5. 9! 11. 14.

RHODOPHYCEAE (*continued*).

Order II.—**GRATELOUPIACEAE**.

Halymenia J. Ag.

H. ligulata, C. Ag. 2. 3. 6. 8! 9! 11. 13. 14.

f. *dichotoma*, Harv. 9!

f. *latifolia*, Harv. 9!

f. *ramentacea*, Harv. 9!

Grateloupia C. Ag.

G. filicina, C. Ag. 9!

f. *intermedia*, Holm. et Batt. 9!

G. dichotoma, J. Ag. 9!

Order III.—**DUMONTIACEAE**.

Dumontia Lamx.

D. filiformis, Grev. 1-14.

f. *crispata*, J. Ag. 4! 9!

Dudresnaya Bonnem.

D. coccinea, Bonnem. 2. 4! 9! 11.

Dilsea Stackh.

D. edulis, Stackh. (*Iridaea edulis*, Phyc. Brit.). 1-14.

Order IV.—**NEMASTOMACEAE**.

Tribe I.—**Schizymeniaceae**.

Calosiphonia Crn.

C. Finisterrae, Crn. 9!

Schizymenia J. Ag.

S. Dubyi, J. Ag. (*Kallymenia Dubyi*, Phyc. Brit.). 1. 9!

11.

Tribe II.—**Halarachnieae**.

Furcellaria Lamx.

F. fastigiata, Lamx. 1-14.

Order V.—**RHIZOPHYLLIDACEAE**.

Polyides C. Ag.

P. rotundus, Grev. 1-14.

Order VI.—**SQUAMARIACEAE**.

Tribe I.—**Cruoriaceae**.

Petrocelis J. Ag.

P. cruenta, J. Ag. (*Cruoria pellita*, Phyc. Brit.). 2. 4! 9!

11.

RHODOPHYCEAE (*continued*).

Petrocelis Hennedyi, Batt. (*Actinococcus Hennedyi*, Harv.).

2! 4! 7!

Cruoria Fries.

Cr. pellita, Lyngb. 4! 5. 6. 9! 14.

Tribe II.—Squamarieae.

Peyssonnelia Dcne.

P. Dubyi, 1-14.

P. Harveyana, Crn. 4! 9!

GENERA OF DOUBTFUL AFFINITY.

Haematocelis J. Ag.

H. fissurata, Crn. 4!

Haematophlaea Crn.

H. Crouanii, Crn. 4! 9!

Rhododermis Crn.

Rh. elegans, Crn.

f. polystromatica, Batt. 4! 9!

Rh. parasitica, Batt. 4!

Order VII.—HILDENBRANDTIACEAE.

Hildenbrandtia Nardo.

H. prototypus, Nardo.

f. rosea, Kütz. (*H. rubra*, Phyc. Brit.). 1-14.

Order VIII.—CORALLINACEAE.

Schmitziella Born. et Batt.

S. endophloea, Born. et Batt. 5! 9!

Choreonema Schmitz.

Ch. Thuretii, Schmitz (*Melobesia Thuretii*, Born.; Holm.

Fasc. No. 14). 9!

Melobesia Lamx.

M. confervoides (*Lithocystis Allmanni*, Phyc. Brit.). 4! 9!

M. corticiformis, Kütz. 4! 9!

M. membranacea, Lamx. 1-14.

M. farinosa, Lamx. 4! 6! 9!

M. verrucata, Lamx. 4! 6. 9!

M. Lejolisii, Rosan. 4! 9!

M. pustulata, Lamx. 1-14.

RHODOPHYCEAE (*continued*).

Melobesia macrocarpa, Rosan. 4! 9!

M. Laminariae, Crn. 4! 9!

M. Corallinae, Crn. 4! 9!

Lithophyllum Phil.

L. lichenoides, Phil. (*Melobesia lichenoides*, Phyc. Brit.).
6! 9! 14.

L. Lenormandi, Rosan. 4! 6! 9!

Lithothamnion Phil.

L. fasciculatum, Aresch. (*Melobesia fasciculata*, Phyc. Brit.). 11.

L. calcareum, Aresch. (*Melobesia calcarea*, Phyc. Brit.).
2. 3. 4! 6. 9! 11. 14.

L. polymorphum, Aresch. (*Melobesia polymorpha*, Phyc. Brit.). 1-14.

L. agariciforme, Aresch. (*Melobesia agariciformis*, Phyc. Brit.). 11.

Corallina Lamx.

C. officinalis, Linn. 1-14.

C. squamata, Ellis. 6! 9! 14.

C. mediterranea, Aresch. 9!

C. rubens, Ellis et Sol. (*Jania rubens*, Phyc. Brit.). 6. 9!
10. 14.

f. *corniculata*, Hauck. (*Jania corniculata*, Phyc. Brit.).
5. 6! 9! 11. 14.

APPENDIX I.

The following species must be excluded from the list of British Marine Algae, since they have not been proved to grow on the shores of Britain, but have only been met with as waifs.

PHAEOPHYCEAE.

Cystoseira barbata, C. Ag.

Laminaria longicuris, De la Pyl.

Sargassum bacciferum, C. Ag.

„ *vulgare*, C. Ag.

RHODOPHYCEAE.

Dasya Mulleri, Sond.

Gelidium cartilagineum, Gaill.

APPENDIX II.

The following species may be expected to occur on the shores of Britain, having been found either on the Atlantic shores of France, or of Norway, or in the Baltic Sea. It is possible that species belonging to the Mediterranean Flora may also occur, as well as *Nitophyllum venulosum*, Zan., but it is not possible to suggest with any degree of certainty the species which may occur on the South-west coasts of England and Ireland. The capital letters N. and S. are employed to indicate that they may occur respectively on the Northern or Southern shores of Britain.

CYANOPHYCEAE.

Brachytrichia Balani, Born. et Flah. S.

Calothrix Contarenii, Born. et Flah. N. S.

C. fusco-violacea, Crn. S.

C. rubra, Born. et Flah. S.

Gloeotrichia punctulata, Thur. S.

Lyngbya gracilis, Menegh. S.

L. membranacea, Kütz. S.

L. persicina, Kütz. S.

CYANOPHYCEAE (*continued*).

- Merismopoedia** glauca, Naeg. S.
- Nodularia** armorica, Thur. S.
- Oscillaria** subsalsa, C. Ag. N.
- Plectonema** terebrans, Born. et Flah. S.
- Phormidium** incrustatum, Gom. MS. S.
- Pleurocapsa** fuliginosa, Hauck. N. S.
- Spirulina** versicolor, Thur. S.

CHLOROPHYCEAE.

- Acrochaete** repens, Pringsh. S.
- Blastophysa** rhizopus, Rke. N.
- Characium** marinum, Kjellm. N.
- Chaetomorpha** Cladophorae, Crn. N.
- „ gracilis, Kütz. N. S.
- „ Sphacelariae, Fosl. N.
- Chlorochytrium** dermatocolax, Rke. N. S.
- Chlorangium** marinum, Cienk. N.
- Cladophora** pygmaea, Rke. N.
- „ sericea, Reinb. N. S.
- Enteromorpha** fucicola, J. Ag. N. S.
- „ radiata, J. Ag. N. S.
- „ tubulosa, J. Ag. N. S.
- Monostroma** balticum, Wittr. N.
- „ fuscum, Wittr. N.
- „ oxycoccum, Kütz. S.
- „ orbiculatum, Thur. S.
- „ splendens, Wittr. N.
- Ostreobium** Queketti, Born. et Flah. S.
- Phaeophila** Engleri, Rke. N.
- „ Floridearum, Hauck. S.
- Protoderma** marinum, Rke. N.
- Schizogonium** laetevirens, Kütz. N. f. *crispata*, Reinb.
- Ulvella** lens, Crn. S.
- Vaucheria** intermedia, Nordst. N. S.
- „ coronata, Nordst. N. S.
- „ piloboloides, Thur. N. S.
- Zygomitus** reticulatus, Born. et Flah. S.

PHAEOPHYCEAE.

- Alaria** linearis, Strömf. N.
Ascocyclus foecundus, Rke. N.
 „ globosus, Rke. N.
 „ ocellatus, Rke. N.
Coilodesme bulligera, Strömf. N.
Ectocarpus fulvescens, Born. S.
 „ microscopicus, Crn. S.
 „ Myriocladiae, Crn. S.
 „ Stilophorae, Crn. N. S.
Desmotrichum balticum, Kütz. N.
 „ scopulorum, Rke. N.
Fucus evanescens, C. Ag. N.
Gobia baltica, Rke. N.
Halorhiza vaga, Kütz. N.
Haplospora globosa, Kjellm. N.
Kjellmania sorifera, Rke. N.
Leptonema fasciculatum, Rke. N.
Liebmannia major, Crn. S.
Lithoderma fatiscens, Aresch. N.
Myriocladia chordariaeformis, Crn. S.
 „ tomentosa, Crn. S.
Phyllaria lorea, Kjellm. N.
Scaphospora speciosa, Kjellm. N.
Scytosiphon pygmaeus, Rke. N.
Streblonema volubilis, Thur. S.
Symphoricoccus radians, Rke. N. S.

RHODOPHYCEAE.

- Antithamnion** boreale, Kjellm. N.
Callithamnion bipinnatum, Crn. S.
 „ decompositum, J. Ag. S.
 „ elegans, C. Ag. S.
 „ fallax, Crn. S.
 „ Furcellariae, J. Ag. S.
 „ Gaillonii, Crn. S.
 „ Hapalidii, Crn. S.
 „ parvulum, Crn. S.

RHODOPHYCEAE (*continued*).

- Callithamnion** serpens, Crn. S.
- „ sphaericum, Crn. S.
- Callophyllis** flabellata, Crn. S.
- Ceramium** pennatum, Crn. S.
- Chantransia** efflorescens, J. Ag. S.
- Contarinia** pulcherrima, Crn. S.
- Crouania** bispora, Crn. S.
- Cruoriella** armorica, Crn. S.
- Cryptonemia** seminervis, J. Ag. S.
- Delesseria** Boerii, Rupr. N.
- Dermocorynus** Montagnei, Crn. S.
- Halosaccion** ramentaceum, J. Ag. N.
- Haematocelis** parasitica, Crn. S.
- „ rubens, J. Ag. S.
- Liagora** viscida, C. Ag. S.
- Lithophyllum** laeve, Strömf. N.
- Lithothamnion** circumspectum, Strömf. N.
- „ depressum, Crn. N.
- „ glaciale, Kjellm. N.
- „ intermedium, Kjellm. N.
- „ soriferum, Kjellm. N.
- Melobesia** callithamnioides, Rosan. S.
- „ confinis, Crn. S.
- „ hapalidioides, Crn. S.
- „ myriocarpa, Crn. S.
- „ simulans, Crn. S.
- Nemastoma** marginifera, J. Ag. S.
- Nitophyllum** alliaceum, Crn. S.
- „ Sandrianum, J. Ag. S.
- Peyssonnelia** atro-purpurea, Crn. S.
- „ rupestris, Crn. S.
- Phyllophora** Bangii, Jensen. N.
- „ Herediae, J. Ag. S.
- Polysiphonia** insignis, Crn. S.
- „ intricata, J. Ag. S.
- „ opaca, Zan. S.
- „ pennata, J. Ag. S.
- Ptilota** pectinata, Kjellm. N.

RHODOPHYCEAE (*continued*).

Ptilota serrata, Kütz. N.

Rhodochorton chantransioides, Rke. N.

Rhodomela virgata, Kjellm. N.

Rhodophyllis dichotoma, Gobi. N.

Solieria chordalis, J. Ag. S.



Holmes, E. M. and Batters, Edward Arthur Lionel. 1890. "A revised list of the British marine algae." *Annals of botany* 5, 63–107.

<https://doi.org/10.1093/oxfordjournals.aob.a090627>.

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DOI: <https://doi.org/10.1093/oxfordjournals.aob.a090627>

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