

## A PRELIMINARY CHECK-LIST OF BRITISH MARINE ALGAE

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This preliminary list of some of the classes of the algae has been prepared, mainly for the use of British phycologists, to form a basis on which to work for the eventual compilation of a complete check and locality list of all species of British marine algae. The compiler would be grateful for all additions and corrections to this list, and for records of marine species from the algal classes not included in the present list.

The classes of algae treated in this list are the Chlorophyceae (53 gen., 156 spp.), Xanthophyceae (7 gen., 15 spp.), Chrysophyceae (15 gen., 22 spp.), Phaeophyceae (96 gen., 199 spp.), Rhodophyceae (126 gen., 324 spp.), and Cyanophyceae (39 gen., 125 spp.). The genera are listed alphabetically under the family and the species alphabetically under the genus. If a name has been changed from that given in Newton (1931), the name in Newton is added, in brackets, below. Names preceded by a question mark appear to need revision for nomenclatural or taxonomic reasons. Most of the so-called varieties listed are very probably merely habitat forms of the species, but further investigation is needed before new combinations are made for them. Notes are given at the end of each class, the number in brackets following a name in the list refers to these notes.

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## CHLOROPHYCEAE

## VOLVOCALES

**Chlamydomonadaceae**

- BRACHIOMONAS Bohlin, 1897.  
*simplex* Hazen  
*submarina* Bohlin  
 ? *westiana* Pascher
- CARTERIA Diesing, 1866.  
*excavata* Mass. ex Carter
- CHLAMYDOMONAS Ehrenberg, 1833.  
*brachyura* G. S. West  
*microplankton* Rke.  
*quadrilobata* Carter
- PLATYMONAS G. S. West, 1916.  
*apiculata* Butcher  
*contracta* Carter  
*tetrathele* G. S. West

**Polyblepharidaceae**

- BIPEDINOMONAS Carter, 1937.  
*pyriformis* Carter  
*rotunda* Carter
- DUNALIELLA Teodoresco, 1905.  
*salina* (Dunal) Teodor.
- HETEROMASTIX Korshikov, 1923.  
*minuta* Carter
- PYRAMIMONAS Schmarida, 1850. (3)  
*angulata* Carter  
*grossii* Parke  
*obovata* Carter  
*octociliata* Carter  
*olivacea* Carter

**Chlorodendraceae**

- PRASINOCLADUS Kuckuck, 1894.  
*lubricus* Kuck.

## CHLOROCOCCALES

**Chlorococcaceae**

- CHARACIUM A. Braun, 1849.  
 ? *marinum* Kjellm. (1)
- CHLOROCHYTRIUM Cohn, 1872.  
*cohnii* Wright  
*dermatocolax* Rke.  
*facciolae* (Borzi) Bristol  
*immersum* Masse  
*inclusum* Kjellm.  
*moorei* Gardner  
*willei* Printz
- CODIOLUM A. Braun, 1855. (2)  
*petrocelidis* Kuck.  
 ? *pusillum* (Lyngb.) Kjellm.
- SYKIDION Wright, 1881.  
*dyeri* Wright

**Chlorellaceae**

- CHLORELLA Beijerinck, 1890.  
*marina* Butcher  
*ovalis* Butcher  
*salina* Butcher  
*stigmatophora* Butcher

## NANNOCHLORIS Naumann, 1919. (3)

- atomus* Butcher  
*maculatus* Butcher
- TREBOUXIA de Puymaly, 1924.  
*humicola* (Trebooux) Puymaly

## ULOTRICHALES

**Ulotrichaceae**

- STICHOCOCCUS Nägeli, 1849.  
*cylindricus* Butcher
- ULOTHRIX Kützing, 1833. (4)  
*consociata* Wille  
*fiacca* (Dillw.) Thur.  
*pseudofiacca* Wille  
*subfiaccida* Wille  
 (? *implexa* Kütz.)

**Monostromaceae**

- MONOSTROMA Thuret, 1854. (5)  
*crepidinum* Farl.  
*fuscum* (Post. et Rupr.) Wittr.  
 (*blyttii* (Aresch.) Wittr.)
- grevillei* (Thur.) Wittr.  
*oxyspermum* (Kütz.) Doty  
 (*laceratum* Thur.)  
 (*latissimum* (Kütz.) Wittr.)  
 (*orbiculatum* Thur.)  
 (*quaternarium* (Kütz.) Desm.)  
 (*wittrockii* Born.)  
*undulatum* Wittr.

**Ulvaceae**

- BLIDINGIA Kylin, 1947.  
*minima* (Näg.) Kylin  
 (*Enteromorpha minima* Næg.)  
 (*Enteromorpha micrococca* Kütz.)
- CAPSOSIPHON Gobi, 1879. (6)  
*fulvescens* (Ag.) Setch. et Gardn.  
 (*C. aureolus* (Ag.) Gobi)
- ENTEROMORPHA Link, 1820. (7)  
*ahlneriana* Bliding  
*clathrata* (Roth) Grev.  
*compressa* (L.) Grev.  
*intestinalis* (L.) Link  
 ? *lingulata* J. Ag.  
*linza* (L.) J. Ag.  
 ? *marginata* J. Ag.  
*prolifera* (Müll.) J. Ag.  
*rafsii* Harv.  
*ramulosa* (Sm.) Hook.  
*torta* (Mert.) Reinb.  
 ? *usneoides* (Bonnem.) J. Ag.
- PERCURSARIA Bory, 1823.  
*percursa* (Ag.) Bory
- ULVA Linnaeus, 1753.  
 ? *lactuca* L.  
 var. ? *lactuca*  
 var. ? *latissima* (L.) D.C.  
 var. ? *rigida* (Ag.) Le Jol.

## PRASIOLOALES

**Prasiolaceae**

- GAYELLA Kolderup Rosenvinge, 1893.  
*polyrhiza* K. Rosenv.  
 PRASIOLA Agardh, 1822.  
*crispa* (Lightf.) Menegh.  
*stipitata* Suhr

## CHAETOPHORALES

**Chaetophoraceae**

- ACROCHAETE Pringsheim, 1862.  
*parasitica* Oltm.  
*repens* Pringsh.  
 BOLBOCOLEON Pringsheim, 1862.  
*piliferum* Pringsh.  
 CHAETOBOLUS Kolderup Rosenvinge, 1893.  
*gibbus* K. Rosenv. (8)  
 ECTOCHAETE (Huber) Wille, 1909. (9)  
*leptochaete* (Huber) Wille  
 (*Endoderma leptochaete* Huber)  
*wittrockii* (Wille) Kylin  
 (*Endoderma wittrockii* Wille)  
 ENTOCLADIA Reinke, 1879.  
*perforans* (Huber) Levring  
*viridis* Rke.  
 (*Endoderma viride* Lagerh.)  
 EPICLADIA Reinke, 1889.  
*flustrae* Rke.  
 (*Endoderma flustrae* Batt.)  
 var. *flustrae*  
 var. ? *phillipsii* Batt.  
 OCHLOCHAETE Thwaites ex Harvey, 1849. (8)  
*ferox* Huber  
*hystrix* Thwaites  
 PHAEOPHILA Hauck, 1876.  
*dendroides* (Crn.) Batt.  
*engleri* Rke.  
 PILINIA Kützing, 1843.  
*maritima* (Kjellm.) K. Rosenv.  
*rimosa* Kütz.  
 PRINGSHEIMIELLA v. Hoehnel, 1920.  
*scutata* (Rke.) Marchew.  
 (*Pringsheimia scutata* Rke.)  
 PROTODERMA Kützing emend. Borzi, 1895  
*marimum* Rke.  
 PSEUDOPRINGSHEIMIA Wille, 1909.  
*confluens* (K. Rosenv.) Wille  
 (*Ulvella confluens* K. Rosenv.)  
*fucicola* (K. Rosenv.) Wille (10)  
 (*Ulvella fucicola* K. Rosenv.)  
 PSEUDULVELLA Wille, 1909.  
*applanata* Setch. et Gardn.  
 ULVELLA Crouan, 1859.  
*lens* Crn.
- Trentepohliaceae**  
 ? GOMONTIA Bornet et Flahault, 1888. (11)  
 ? *manxiana* Chodat  
 ? *polyrhiza* (Lagerh.) Born. et Flah.

- TELLAMIA Batters, 1895.  
*contorta* Batt.  
 ? *intricata* Batt.

## CLADOPHORALES

**Cladophoraceae** (12)

- ACROSIPHONIA J. Agardh; sensu Wille, 1909.  
*centralis* (Lyngb.) Kjellm. (13)  
 (*Cladophora* (*Spongomorpha*) *arcta* (Dillw.) Kütz.)  
 CHAETOMORPHA Kützing, 1845.  
 ? *aerea* (Dillw.) Kütz.  
*capillaris* (Kütz.) Børg. (14)  
*crassa* (Ag.) Kütz.  
*linum* (Müll.) Kütz.  
 ? *litorea* Cooke  
*melagonium* (Web. et Mohr) Kütz.  
 CLADOPHORA Kützing, 1843.  
*albida* (Huds.) Kütz.  
 var. *albida*  
 var. *refracta* (Harv.) Thur.  
 ? *arctiuscula* Kütz.  
 ? *balliana* Harv.  
*brownii* (Dillw.) Harv.  
*cornea* Kütz.  
 var. *verticillata* Kütz.  
 ? *corymbifera* Kütz. (17)  
*corynarthra* Kütz.  
 var. *spinescens* Batt.  
*expansa* (Mert.) Kütz.  
 ? *falcata* Harv.  
 ? *flexuosa* (Griff.) Harv.  
*fracta* (Müll.) Kütz. (15)  
*glaucescens* (Griff.) Harv.  
*gracilis* (Griff.) Kütz.  
*hirta* Kütz.  
*hutchinsiae* (Dillw.) Kütz.  
 var. *hutchinsiae*  
 var. *distans* (Ag.) Kütz. (16)  
 var. ? *divaricata* Harv.  
*macallana* Harv.  
*magdalanae* Harv.  
*pachyderma* (Kjellm.) Brand  
 var. *tenuior* (Børg.) Brand  
*pellucida* (Huds.) Kütz.  
 var. *pellucida*  
 var. ? *comosa* Kütz.  
 var. ? *cristata* Kütz.  
 var. ? *curvata* Kütz.  
*prolifera* (Roth) Kütz.  
*ramosissima* (Drap.) Kütz.  
 f. *humilis* (Kütz.) Hamel  
 (*C. neesiorum* Kütz. var. *humili* Batt.)  
*rectangularis* (Griff.) Harv.  
 f. *rectangularis*  
 f. *hispida* Kütz.  
 f. *horrida* Kütz.  
 f. *subnuda* Kütz.  
 ? *refracta* (Roth) Kütz. (17)  
*repens* (J. Ag.) Harv.  
*rudolphiana* (Ag.) Harv.

## CLADOPHORA (cont.)

- rupestris* (L.) Kütz.  
 f. *rupestris*  
 f. ? *distorta* (Harv.) Hamel  
 f. *nuda* (Harv.) Hamel  
 ? *sericea* (Huds.) Kütz. (18)  
*sonderi* Kütz.  
*stolonifera* (Kjellm.) Batt.  
 ? *traillii* (Batt.) Batt.  
 ? *trichocoma* Kütz.  
*utriculosa* Kütz.  
 var. *utriculosa*  
 var. ? *diffusa* Hauck

- RHIZOCLONIUM Kütz. 1843.  
*arenosum* (Carm.) Kütz.  
 ? *hieroglyphicum* (Ag.) Kütz.  
*implexum* (Dillw.) Kütz.  
 ? *kernerii* Stockm.  
*kochianum* Kütz.

- riparium* (Roth) Harv.  
*tortuosum* (Dillw.) Kütz. (19)  
 SPONGOMORPHA Kütz. 1843.  
*bombycina* (Kjellm.) Wille  
*lanosa* (Roth) Kütz.

- var. *lanosa*  
 var. ? *uncialis* (Müll.)  
*pallida* (Kjellm.) Kylin

- UROSPORA Areschoug, 1866.  
*bangioides* (Harv.) Holm. et Batt.  
*penicilliformis* (Roth) Aresch. (2)  
 (*isogona* (Sm.) Batt.)  
 sporophyte *Codiolumgregarium* A.Br.  
*speciosa* (Carm.) Leblond ex Hamel  
 (*Ulothrix speciosa* (Carm.) Kütz.)  
*wormskioldii* (Mert.) K. Rosenv.  
 (*collabens* (Ag.) Holm. et Batt.)

## ? SIPHONALES

## Caulerpacae

- BRYOPSIS Lamouroux, 1809.  
*hypnoides* Lamour.  
*plumosa* (Huds.) Ag.  
 var. *plumosa*  
 var. ? *nuda* Holm.  
 var. ? *subsimplex* Holm. et Batt.

## Derbesiaceae

- DERBESIA Solier, 1847. (20)  
*marina* (Lyngb.) Kjellm.  
 gametophyte = *Halicystis ovalis*  
 (Lyngb.) Aresch.  
*tenuissima* (De Not.) Crn.

## Codiaceae

- CODIUM Stackhouse, 1797.  
*adhaerens* (Cabr.) Ag.  
 ? *amphibium* Moore  
*bursa* (L.) Ag.  
 ? *fragile* (Sur.) Hariot  
 f. *atlanticum* (Cotton) Levring  
 (*tomentosum* var. *atlanticum* Cotton)  
 ? *tomentosum* Stackh.

## Chaetosiphonaceae

- BLASTOPHYSA Reinke, 1888.  
*rhizopus* Rke.

## Phyllosiphonaceae

- OSTREOBIUM Bornet et Flahault, 1889.  
*quekettii* Born. et Flah.

## Notes on Chlorophyceae

- (1) Not an independent species according to Levring (1937)—a *Gladophora* sporeling.
- (2) *C. gregarium* A.Br., diploid generation of *Urospora penicilliformis*; *C. petrocelidis*, probably an independent form.
- (3) Systematic position uncertain; see Chadeffaud (1941) on *Pyramimonas* Schmarida.
- (4) British species of *Ulothrix* require revision.
- (5) British species in urgent need of revision: see Hamel (1931) for species included under *M. oxycoccum* (Kütz.) Thur. = *M. oxyspermum* (Kütz.) Doty.
- (6) Chapman (1952) advocates the removal of the genus *Capsosiphon* from the Ulvaceae to separate family, Capsosiphonaceae.
- (7) Until British material belonging to this genus has been fully investigated on the lines of the work of Bliding, the limits of the species occurring in Britain cannot be assessed.

Dr C. Bliding has checked the list of species personally, and has very kindly allowed me to publish his records of *E. ahlnneriana* for the British coast. He reports:

'During an excursion to Anglesey, North Wales, in July 1953, I found *Enteromorpha Ahlnneriana* Bliding in the intertidal zone at two different localities, Rhosneigr and Newborough.

'At Rhosneigr the main axes of the thalli were often very broad with few branches, as in Typus III (Bliding, 1944, p. 343, fig. 16). The material from Newborough, however, was more branched and the axes of the plants, as well as the branches, were more slender.

'*E. Ahlnneriana* has so far been recorded only from the west coast of Sweden and from the Baltic Sea. In the Baltic this species is very abundant.' (Carl Bliding, Plymouth, 17 July 1953.)

- (8) *Chaetobolus gibbus*, *Ochlochaete ferox* and *O. hystrix*—possibly forms of one species, see Waern (1952).
- (9) *Endoderma-Ectochaete-Entocladia-Epicladia* complex—British material needs revision.
- (10) *Ulvella fucicola* var. *globosa* Batt.; before making new combination under *Pseudopriingsheimia* further investigation seems desirable.
- (11) If Kylin (1935) is right *Gomontia* is a name of a taxon derived from two entirely discordant elements and should perhaps be rejected (Art. 76, Lanjouw, 1952).
- (12) The British species of all genera in this family are in urgent need of revision.
- (13) Part at least, if not all, material recorded for Britain under *Cl. (Spongomorpha) arcta* should be referred to *Acrosiphonia centralis* (Lyngb.) Kjellm.
- (14) = '*Conferva tortuosa* J. Ag.', Harv., *Phyc. Brit.* 54A, *Chaetomorpha tortuosa* Kütz., in Newton, 1931, p. 91 (Chapman, 1939).
- (15) British forms referred to this species are in need of revision.
- (16) It is generally considered that the alga described and figured by Harvey, *Phyc. Brit.*, 130, as *Cladophora diffusa* is *C. hutchinsiae* Kütz. var. *distans* (Ag.) Kütz., which differs from *Conferva diffusa* Roth (= *Cladophora diffusa* (Roth) Harv.).
- (17) Possibly forms of *Cladophora hamosa* Kütz.
- (18) Should possibly be *Cladophora crystallina* (Roth) Kütz., see Levring (1937, 1940), Waern, 1952.
- (19) = *Conferva tortuosa* Dillw., *Conferva implexa* Harv., *Phyc. Brit.*, 54B, *Lola implexa* (Harv.) Hamel (Chapman, 1939).
- (20) HALICYSTIS Areschoug, 1850; gametophyte generation of *Derbesia marina* (Lyngb.) Kjellm. (*Halicystis ovalis* (Lyngb.) Aresch.) recorded for Britain but not the gametophyte generation (*H. parvula* Schmitz) of *Derbesia tenuissima* (De Not.) Crn.

## XANTHOPHYCEAE

## HETEROCHLORIDALES

**Heterochloridaceae**

- CHLOROMESON Pascher, 1930.  
*parvum* Carter  
 NEPHROCHLORIS Geitler et Gemisi, 1925.  
 ? *salina* Carter (1)  
 OLISTHODISCUS Carter, 1937. (1)  
*luteus* Carter  
 RHIZOCHLORIS Pascher, 1917.  
*arachnoides* Carter

## HETEROCOCCALES

**Halosphaeraceae**

- HALOSPHERA Schmitz, 1879.  
*viridis* Schm.

## HETEROTRICHALES

**Tribonemataceae**

- TRIBONEMA Derbès et Solier, 1856.  
*bombycinum* Derb. et Sol.  
*endozooticum* (Wille) Magne  
 (*Rhizoclonium kernerii* Stockm.  
 f. *endozooticum* Wille)

## HETEROSIPHONALES

**Vaucheriaceae** (2)

- VAUCHERIA De Candolle, 1801. (3)  
*compacta* (Collins) Collins s.lat.  
 (*sphaerospora* Nordst. var. *dioica*  
 K. Rosenv.)  
*coronata* Nordst.  
*dichotoma* (L.) Ag.  
*intermedia* Nordst.  
*litorea* Hofm. et Ag.  
*sphaerospora* Nordst.  
*synandra* Woron.  
*thuretii* Woron.

*Notes on Xanthophyceae*

- (1) Systematic position uncertain.
- (2) Reasons for placing in Xanthophyceae—see Chadeffaud (1945, 1951), Smith (1950).
- (3) The list of species given has been checked by Mr T. Christensen, who also says that the *Vaucheria* sp. recorded by Carter as possibly *V. woroniniana* Heer. is definitely not this species. See also Christensen (1952) for information on distribution.

## CHRYSOPHYCEAE

## CHRYSOMONADALES (1)

**Chromulinaceae**

CHROMULINA Cienkowski, 1870.

- lunaris* Carter
- pleiades* Parke
- pusilla* Butcher

**Cyrtophoraceae**

PSEUDOPEDINELLA Carter, 1937.

- pyriformis* Carter

**Isochrysidaceae**

DICRATERIA Parke, 1949.

- gilva* Parke
- inornata* Parke

ISOCHRYISIS Parke, 1949.

- galbana* Parke

**Ochromonadaceae**

OCHROMONAS Wystozki, 1887.

- oblonga* Carter

PAVLOVA Butcher, 1952.

- gyrans* Butcher

**Prymnesiaceae**

PRYMNESIUM Massart, 1920.

- minutum* Carter
- parvum* Carter

## RHIZOCHRYSIDALES

**Platychrysidaceae**

PLATYCHRYISIS Geitler, 1930.

- pigra* Geitler

## CHRYSOCAPSALES

**Chrysocapsaceae**

CHRYSOTILA Anand, 1937. (2)

- lamellosa* Anand
- stipitata* Anand

GLOEOCHRYISIS Pascher, 1925.

- litoralis* Anand
- maritima* Anand

PHAEOCYSTIS Lagerheim, 1893.

- globosa* Scherff.
- pouchetii* (Hariot) Lagerh.

## CHRYSOTRICHALES

**Nematochrysidaceae**

NEMATOCHRYISIS Pascher, 1925.

- sessilis* Pascher
- var. *vectensis* Carter

**Phaeothamnionaceae**

APISTONEMA Pascher, 1925. (3)

- carteri* Anand (4)

CHRYSONEMA Anand, 1937.

- litorale* Anand

**Thallochrysidaceae**

THALLOCHRYISIS Conrad, 1920.

- litoralis* Anand

*Notes on Chrysophyceae*

- (1) Coccolithophoridaeae not included in this preliminary list.
- (2) Systematic position uncertain: should possibly be placed as the type of a new family.
- (3) *Phaeococcus adnatus* G. S. West ex Cotton (1912), imperfectly described by Cooke and Rabenhorst under the name *Gloeocystis adnata* Näg., belongs, very possibly, to the genus *Apistonema* Pascher.
- (4) See Waern (1952)—possibly a form of *A. pyrenigerum* Pascher.

## PHAEOPHYCEAE

## ECTOCARPALES

**Ectocarpaceae** (1)

ACINETOSPORA Bornet, 1891.

- crinita* (Carm.) Kornmann (2)

- pusilla* (Griff.) Born.

- pusilla* var. *crinita* (Carm.) Batt.)

haploid generation =

- ? *Ectocarpus lebelii* Crn.

- ? *Ectocarpus padinae* Sauv.

CHILIONEMA Sauvageau, 1897. (3)

- ocellatum* (Kütz.) Kuck.

- (*nathaliae* Sauv.)

- (*ocellatum* (Rke.) Sauv.)

- reptans* (Crn.) Sauv.

COMPSONEMA Kuckuck, 1899. (3)

- microspogium* (Batt.) Kuck.

- (*Ectocarpus microspogium* Batt.)

- saxicola* Kuck.

- (*Myrionema saxicolium* Kuck.)

- ? *DICHOSPORANGIUM* Hauck, 1885.  
 ? *chordariae* Wollny (4)  
 (*Streblonema chordariae* Cotton in  
 Newton, p. 128, non *S. chordariae*  
 (Farl.) De Toni)
- ECTOCARPUS* Lyngbye, 1819.  
 ? *acanthophorus* Kütz.  
*confervoides* (Roth) Le Jol. s. lat.  
 (*confervoides* s.str.)  
 (*amphibius* Harv.)  
 (*arctus* Kütz.)  
 (*dasycarpus* Kuck.)  
 (*hiemalis* Crn.)  
 (*penicillatus* (Ag.) Kjellm.)  
 (*siliculosus* (Dillw.) Lyngb.)  
*congestus* Crn.  
*crouanii* Thur.  
 ? *distortus* Carm.  
*draparnaldoides* (Crn.) Kjellm.  
 ? *erectus* Kütz.  
*fasciculatus* Harv.  
 ? *fenestratus* Berk. ex Harv.  
*holmesii* Batt.  
 ? *landsburgii* Harv.  
 ? *minimus* Näg. (5)  
*reinboldii* Rke.
- ENDODICTYON* Gran, 1897.  
*infestans* Gran (9)  
 (*Streblonema infestans* Batt.)
- FELDMANNIA* Hamel, 1939.  
*battersii* (Born.) Hamel  
 (*Ectocarpus battersii* Born.)  
*globifera* (Kütz.) Hamel  
 (*Ectocarpus globifer* Kütz.) (6)  
 ? *irregularis* (Kütz.) Hamel  
 (*Ectocarpus irregularis* Kütz.)  
*simplex* (Crn.) Hamel  
 (*Ectocarpus simplex* Crn.)
- GIFFORDIA* Batters emend. Hamel,  
 1939.  
*granulosa* (Sm.) Hamel  
 (*Ectocarpus granulosa* (Sm.) Ag.)  
*hincksiae* (Harv.) Hamel  
 (*Ectocarpus hincksiae* Harv.)  
*mitchellae* (Harv.) Hamel  
 (*Ectocarpus mitchellae* Harv.)  
*ovata* (Kjellm.) Kylin  
 (*Ectocarpus ovatus* Kjellm.)  
 var. *ovata*  
 var. *arachnoidea* (Rke.) Kylin  
*sandriana* (Zanard.) Hamel  
 (*Ectocarpus sandrianus* Zanard.)  
*secunda* (Kütz.) Batt.  
 (*Ectocarpus secundus* Kütz.)
- HECATONEMA* Sauvageau 1897. (3)  
*liechtensternii* (Hauck) Batt.  
*maculans* (Coll.) Sauv.  
*speciosum* (Børg.) Cotton
- HERPONEMA* J. Agardh emend. Hamel,  
 1939.  
*luteolum* (Sauv.) Hamel  
 (*Ectocarpus luteolus* Sauv.)  
*solitarium* (Sauv.) Hamel  
 (*Ectocarpus solitarius* Sauv.)
- valianthei* (Born.) Hamel  
 (*Ectocarpus valianthei* Born.)  
*velutinum* (Grev.) J. Ag.  
 (*Ectocarpus velutinus* (Grev.)  
 Kütz.) (7)
- LAMINARIOCOLAX* Kylin, 1947.  
*tomentosoides* (Farl.) Kylin  
 (*Ectocarpus tomentosoides* Farl.) (8)
- MIKROSYPHAR* Kuckuck, 1895. (9)  
*polysiphoniae* Kuck.  
*porphyrae* Kuck.
- PHAEOSTROMA* Kuckuck, 1895.  
*pustulosum* Kuck. (10)  
 (*P. prostratum* Kuck.)
- PYLAIELLA* Bory, 1823.  
*littoralis* (L.) Kjellm. (11)
- SOROCARPUS* Pringsheim, 1862.  
*micromorus* (Bory) Silva  
 (*uvaformis* (Lyngb.) Pringsh.)
- SPONGONEMA* Kützing, 1849.  
*tomentosum* (Huds.) Kütz.  
 (*Ectocarpus tomentosus* (Huds.)  
 Lyngb. *E. terminalis* Kütz.) (3)
- STREBLONEMA* Derbès et Solier,  
 1851. (12)  
 ? *aequale* Oltm. (10)  
*breve* (Sauv.) De Toni  
 (*Ectocarpus brevis* Sauv.)  
*effusum* Kylin  
*fasciculatum* Thur.  
 var. *fasciculatum*  
 var. ? *simplex* Batt.  
 ? *helophorum* (K. Rosenv.) Batt.  
*intestinum* (Reinsch) Holm. et Batt.  
*parasiticum* (Sauv.) De Toni  
 (*Ectocarpus parasiticus* Sauv.)  
*sphaericum* (Derb. et Sol.) Thur.  
*stilophorae* (Crn.) De Toni  
 (*Ectocarpus stilophorae* Crn.) (13)  
 var. *stilophorae*  
 var. *caespitosum* (K. Rosenv.)  
 De Toni  
 ? *tenuissimum* Hauck (13)  
*volubile* (Crn.) Thur.  
*zanardinii* (Crn.) De Toni
- WAERNIELLA* Kylin, 1947.  
*lucifuga* (Kuck.) Kylin
- Lithodermataceae**  
*LITHODERMA* Areschoug, 1875.  
*extensum* (Crn.) Hamel (14)  
 (*fatiscens* Aresch. emend. Kuck.)
- PETRODERMA* Kuckuck, 1897.  
*maculiforme* (Wollny) Kuck.
- SORAPION* Kuckuck, 1894.  
*simulans* Kuck.
- Ralfsiaceae**  
*RALFSIA* Berkeley, 1831. (15)  
*clavata* (Carm.) Farlow  
*disciformis* Crn.  
*pusilla* (Strömf.) Fosl.  
*spongiocarpa* Batt. (16)  
*verrucosa* (Aresch.) J. Ag.

**Myrionemataceae**

- ASCOCYCLUS Magnus, 1874.  
*foecundus* (Strömf.) Cotton  
*hispanicus* Sauv.  
*magni* Sauv.  
 (*orbicularis* Magn. in Newton, p. 159)  
 MICROSPONGIUM Reinke, 1888.  
*globosum* Rke.  
 (*Hecatonema globosum* (Rke.) Batt.)  
 MYRIONEMA Greville, 1827.  
*aecidioides* (K. Rosenv.) Sauv. (12)  
*corumnae* Sauv.  
*papillosum* Sauv.  
*polycladum* Sauv.  
*strangulans* Grev.  
 SYMPHYOCARPUS Kolderup Rosenvinge,  
 1894.  
*strangulans* K. Rosenv.  
 ? ULONEMA Foslie, 1894. (17)  
 ? *rhizophorum* Fosl.

**Elachistaceae**

- ELACHISTA Duby, 1830. (18)  
*flaccida* (Dillw.) Aresch.  
*fucicola* (Vell.) Aresch.  
 f. *fucicola*  
 f. *grevillei* (Arnott) Hamel  
 (*E. grevillei* Arnott)  
*scutulata* (Sm.) Duby  
 HALOTHRIX Reinke, 1888.  
*lumbricalis* (Kütz.) Rke.  
 LEPTONEMA Reinke, 1888.  
*fasciculatum* Rke.  
 var. *fasciculatum*  
 var. ? *majus* Rke. (19)  
 var. ? *subcylindrica* K. Rosenv. (19)  
 var. ? *uncinatum* Rke. (19)  
 SYMPHORICOCCUS Reinke, 1888.  
*stellaris* (Aresch.) Kuck. (20)  
 (*Elachista stellaris* Aresch.)

**Leathesiaceae**

- CORYNOPHLAEA Kützing, 1843.  
*crispa* (Harv.) Kuck.  
 (*Leathesia crispa* Harv.)  
 CYLINDROCARPUS Crouan, 1851.  
 (*Petrospongium* Näg.)  
*berkeleyi* (Grev.) Crn.  
 (*Petrospongium berkeleyi* Näg.)  
*microscopicus* Crn.  
 (*Ectocarpus microscopicus* Batt.)  
 LEATHESIA S. F. Gray, 1821.  
*difformis* (L.) Aresch.  
 MICROCORYNE Strömfelt, 1888.  
*ocellata* Strömf. (21)  
 MYRIACTULA Kuntze, 1898.  
 (*Myriactis* Kütz.)  
*areschougii* (Crn.) Hamel  
*chordae* (Aresch.) Levring  
 (*Elachista stellaris* var. *chordae*  
 Aresch.)  
*clandestina* (Crn.) J. Feldm.  
 (*Ectocarpus clandestinus* (Crn.) Sauv.)  
*haydenii* (Gatty) Levring  
*rivulariae* (Suhr) J. Feldm.  
 (*Myriactis pulverinata* Kütz.)  
*stellulata* (Griff.) Levring

**Mesogloiaceae**

- CHORDARIA Agardh emend. Lyngbye,  
 1819.  
*flagelliformis* (Müll.) Ag.  
 var. *flagelliformis*  
 var. ? *firmus* Kjellm.  
 var. ? *minor* J. Ag.  
 CLADOSIPHON Kützing, 1843.  
*contortus* (Thur.) Kylin  
 (*Castagnea contorta* Thur.)  
*zosteræ* (J. Ag.) Kylin  
 (*Castagnea zosteræ* (J. Ag.) Thur.)  
 EUDESME J. Agardh, 1880.  
*virescens* (Carm.) J. Ag.  
 (*Castagnea virescens* (Carm.) Thur.)  
 LIEBMANNA J. Agardh, 1842.  
*leveillei* J. Ag.  
 (*Mesogloia leveillei* Menegh.)  
 MESOGLOIA Agardh, 1817.  
*lanosa* Crn.  
 ? *neglecta* Batt. (22)  
*vermiculata* (Sm.) Le Jol.  
 MYRIOCLADIA J. Agardh, 1841. (23)  
*tomentosa* Crn.  
 SAUVAGEAUGLOIA Hamel, 1939.  
*griffithsiana* (Grev.) Hamel  
 (*Mesogloia griffithsiana* Grev.)  
 SPHAEROTRICHIA Kylin, 1940.  
*divaricata* (Ag.) Kylin  
 (*Chordaria divaricata* Ag.)  
 STREPSITHALIA Sauvageau, 1896.  
*buffhamiana* (Batt.) Batt.

**Acrothricaceae**

- ACROTHRIX Kylin, 1907.  
*gracilis* Kylin

**Spermatochneaceae**

- SPERMATOCHNUS Kützing emend. Reinke,  
 1889.  
*paradoxus* (Roth) Kütz.  
 STILOPHORA J. Agardh, 1841.  
*rhizodes* (Ehrh.) J. Ag.  
*tuberculosa* (Horn.) Rke.  
 STILOPSIS Kuckuck, 1929.  
*lejolissii* (Thur.) Kuck.  
 (*Spermatochnus lejolissii* Rke.)

**DICTYOSIPHONALES****Striariaceae**

- ISTHMOPLEA Kjellman, 1877.  
*sphaerophora* (Carm.) Kjellm.  
 STICTYOSIPHON Kützing, 1843.  
*griffithsianus* (Le Jol.) Holm. et  
 Batt. (24)  
 (*Phloeospora brachiata* Born. in  
 Newton, p. 187)  
*soriferus* (Rke.) K. Rosenv. (25)  
*subarticulatus* (Aresch.) Hauck (25)  
*tortilis* (Rupr.) Rke. (25)  
 STRIARIA Greville, 1829.  
*attenuata* Grev.  
 f. *attenuata*  
 f. *crinita* (Ruch.) Hauck



**Myriotrichiaceae**

- BUFFHAMIA Batters, 1895. (26)  
*speciosa* Batt.  
 LEBLONDIELLA Hamel, 1939.  
*densa* (Batt.) Hamel  
 (*Myriotrichia densa* Batt.)  
 MYRIOTRICHIA Harvey, 1834.  
*clavaeformis* Harv.  
 var. *clavaeformis*  
 var. ? *minima* Holm. et Batt.  
 ? *filiformis* Harv. (27)  
*repens* (Hauck) Karsakoff

**Giraudiaceae**

- GIRAUDIA Derbès et Solier, 1851. (26)  
*spacelarioides* Derb. et Sol.

**Punctariaceae**

- DESMOTRICHUM Kützing, 1845.  
*undulatum* (J. Ag.) Rke.  
 (*balticum* Kütz.) (28)  
 (*Punctaria tenuissima* Grev.)  
 LITOSIPHON Harvey, 1849.  
*filiformis* (Rke.) Batt.  
 var. *filiformis*  
 var. ? *gracilis* Batt.  
*laminariae* (Lyngb.) Harv.  
 (*hibernicus* (Johns.) Batt.)  
*pusillus* (Carm.) Harv.  
 PUNCTARIA Greville, 1830. (29)  
*crispata* (Kütz.) Batt.  
*latifolia* Grev.  
 var. *latifolia*  
 var. ? *laminarioides* Holm. et Batt.  
 var. ? *lanceolata* Batt.  
*plantaginea* Grev.  
 var. *plantaginea*  
 var. ? *crouanii* Thur.  
 var. ? *rubescens* Batt.

**Asperococcaceae**

- ASPEROCOCCUS Lamouroux, 1813.  
*bullosus* Lamour.  
*compressus* Griff. ex Hook. (30)  
*fistulosus* (Huds.) Hook.  
 f. *fistulosus*  
 f. *vermicularis* (Griff.) Harv.  
*scaber* Kuck.

**Dictyosiphonaceae**

- DICTYOSIPHON Greville, 1830. (31)  
*chordaria* Aresch.  
 (*mesogloia* Aresch.)  
 (*Gobia baltica* Rke.)  
*ekmanii* Aresch.  
*foeniculaceus* (Huds.) Grev.  
 f. *foeniculaceus*  
 f. *hippuroides* (Lyngb.) Levring  
 (*D. hippuroides* Kütz.)

**SCYTOSIPHONALES (32)****Phaeosaccionaceae**

- PHAEOSACCION Farlow, 1882.  
*collinsii* Farl.

**Scytosiphonaceae**

- COLPOMENIA Derbès et Solier, 1856.  
*peregrina* Sauv.  
 PETALONIA Derbès et Solier, 1850. (33)  
*fascia* (Müll.) Kuntze (34)  
 (*debilis* (Ag.) Derb. et Sol.)  
 (*Phyllitis fascia* Kütz.)  
 ? *filiformis* (Batt.)  
*zosterifolia* (Rke.) Kuntze  
 (*Phyllitis zosterifolia* Rke.)  
 SCYTOSIPHON Agardh, 1811.  
*lomentaria* (Lyngb.) Endl.  
 (*pygmaeus* Rke.)  
 var. *lomentaria*  
 var. ? *zostericola* Thur.

**TILOPTERIDALES****Tilopteridaceae**

- HAPLOSPORA Kjellman, 1872.  
*globosa* Kjellm.  
 TILOPTERIS Kützing, 1849.  
*mertensii* (Sm.) Kütz.

**CUTLERIALES****Cutleriaceae**

- CUTLERIA Greville, 1830.  
*multifida* (Sm.) Grev.  
 sporophyte = *Aglaozonia parvula*  
 (Grev.) Zanard. (*A. reptans* Crn.)  
 ZANARDINIA Nardo, 1841.  
*prototypus* Nardo  
 (*collaris* Crn.)

**SPOROCHNALES****Sporochnaceae**

- CARPOMITRA Kützing, 1843.  
*costata* (Stackh.) Batt.  
 SPOROCHNUS Agardh, 1817.  
*pedunculatus* (Huds.) Ag.

**DESMARESTIALES****Arthrocladiaceae**

- ARTHROCLADIA Duby, 1832.  
*villosa* (Huds.) Duby

**Desmarestiaceae**

- DESMARESTIA Lamouroux, 1813.  
*aculeata* (L.) Lamour.  
*dudresnayi* Lamour.  
*ligulata* (Lightf.) Lamour.  
 var. *ligulata*  
 var. ? *angustior* Batt.  
 var. ? *dilatata* Batt.  
*viridis* (Müll.) Lamour.

## LAMINARIALES

**Chordaceae**

- CHORDA Stackhouse, 1797. (35)  
*filum* (L.) Stackh.  
*tomentosa* Lyngb.

**Laminariaceae**

- LAMINARIA Lamouroux, 1813.  
*digitata* (Huds.) Lamour.  
*hyperborea* (Gunn.) Fosl.  
 (*cloustonii* Edm.)  
*ochroleuca* La Pylaie  
*saccharina* (L.) Lamour.  
 (*hieroglyphica* J. Ag.)  
 SACCORHIZA La Pylaie, 1829.  
*polyschides* (Lightf.) Batt.  
 (*bulbosa* (Huds.) La Pylaie)

**Alariaceae**

- ALARIA Greville, 1830.  
*esculenta* (L.) Grev.

## SPHACELARIALES

**Choristocarpaceae**

- CHORISTOCARPUS Zanardini, 1860.  
*tenellus* (Kütz.) Zanard.

**Sphacelariaceae**

- BATTERSIA Reinke, 1890.  
*mirabilis* Rke.  
 CHAETOPTERIS Kützing, 1843.  
*plumosa* (Lyngb.) Kütz.  
 SPHACELARIA Lyngbye, 1819. (36)  
*bipinnata* (Kütz.) Sauv.  
*britannica* Sauv.  
*caespitula* Lyngb.  
*cirrosa* (Roth) Ag.  
*fusca* (Huds.) Ag.  
*plumigera* Holm.  
*plumula* Zanard.  
*racemosa* Grev.  
*radicans* (Dillw.) Ag.  
 ? *saxatilis* (Kuck.) Sauv.  
*tribuloides* Menegh.  
 SPHACELLA Reinke, 1890.  
*subtilissima* Rke.

**Stypocaulaceae**

- HALOPTERIS Kützing emend. Sauvageau,  
 1903.  
*filicina* (Grat.) Kütz.  
 var. *filicina*  
 var. *patentissima* Sauv.  
 (*sertularia* Batt.)  
*scoparia* (L.) Sauv.  
 var. *scoparia*  
 var. *patentissima* Sauv.  
 (*scoparioides* Holm. et Batt.)

**Cladostephaceae**

- CLADOSTEPHUS Agardh, 1817.  
*spongiosus* (Huds.) Ag.  
*verticillatus* (Lightf.) Ag.

## DICTYOTALES

**Dictyotaceae**

- DICTYOPTERIS Lamouroux, 1809.  
*membranacea* (Stackh.) Batt.  
 DICTYOTA Lamouroux, 1809.  
*dichotoma* (Huds.) Lamour.  
 var. *dichotoma*  
 var. *intricata* (Ag.) Grev.  
 var. ? *latifrons* Holm. et Batt.  
 ILOPHUS J. Agardh, 1880.  
*spiralis* (Mont.) Hamel  
 (*Dictyota ligulata* Kütz.)  
 PADINA Adanson, 1763.  
*pavonia* (L.) Lamour.  
 TAONIA J. Agardh, 1848.  
*atomaria* (Woodw.) J. Ag.  
 var. *atomaria*  
 var. ? *divaricata* Holm. et Batt.

## FUCALES

**Fucaceae**

- ASCOPHYLLUM Stackhouse, 1809.  
*nodosum* (L.) Le Jol.  
 f. *nodosum*  
 f. *mackaii* (Turn.)  
 (*A. mackaii* (Turn.) Holm. et  
 Batt.)  
 f. *scorpioides* (Hornem.) Hauck  
 FUCUS Linnaeus, 1753. (37)  
*ceranoides* L.  
*inflatus* L.  
 (*anceps* Harv. et Ward.)  
*serratus* L.  
*spiralis* L.  
*vesiculosus* L.  
 PELVETIA Decaisne et Thuret, 1845.  
*canaliculata* (L.) Dcne. et Thur.

**Himanthaliaceae**

- HIMANTHALIA Lyngbye, 1819.  
*elongata* (L.) S. F. Gray  
 (*lorea* (L.) Lyngb.)

**Cystoseiraceae**

- BIFURCARIA Stackhouse, 1809.  
*rotunda* (Huds.) Papenf.  
 (*tuberculata* (Huds.) Stackh.)  
 CYSTOSEIRA Agardh, 1820.  
*fibrosa* (Huds.) Ag.  
*foeniculacea* (L.) Grev. emend. Sauv.  
 (*discors* Ag.)  
*granulata* Ag.  
*tamariscifolia* (Huds.) Papenf.  
 (*ericoides* (L.) Ag.)  
 HALIDRYS Lyngbye, 1819.  
*siliquosa* (L.) Lyngb.

## Notes on Phaeophyceae

- (1) British material belonging to genera in this family is in urgent need of revision.
- (2) See Kornmann (1953): Dr Kornmann very kindly sent me proofs of his paper and also of that of Kuckuck (1953), so that the information contained in these papers could be included here.
- (3) See Kuckuck (1953).
- (4) The genus *Dichosporangium* is included here for the present to cover *Streblonema chordariae* Cotton in Newton (1931). If remaining in *Streblonema* it would need a new name because of earlier *S. chordariae* (Farl.) De Toni.
- (5) Requires investigation. Hamel (1939), suggests it should be placed in *Herponema* J. Ag. emend. Hamel.
- (6) New combination not made for var. *rupestris* Batt., investigation needed.
- (7) New combination not made for var. *laterifructus* Batt., investigation needed.
- (8) New combination not made for var. *punctiformis* Batt., investigation needed.
- (9) See Levring (1945) and Waern (1952).
- (10) Jaasund (1951) considers genus should be placed in the Chordariaceae; also considers that *Streblonema aequale* Oltm. is possibly a form of *Phaestroma pustulosum*. According to Cotton (1912) British material differs slightly from Kuckuck's plant and may possibly be a distinct species.
- (11) Concerning validity of name and also *Pylaiella rupicola* (Aresch.) Kylin—see information given in Waern (1952).
- (12) *Streblonema* s.lat.; British material belonging to this complex in urgent need of investigation and revision, see Hamel (1939), Kylin (1947), Waern (1952). British species placed by Hamel (1939) in *Entonema* Reinsch sensu Hamel (*Streblonema parasiticum* (Sauv.) De Toni, *S. breve* (Sauv.) De Toni, *Ectocarpus clandestinus* (Crn.) Sauv.) and by Kylin (1947) in *Entonema* Reinsch sensu Kylin (*Streblonema effusum* Kylin, *S. aequale* Oltm., *Myrionema aecidioides* (K. Rosenv.) Sauv.) have, for the time being, been left, either in the genus *Streblonema* s.lat., or in other genera in which they have been placed.
- (13) *Ectocarpus stilophorae* Crn. var. *cervicornis* Batt. recorded, investigation needed. Is *Streblonema tenuissimum* Hauck a form of *S. stilophorae* (Crn.) De Toni?
- (14) Almost certainly more than one species recorded for British coast under name *L. fatiscens* Aresch., see Waern (1952). British material of whole family in need of investigation.
- (15) Genus in need of revision, see Hamel (1939), Hollenberg (1941), Kylin (1947).
- (16) According to Batters = *R. clavata* Rke. non Farlow; see Kylin (1947) who gives new name *R. tenuis* for Reinke's *R. clavata*; requires investigation.
- (17) See Cotton (1912), Levring (1937), Kylin (1947), Jaasund (1951).
- (18) Conserved as *Elachista*, original spelling *Elachistea*, which is etymologically incorrect according to Fritsch (1945).
- (19) Habitat forms of species?
- (20) = *Areschougia stellaris* (Aresch.) Menegh. See Silva (1952), where *Areschougia* Harv. is proposed for conservation against *Areschougia* Menegh.
- (21) See Hamel (1939).
- (22) See Batters (1906), and Cotton (1912, p. 124, under *Acrothrix*.)
- (23) According to Kylin (1933) the plant recorded on the British coast under the name *Myriocladia lovenii* is not the true *M. lovenii* J. Ag.; it may be an undescribed species.
- (24) The following notes are from Mr R. Ross and Miss L. Newton concerning the confusion that has been found in the synonymy dealing with this plant. The type specimen of *Conferva brachiata* Sm. in Engl. Bot. has been examined and is thought to be a *Pylaiella*. This specimen is also the nomenclatural type of *Ectocarpus brachiatus* (Sm.) Harv. ex Hook. non C. Ag., *Phloeospora brachiata* (Sm.) Bornet, *Stictyosiphon brachiatus* (Sm.) Hygen et Jorde. The plant found by Mrs Griffiths and described and figured under the above names by all authors is quite different. Its earliest legitimate name is *Ectocarpus griffithsianus* Le Jolis in *Trans. bot. Soc. Edinb.*, vol. 7, p. 37 (1863), and a combination based on this name in the appropriate genus is its correct name. The plant has been left for the time being in the genus *Stictyosiphon*, but further study is needed.
- (25) British material in urgent need of investigation; kept as three separate species for the present, but see Kolderup Rosenvinge (1935), Levring (1937, 1940), Kolderup Rosenvinge & Lund (1947), Waern (1952).
- (26) Systematic position uncertain.

- (27) British material needs investigation; should be perhaps *M. clavaeformis* f. *filiformis* (Harv.) Kjellm., see Kolderup Rosenvinge & Lund (1947), Kylin (1947).
- (28) See Kylin (1947), Kolderup Rosenvinge & Lund (1947).
- (29) British material needs study, see Hamel (1939), Kolderup Rosenvinge & Lund (1947).
- (30) See Hamel (1939), who places this species in genus *Haloglossum* Kütz.
- (31) British material of genus in need of investigation; see Du Rietz (1940), Levring (1940), Kolderup Rosenvinge & Lund (1947), Sinclair (1949).
- (32) See J. Feldmann (1949).
- (33) See Silva (1952) concerning name of genus.
- (34) See Setchell & Gardner (1925) under *Ilea* Fries; field observations needed before British forms of species can be revised and the limits of the species assessed.
- (35) Recorded varieties of both species require investigation before being listed. Kolderup Rosenvinge & Lund (1947) state that the var. *subtomentosa* of *Chorda filum* is not to be maintained.
- (36) British material of genus in need of revision, see Waern (1945, 1952), Kylin (1947), Lund (1950).
- (37) No varieties or forms given in list; awaiting the results of Dr E. Burrows and Dr S. Lodge's work on the form-range of the *Fucus* species (except *F. inflatus*) on the British coast. Mr H. Powell is investigating *F. inflatus* L.

## RHODOPHYCEAE

## BANGIOPHYCIDAE

## GONIOTRICHALES

## Goniotrichaceae

- ASTEROCYTIS Gobi, 1879.  
*ramosa* (Thwaites) Gobi (1)
- GONIOTRICHUM Kützing, 1843.  
 ? *elegans* (Chauv.) Le Jol.  
*cornu-cervi* (Reinsch) Hauck
- NEEVEA Batters, 1900.  
*repens* Batt.

## BANGIALES

## Erythropeltidaceae

- ERYTHROCLADIA Kolderup Rosenvinge,  
 1909.  
*irregularis* K. Rosenv.  
*subintegra* K. Rosenv.
- ERYTHROPELTIS Schmitz, 1896. (2)  
 ? *discigera* Schm.  
 var. ? *discigera*  
 var. ? *flustrae* Batt.
- ERYTHROTRICHIA Areschoug, 1850. (3)  
*bertholdii* Batt.  
*boryana* (Mont.) Berth.  
 var. *boryana*  
 var. ? *crispa* Batt.  
*carnea* (Dillw.) J. Ag.  
*ciliaris* (Carm.) Batt.  
*investiens* (Zanard.) Born.  
*reflexa* (Crn.) Thur.  
*welwitschii* (Rupr.) Batt.
- PORPHYROPSIS Kolderup Rosenvinge,  
 1909.  
*coccinea* (J. Ag.) K. Rosenv.

## Bangiaceae

- BANGIA Lyngbye, 1819.  
*fuscopurpurea* (Dillw.) Lyngb. (4)
- CONCHOCELIS Batters, 1892. (5)  
 ? *rosea* Batt.
- PORPHYRA Agardh, 1824.  
*amethystea* Kütz.  
*leucosticta* Thur.  
*linearis* Grev.  
*miniata* (Lyngb.) Ag.  
 f. *miniata*  
 f. *abyssicola* (Kjellm.) K. Rosenv.  
 f. *amplissima* (Kjellm.) K. Rosenv.  
 f. *temuissima* (Strömf.) K. Rosenv.  
*umbilicalis* (L.) Kütz.  
 f. *umbilicalis*  
 f. *laciniata* (Lightf.) J. Ag.

## FLORIDEOPHYCIDAE

## NEMALIONALES

## Acrochaetiaceae

- ACROCHAETIUM Nägeli, 1861. (6)  
*alariae* (Jonss.) Born.  
*battersianum* Hamel  
*bonnemaisoniae* (Batt.) J. et G. Feldm.  
 (*Colaconema bonnemaisoniae* Batt.)  
*bornetii* Papenf.  
 (*corymbiferum* (Thur.) Batt.)  
*brebneri* (Batt.) Hamel  
 (*Rhodochorton brebneri* Batt.)  
*caespitosum* (J. Ag.) Näg.  
 ? (*lorrain-smithiae* (Lyle) Newton)  
*chylocladiae* (Batt.) Batt.  
 f. *chylocladiae*  
 f. *pulchrum* Batt.  
*daviesii* (Dillw.) Näg.

- ACROCHAETIUM** (*cont.*)  
*emergens* (K. Rosenv.) Web.-v. Bosse  
*endophyticum* (Batt.) Batt.  
*endozoicum* (Darb.) Batt.  
*microscopicum* (Näg.) Näg.  
*minutum* (Suhr) Hamel  
 (*Rhodochorton minutum* (Suhr) Rke.)  
*mirabile* Näg.  
*nemalionalis* (De Not.) Born.  
*pallens* (Zanard.) Näg.  
 (*Rhodochorton pallens* (Zanard.) Hauck)  
*parvulum* (Kylin) Hoyt  
*reticulatum* (Batt.) Papenf.  
 (*Colaconema reticulatum* Batt.)  
*sanctae-mariae* (Darb.) Hamel  
*scapae* (Lyle) Papenf.  
*secundatum* (Lyngb.) Näg.  
*seiriolanum* (Harvey-Gibs.) K. Rosenv.  
*sparsum* (Harv.) Näg.  
*thuretii* (Born.) Collins et Hervey  
*trifilum* (Buff.) Batt.  
*virgatulum* (Harv.) J. Ag.  
 f. *virgatulum*  
 f. *luxurians* (J. Ag.)  
 f. *tetrica* (K. Rosenv.)  
 ? *griffithsianum* Näg.  
 ? *irregulare* Reinsch  
 ? *lanuginosum* (Dillw.) Näg.  
 ? *pulvereum* Näg.
- AUDOUINELLA** Bory emend. Papenfuss, 1945.  
*efflorescens* (J. Ag.) Papenf.  
 (*Acrochaetium efflorescens* Näg.)  
*membranacea* (Magn.) Papenf.  
 (*Rhodochorton membranaceum* Magn.)
- RHODOCHORTON** Nägeli, 1861. (7)
- Helminthocladiaaceae**  
**HELMINTHOCLODIA** J. Agardh, 1851.  
*calvadosii* (Lamour.) Setch.  
 (*purpurea* J. Ag.)  
 ? *hudsonii* J. Ag.
- HELMINTHORA** J. Agardh, 1851.  
*divaricata* (Ag.) J. Ag.
- NEMALION** Duby, 1830.  
*elminthoides* (Vell.) Batt.  
 ? *multifidum* (Web. et Mohr) J. Ag.
- Chaetangiaceae**  
**SCINAIA** Bivona, 1822.  
*furcellata* (Turn.) Bivona  
*subcostata* (J. Ag.) Chemin ex Hamel  
 (*furcellata* var. *subcostata* J. Ag.)
- GELIDIALES**
- Gelidiaceae**  
**GELIDIUM** Lamouroux, 1813. (8)  
**PTEROCLADIA** J. Agardh, 1852.  
*pinnata* (Huds.) Papenf.  
 (*capillacea* (Gmel.) Born. et Thur.)
- GIGARTINALES**
- Cruoriaceae**  
**CRUORIA** Fries, 1835.  
*pellita* (Lyngb.) Fries
- rosea* Crn.  
 var. *rosea*  
 var. *purpurea* (Crn.) Batt.
- CRUORIOPSIS** Dufour, 1864.  
*gracilis* (Kuck.) Batt.  
 ? *hauckii* Batt. (9)
- PETROCELIS** J. Agardh, 1852.  
*cruenta* J. Ag.  
*hennedyi* (Harv.) Batt.
- Calosiphoniaceae**  
**CALOSIPHONIA** Crovan, 1852.  
*vermicularis* (J. Ag.) Schm.
- Nemastomaceae** (10)  
**PLATOMA** Schmitz, 1889.  
*bairdii* (Farl.) Kuck.  
*marginifera* J. Ag.
- SCHIZYMENIA** J. Agardh, 1851.  
*dubyi* (Chauv.) J. Ag.
- Furcellariaceae**  
**FURCELLARIA** Lamouroux, 1813.  
*fastigiata* (L.) Lamour. (11)  
**HALARACHNION** Kützing, 1843.  
*ligulatum* (Woodw.) Kütz.
- Rhabdoniaceae**  
**CATENELLA** Greville, 1830.  
*repens* (Lightf.) Batt.
- Rhodophyllidaceae**  
**CALLIBLEPHARIS** Kützing, 1843.  
*ciliata* (Huds.) Kütz.  
 var. *ciliata*  
 var. ? *angusta* Holm. et Batt.  
*lanceolata* (Stackh.) Batt.
- CYSTOCLONIUM** Kützing, 1843.  
*purpureum* (Huds.) Batt.
- RHODOPHYLLIS** Kützing, 1847.  
 ? *appendiculata* J. Ag.  
*divaricata* (Stackh.) Papenf. (12)  
 (*bifida* Kütz.)
- Plocamiaceae**  
**PLOCAMIUM** Lamouroux, 1813.  
*coccineum* (Huds.) Lyngb.  
 f. *coccineum*  
 f. *uncinatum* (Ag.) Levring
- Sphaerococcaceae**  
**SPHAEROCOCCUS** Stackhouse, 1797.  
*coronopifolius* Stackh.
- Gracilariaceae**  
**CORDYLECLADIA** J. Agardh, 1852.  
*erecta* (Grev.) J. Ag.
- GRACILARIA** Greville, 1830.  
*bursa-pastoris* (Gmel.) Silva  
 (*compressa* (Ag.) Grev.)  
*foliifera* (Forssk.) Børg.  
 (*multipartita* J. Ag.)  
*verrucosa* (Huds.) Papenf.  
 (*confervoides* (L.) Grev.)  
 f. *verrucosa*  
 f. *gracilis* (Stackh.)  
 f. *procerrima* (Turn.)

**Phylloporaceae**

- AHNFELTIA Fries, 1835.  
*plicata* (Huds.) Fries  
 GYMNOGONGRUS Martius, 1833.  
*griffithsiae* (Turn.) Mart.  
*norvegicus* (Gunn.) J. Ag.  
*patens* J. Ag.  
 ? PETROGLOSSUM Hollenberg, 1943.  
*nicaeense* (Duby) Schotter (13)  
 (*Rhodymenia palmetta* var. *elisiae*  
 Chauv.)  
 PHYLLOPHORA Greville, 1830. (14)  
*brodiaei* (Turn.) J. Ag.  
*membranifolia* (Good. et Woodw.) J. Ag.  
*palmettoides* J. Ag.  
*rubens* (L.) Grev.  
 (*epiphylla* (Müll.) Batt.)  
*traillii* Holm. et Batt.  
 STENOGRAMME Harvey, 1841.  
*interrupta* (Ag.) Mont.

**Gigartinaceae**

- CHONDRUS Stackhouse, 1797.  
*crispus* (L.) Stackh. (15)  
 GIGARTINA Stackhouse, 1809.  
*acicularis* (Wulf.) Lamour.  
*pistillata* (Gmel.) Stackh.  
*stellata* (Stackh.) Batt. (15)  
*teedii* Lamour.

**CRYPTONEMIALES****Gloiosiphoniaceae**

- GLOIOSIPHONIA Carmichael ex Berkeley,  
 1833.  
*capillaris* (Huds.) Carm.

**Dumontiaceae**

- DILSEA Stackhouse, 1809.  
*carnosa* (Schmidel) Kuntze  
 (*edulis* (Stackh.) Stackh.)  
 DUDRESNAYA Crouan frat., 1835.  
*verticillata* (With.) Le Jol.  
 DUMONTIA Lamouroux, 1813.  
*incrassata* (Müll.) Lamour.

**Polyideaceae**

- POLYIDES Agardh, 1822.  
*caprinus* (Gunn.) Papenf.  
 (*rotundus* (Gmel.) Grev.)

**Squamariaceae** (16)

- ERYTHRODERMIS Batters, 1900. (17)  
*allenii* Batt.  
 HAEMATOCCELIS J. Agardh, 1852. (17)  
*rubens* J. Ag.  
 PEYSSONELIA Decaisne, 1841.  
*atropurpurea* Crn.  
*dubyi* Crn.  
 (*Cruoriella dubyi* (Crn.) Schm.)  
*harveyana* Crn.  
*rosenvingii* Schm.  
*rubra* (Grev.) J. Ag.  
*rupestris* Crn.  
 PORPHYRODISCUS Batters, 1897. (17)  
*simulans* Batt.

- RHODODERMIS Crouan, 1852.  
*elegans* Crn.  
 var. *elegans*  
 var. *polystromatica* Batt. (18)  
*georgii* (Batt.) Collins  
 (*Rhodophysema georgii* Batt.)  
 ? *parasitica* Batt. (19)  
 RHODODISCUS Crouan, 1859.  
*pulcherrimus* Crn.

**Hildenbrandiaceae**

- HILDENBRANDIA Nardo, 1834.  
*crouanii* J. Ag.  
*prototypus* Nardo

**Corallinaceae** (20)

- CHOREONEMA Schmitz, 1889.  
*thuretii* (Born.) Schm.  
 CORALLINA Linnaeus emend.  
 Lamouroux, 1812.  
 ? *elongata* Johnst. (21)  
*granifera* Ellis et Soland.  
 (*virgata* Zanard.)  
*officinalis* L.  
 f. *officinalis*  
 f. *compacta* (Crn.)  
*squamata* Ellis  
 EPILITHON Heydrich, 1897. (22)  
 ? *membranaceum* (Esper) Heydr.  
 (*Lithothamnion membranaceum*  
 Fosl.)  
 JANIA Lamouroux, 1812.  
*corniculata* (L.) Lamour.  
 (*Corallina rubens* var. *corniculata*  
 Hauck)  
*rubens* (L.) Lamour.  
 (*Corallina rubens* Ellis et Sol.)  
 LITHOPHYLLUM Philippi, 1837.  
*adplicitum* (Fosl.) Newton  
*corallinae* (Crn.) Heydr.  
 (*Melobesia corallinae* Crn.)  
*crouanii* Fosl.  
*fasciculatum* Fosl.  
 f. *complanata* Fosl.  
 f. *divergens* Fosl.  
 f. *incrassata* Fosl.  
*hapalidioides* (Crn.) Heydr.  
 f. *hapalidioides*  
 f. *confinis* (Crn.) Fosl.  
*incrustans* Phil.  
 f. *incrustans*  
 f. *depressa* (Crn.) Fosl.  
 f. *harveyi* Fosl.  
 f. *subdichotomum* Heydr.  
*orbiculatum* Fosl. (23)  
*pustulatum* (Lamour.) Fosl.  
 f. *pustulatum*  
 f. *laminariae* (Crn.) Fosl.  
 LITHOTHAMNION Philippi, 1837.  
*bornetii* Fosl.  
*calcareum* (Pall.) Aresch.  
 f. *calcareum*  
 f. *compressa* (McCalla) Fosl.  
 f. *crassa* Lem.  
 f. *squarrolosa* Fosl.

- LITHOTHAMNION (cont.)**  
*calcareum* (cont.)  
 f. *subsimplex* (Batt.) Fosl.  
 f. ? *subvalida* Fosl.  
 ? *colliculosum* Fosl. (24)  
 f. *colliculosum*  
 f. *rosea* Batt.  
*compactum* Kjellm.  
 ? *fruticulosum* (Kütz.) Fosl.  
*glaciale* Kjellm.  
*granii* Fosl. (24)  
 f. *reducta* Fosl. (*battersii* Fosl.)  
*laeve* (Strömf.) Fosl.  
 (*stroemfeltii* Fosl.)  
*laevigatum* Fosl.  
*lenormandii* (Aresch.) Fosl.  
 f. *lenormandii*  
 f. *squamulosa* Fosl.  
 f. *sublaevis* Fosl.  
*norvegicum* (Aresch.) Kjellm.  
 (*calcareum* var. *norvegicum* Fosl.)  
*polymorphum* (L.) Aresch.  
*sonderi* Hauck  
 f. *sonderi*  
 f. *sublaevigata* Fosl.  
**MELOBESIA** Lamouroux, 1812. (22)  
 ? *farinosa* Lamour.  
 var. *farinosa*  
 var. *borealis* Lemoine  
 var. *solmsiana* Fkbg.  
 ? *lejolissii* Rosan.  
 ? *minutula* Fosl.  
 ? *zonalis* (Crn.) Fosl.  
**MESOPHYLLUM** Lemoine, 1928.  
*lichenoides* (Ellis) Lemoine  
 (*Lithothamnion lichenoides* Fosl.)  
 f. *lichenoides*  
 f. *agariciformis* (Johnst. ?)  
 f. *depressa* (Fosl.)  
**SCHMITZIELLA** Bornet et Batters, 1892.  
*endophlaea* Born. et Batt.
- Grateloupiaceae**  
**GRATELOUPIA** Agardh, 1822.  
*dichotoma* J. Ag.  
*filicina* (Wulf.) Ag.  
 var. *filicina*  
 var. *intermedia* Holm. et Batt.  
*minima* Crn.  
**HALYMENTIA** Agardh, 1817.  
*latifolia* Crn.
- Kallymeniaceae**  
**CALLOCOLAX** Schmitz, 1895.  
*neglectus* Schm.  
**CALLOPHYLLIS** Kützing, 1843.  
*flabellata* Crn.  
*laciniata* (Huds.) Kütz.  
**EUTHORA** J. Agardh, 1847.  
*cristata* (L.) J. Ag.  
**KALLYMENTIA** J. Agardh, 1842. (25)  
 ? *larterae* Holm.  
*reniformis* (Turn.) J. Ag.  
 var. *reniformis*  
 var. *ferrarii* J. Ag.  
 var. *undulata* J. Ag.
- MEREDITHIA** J. Agardh, 1892.  
*microphylla* J. Ag.  
 (*Kallymenia microphylla* J. Ag.)
- Choreocolaceae**  
**CHOREOCOLAX** Reinsch, 1875.  
*polysiphoniae* Reinsch  
**HARVEYELLA** Schmitz et Reinke, 1889.  
*mirabilis* (Reinsch) Schm. et Rke.  
**HOLMSELLA** Sturch, 1926.  
*pachyderma* (Reinsch) Sturch
- BONNEMAIISONIALES** (26)
- Naccariaceae**  
**ATRACTOPHORA** Crouan, 1849.  
*hypnoides* Crn.  
**NACCARIA** Endlicher, 1836.  
*wiggii* (Turn.) Endl.
- Bonnemaisoniaceae**  
**ASPARAGOPSIS** Montagne, 1840.  
*armata* Harv.  
 tetrasporophyte = *Falkenbergia rufolanosa* (Harv.) Schm.  
**BONNEMAIISONIA** Agardh, 1822.  
*asparagoides* (Woodw.) Ag.  
 tetrasporophyte = *Hymenoclonium serpens* (Crn.) Batt.  
*clavata* (Schousb.) Hamel  
*hamifera* Hariot  
 tetrasporophyte = *Trailiella intricata* Batt.
- RHODYMENIALES**
- Champiaceae**  
**CHAMPIA** Desvaux, 1808.  
*parvula* (Ag.) Harv.  
**CHYLOCLADIA** Greville, 1833.  
*reflexa* Lenorm.  
*squarrosa* (Kütz.) Le Jol.  
 (*kaliformis* var. *squarrosa* Harv.)  
*verticillata* (Lightf.) Bliding  
 (*kaliformis* (Good. et Woodw.) Grev.)  
 var. *verticillata*  
 var. *patens* (Kütz.)  
**GASTROCLONIUM** Kützing, 1843.  
*ovatum* (Huds.) Papenf.  
 (*Chylocladia ovata* Batt.)  
 var. *ovatum*  
 var. *subarticulatum* (Kütz.)  
**LOMENTARIA** Lyngbye, 1819.  
*articulata* (Huds.) Lyngb.  
*clavellata* (Turn.) Gaill.  
 var. *clavellata*  
 var. *sedifolia* Harv.  
*orcadensis* (Harv.) Collins  
 (*rosea* (Harv.) Thur.)
- Rhodymeniaceae**  
**RHODYMENTIA** Greville, 1830.  
*ardissoni* J. Feldm.  
 (*corallicola* Ardiss.)  
*palmata* (L.) Grev. (27)  
*pseudopalmata* (Lamour.) Silva (27)  
 (*palmetta* Grev.)

## CERAMIALES

## Ceramiales

- AGLAOTHAMNION** G. Feldmann-Mazoyer, 1940.  
*brodiaei* (Harv.) G. Feldm.  
 (*Callithamnion brodiaei* Harv.)  
*polyspermum* (Ag.) Parke  
 (*Callithamnion polyspermum* Ag.)  
 f. *polyspermum*  
 f. *scopulorum* (Ag.) Parke  
 (*Aglaothamnion scopulorum* (Ag.) G. Feldm.)  
*tenuissimum* (Bonnem.) G. Feldm.  
 (*Callithamnion tenuissimum* (Bonnem.) Kütz.)  
*tripinnatum* (Grat.) G. Feldm.  
 (*Callithamnion tripinnatum* (Grat.) Ag.)
- ANTITHAMNION** Nägeli, 1847.  
*boreale* (Gobi) Kjellm.  
*cruciatum* (Ag.) Näg.  
 var. *cruciatum*  
 var. *pumilum* (Harv.) Batt.  
*floccosum* (Müll.) Kleen  
*plumula* (Ellis) Thur.  
 var. *plumula*  
 var. *crispum* (Ducluz.) Hauck  
 var. *spinescens* Strömf.  
*sarniense* (Lyle) G. Feldm. (28)  
 (*Antithamnionella sarniense* Lyle)  
*spirographidis* Schiffner
- BORNETIA** Thuret, 1855.  
*secundiflora* (J. Ag.) Thur.
- CALLITHAMNION** Lyngbye emend. G. Feldmann-Mazoyer, 1940. (29)  
*arbuscula* (Dillw.) Lyngb.  
*byssoides* Arnott  
*corymbosum* (Sm.) Lyngb.  
*dudresnayi* Crn.  
 ? *fruticulosum* J. Ag. (30)  
*granulatum* (Ducluz.) Ag. (31)  
*hookeri* (Dillw.) Ag.  
*rabenhorstii* Crn.  
 ? *roseum* Harv. (32)  
 ? *spongiosum* Harv. (31)  
*tetragonum* (Wither.) Ag. (30)  
 f. *tetragonum*  
 f. *brachiatum* (Bonnem.) K. Rosenv.  
*tetricum* Ag.
- CERAMIUM** Roth, 1797. (33)  
*acanthotum* Carm. ex Harv.  
*arborescens* J. Ag.  
*areschougii* Kylin  
*atlanticum* Peterson  
*boergesenii* Peterson  
*ciliatum* (Ellis) Ducluz.  
*circinatum* (Kütz.) J. Ag.  
 ? *crouanianum* J. Ag.  
*derbesii* Solier  
*deslongchampsii* Chauv.  
*diaphanum* (Lightf.) Roth  
*echionotum* J. Ag.  
 var. *echionotum*  
 var. *transcurrens* (Kütz.) Batt.
- fastigiatum* Harv.  
*flabelligerum* J. Ag.  
*fruticulosum* (Kütz.) J. Ag.  
*gracillimum* Griff. et Harv.  
*pedicellatum* (Duby) J. Ag.  
*pennatum* Crn.  
*rubrum* (Huds.) Ag.  
*secundatum* J. Ag.  
*strictum* Harv.  
*tenue* J. Ag.  
*tenuissimum* (Lyngb.) J. Ag.  
*vimineum* J. Ag.
- COMPSOTHAMNION** Nägeli, 1861.  
*gracillimum* (Harv.) Näg.  
*thuyoides* (Sm.) Näg.
- CORYNOSPORA** J. Agardh emend. J. Agardh, 1876.  
*pedicellata* (Sm.) J. Ag.  
 (*Monospora pedicellata* (Sm.) Solier)  
 f. *pedicellata*  
 f. *comosa* (Holm. et Batt.)
- CROUANIA** J. Agardh, 1842.  
*attenuata* (Bonnem.) J. Ag.
- GRIFFITHSIA** Agardh, 1817.  
*barbata* (Sm.) Ag.  
*corallinoides* (L.) Batt.  
*devoniensis* Harv. (34)  
*flosculosa* (Ellis) Batt.
- HALURUS** Kützing, 1849.  
*equisetifolius* (Ag.) Kütz.  
 var. *equisetifolius*  
 var. *simplicifolium* J. Ag.
- MICROCLADIA** Greville, 1830.  
*glandulosa* (Soland.) Grev.
- PLEONOSPORIUM** Nägeli emend. Nägeli ex Hauck, 1883.  
*borveri* (Sm.) Näg. ex Hauck  
 var. *borveri*  
 var. *fasciculatum* (Harv.) Holm. et Batt.
- ? **PLUMARIA** Schmitz, 1896. (35)  
 ? *elegans* (Bonnem.) Schm.
- ? **PTILOTA** Agardh, 1817. (35)  
 ? *plumosa* (Huds.) Ag.
- PTILOTHAMNION** Thuret, 1863.  
 ? *lucifugum* Cotton (36)  
*pluma* (Dillw.) Thur.
- SEIROSPORA** Harvey, 1846. (37)  
*griffithsiana* Harv.  
*hormocarpa* (Holm.) Batt.  
*interrupta* (Sm.) Schm.
- SPERMOTHAMNION** Areschoug, 1877. (38)  
*barbatum* (Ag.) Näg.  
*irregulare* (J. Ag.) Ardiss.  
*repens* (Dillw.) K. Rosenv.  
 (*roseolum* Pringsh.)  
 (*turneri* (Mert.) Aresch.)  
*strictum* (Ag.) Ardiss.
- SPHONDYLOTHAMNION** Nägeli, 1861.  
*multifidum* (Huds.) Näg.  
 var. *multifidum*  
 var. *piliferum* (Ag.) Batt.
- SPYRIDIA** Harvey, 1833.  
*filamentosa* (Wulf.) Harv.



**Delesseriaceae**

- ACROSORIUM Zanardini, 1869.  
*reptans* (Crn.) Kylin (39)  
*uncinatum* (J. Ag.) Kylin (39)
- APOGLOSSUM J. Agardh, 1898.  
*ruscifolium* (Turn.) J. Ag.
- CRYPTOPLEURA Kützing, 1843.  
*ramosa* (Huds.) Kylin  
 f. *ramosa*  
 f. *ciliifera* (Kütz.)  
 f. *lobata* (Kütz.)  
 f. *uncinata* (Grev.)
- DELESSERIA Lamouroux, 1813.  
*sanguinea* (Huds.) Lamour.
- ERYTHROGLOSSUM J. Agardh, 1898.  
*sandrianum* (Zanard.) Kylin
- GONIMOPHYLLUM Batters, 1892.  
*buffhamii* Batt.
- HYOGLOSSUM Kützing, 1843.  
*woodwardii* Kütz. (40)
- MEMBRANOPTERA Stackhouse, 1809.  
*alata* (Huds.) Stackh.
- NITOPHYLLUM Greville, 1830. (41)  
 ? *bonnemaisonii* Grev.  
 (Myriogramme *bonnemaisonii* Kylin)  
 var. *bonnemaisonii*  
 var. *crassinerve* Batt.  
*punctatum* (Stackh.) Grev.  
 ? *versicolor* Harv.  
 (Myriogramme *versicolor* Kylin)
- PANTONEURA Kylin, 1919.  
*angustissima* (Turn.) Kylin
- PHYCODRYS Kützing, 1843.  
*rubens* (Huds.) Batt.
- POLYNEURA Kylin, 1924.  
*gmelinii* (Grev.) Kylin  
*hilliae* (Grev.) Kylin  
*litterata* (J. Ag.) Kylin
- RHIZOGLOSSUM Kylin, 1924.  
*thysanorhizans* (Holm.) Kylin
- Dasyaceae**
- DASYA Agardh, 1824.  
*arbuscula* (Dillw.) Ag.  
 var. *arbuscula*  
 var. ? *caespitosa* J. Ag.  
*corymbifera* J. Ag.  
*ocellata* (Grat.) Harv.  
*punicea* Menegh.
- HETEROSIPHONIA Montagne, 1842.  
*plumosa* (Ellis) Batt.  
 f. *plumosa*  
 f. *patens* (Grev.)  
 f. *tenuior* (Dillw.)
- Rhodomelaceae** (42)
- BOSTRYCHIA Montagne, 1838.  
*scorpioides* (Huds.) Mont.
- BRONGNIARTELLA Bory, 1822.  
*byssoides* (Good. et Woodw.) Schm.
- CHONDRIA Agardh, 1817.  
*caerulescens* J. Ag.  
*dasyphylla* (Woodw.) Ag.  
*tenuissima* (Good. et Woodw.) Ag.
- HALOPITYS Kützing, 1843.  
*incurvus* (Huds.) Batt.
- LAURENCIA Lamouroux, 1813. (43)  
*hybrida* (D.C.) Lenorm. ex Duby  
 (*caespitosa* Lamour.)  
*obtusa* (Huds.) Lamour.  
*pinnatifida* (Huds.) Lamour.
- LOPHOSIPHONIA Falkenberg, 1897.  
*obscura* (Ag.) Fkbg.  
 (*Polysiphonia obscura* J. Ag.)
- ODONTHALIA Lyngbye, 1819.  
*dentata* (L.) Lyngb.
- POLYSIPHONIA Greville, 1824. (44)  
*brodiaei* (Dillw.) Grev.  
*denudata* (Dillw.) Kütz.  
 (*variegata* (Ag.) Zanard.)  
*elongata* (Huds.) Harv.  
*elongella* Harv.  
*fibrata* (Dillw.) Harv.  
*fibrillosa* (Dillw.) Grev. (45)  
*foetidissima* Cocks  
*fruticulosa* (Wulf.) Spreng.  
 (*Pterosiphonia fruticulosa* (Wulf.)  
 Batten)  
*furcellata* (Ag.) Harv.  
 var. *furcellata*  
 var. *forcipata* J. Ag.  
*insidiosa* Crn.  
*lanosa* (L.) Tandy (*fastigiata* Grev.)  
*macrocarpa* Harv.  
*nigra* (Huds.) Batt.  
*nigrescens* (Sm.) Grev.  
 f. *nigrescens*  
 f. *affinis* (Moore) J. Ag.  
 f. *fucooides* (Huds.) J. Ag.  
 f. *protensa* J. Ag.  
 f. *senticosa* J. Ag.  
*opaca* (Ag.) Zanard.  
*rhumensis* Thur.  
*richardsonii* Hook.  
 ? *sanguinea* (Ag.) Zanard.  
*simulans* Harv.  
*spinulosa* Grev.  
 var. *spinulosa*  
 var. *major* J. Ag.  
*spiralis* Batten  
*subulifera* (Ag.) Harv.  
 var. *subulifera*  
 var. *templetonii* Harv.  
*urceolata* (Dillw.) Grev.  
 f. *urceolata*  
 f. *comosa* (Ag.) J. Ag.  
 f. *formosa* (Suhr) J. Ag.  
 f. *patens* (Dillw.) J. Ag.  
*violacea* (Roth) Grev. (46)
- PTEROSIPHONIA Falkenberg, 1889.  
*complanata* (Clem.) Fkbg.  
*parasitica* (Huds.) Fkbg.  
*pennata* (Roth) Fkbg.  
*thuyoides* (Harv.) Schm.
- RHODOMELA Agardh, 1822. (47)  
*confervoides* (Huds.) Silva  
 (*subfusca* (Woodw.) Ag.)  
*lycopodioides* (L.) Ag.

Notes on *Rhodophyceae*

- (1) See Waern (1952).
- (2) See Hamel (1924, p. 283).
- (3) British material of genus in need of revision.
- (4) According to Koster (1952) should be *B. atropurpurea* (Roth) Ag. f. *fuscopurpurea* (Dillw.) Ag. as there are no differences to be found between the fresh-water and marine material; see also Hamel (1924), and Kylin (1944). Kept the marine form distinct for the present awaiting the results of Dr K. M. Baker's investigations.
- (5) See Drew (1949).
- (6) *Acrochaetium* Nägeli, sens. lat.
- (7) Dr K. M. Baker is revising the British material of this genus.
- (8) Awaiting the results of the investigation of this genus carried out by Dr M. de Valèra and Mr P. Dixon.
- (9) Requires investigation.
- (10) *Nemastoma* J. Agardh, 1842; *N. dichotoma* J. Ag., recorded by Lyle (1920) for Guernsey. J. Feldmann (1941) thinks that several species may have been confused under the above name, so Lyle's specimen should be examined.
- (11) See Papenfuss (1950), Waern (1952), Silva (1952).
- (12) *Rhodophyllis bifida* var. *incrassata* Harv., requires investigation before any new combination is made under *R. divaricata*. *R. appendiculata* may be a form of *R. divaricata* (J. Feldmann, 1941).
- (13) See J. Feldmann (1941, p. 86) and G. Schotter (1952).
- (14) The form-range of the species on the British coast require investigation.
- (15) See Marshall, Newton & Orr (1949).
- (16) British material belonging to this family requires monographic treatment.
- (17) Systematic position uncertain.
- (18) See Cotton (1912).
- (19) See Kylin (1944).
- (20) In need of monographic treatment.
- (21) Needs investigation—should be possibly *C. mediterranea* Aresch. or *C. officinalis* L. var. *mediterranea* (Aresch.) Hauck.
- (22) The genus *Foshiella* Howe not adopted for the present—appears to require further investigation. If adopted the British species would be *F. farinosa* (Lamour.) Howe, *F. lejolisii* (Rosan.) Howe, *F. minuta* (Fosl.), *F. zonalis* (Crn.) J. Feldm., and *Epilithon membranaceum* would again be known as *Melobesia membranacea* (Esper.) Lamour.
- (23) Should possibly be placed in genus *Pseudolithothamnion* Lemoine, 1913; see Lemoine (1928).
- (24) Regarded by some workers as a form of *L. glaciale*.
- (25) *K. larterae* Holm. requires investigation—may be a form of *K. reniformis* (Turn.) J. Ag.
- (26) See J. & G. Feldmann (1942, 1952) and J. Feldmann (1952).
- (27) The form-range of the species requires investigation and revision.
- (28) Possibly a form of *A. spirographidis*, see J. Feldmann (1942).
- (29) British species require investigation as no doubt some of the species listed here under *Callithamnion* should be placed under *Aglaothamnion*. The range of form of species of this genus on the British coast is in urgent need of attention.
- (30) Kolderup Rosenvinge (1924) and Kylin (1944) consider *C. tetragonum*, *C. spiniferum* Kylin (Dutch coast) and *C. fruticosum* forms of one species. Kolderup Rosenvinge (1924) unites them under *C. tetragonum* but Kylin (1944) prefers to keep them separate and to use the name *C. tetragonum* for plants on the British coast and *C. fruticosum* for the plants on the Swedish coast. The form-range of the series on the British coast needs investigation and comparison with material from Sweden, Holland and Denmark.
- (31) Cotton (1912) thinks that *C. spongiosum* and *C. granulatum* may be two distinct species, having found no intermediate forms between them. They have been listed separately awaiting monographic treatment of British material.
- (32) Left as *C. roseum* Harv. until it is certain that Harvey's plant is the same as *C. roseum* (Roth) Lyngb.

- (33) British material in urgent need of revision, see work of Petersen, Kylin, Sjösted, Waern (references to literature in Waern, 1952), Kolderup Rosenvinge (1924), G. Feldmann-Mazoyer (1940), Lucas (1950). The different workers' interpretations of many of the species and of the form-range within any one species vary so much that no attempt has been made to link up the 'species' recorded for the British coast with these treatments. This must await monographic treatment of British material.
- (34) Possibly an ecological form of *G. corallinoides*, Koster (1952).
- (35) *Plumaria* Schm. and *Ptilota* Ag. used awaiting decision concerning conservation of *Plumaria* Schm. over *Plumaria* Stackh.—see Silva (1952).
- (36) See Cotton (1912), G. Feldmann-Mazoyer (1940); *P. lucifugum* Cotton may be a form of *P. pluma* since G. Feldmann considers that *P. micropterum* (Mont.) Born. is a reduced form of *P. pluma*. Fertile material of Cotton's plant needs investigation.
- (37) British material in need of revision.
- (38) British material requires investigation and revision. Kolderup Rosenvinge places *S. turneri* (Mert.) Aresch. as var. *turneri* (Mert.) K. Rosenv. and *S. roseolum* (Ag.) Pringsh. as var. *roseolum* (Ag.) K. Rosenv. under *S. repens* (Dillw.) K. Rosenv. If *Conferva repens* Dillw. is the same plant as that described by Mertens as *Ceramium turneri*, which Kolderup Rosenvinge believed it was, then var. *turneri* should be placed as a synonym under *S. repens* (Dillw.) K. Rosenv. var. *repens*. See J. Feldmann (1942, p. 59) concerning *S. strictum*.
- (39) Doubtful if these two species are distinct.
- (40) Forms of this species occurring on British coast in need of revision.
- (41) Kylin (1934) considered that *N. bonnemaisonii* and *N. versicolor* are closer to the genus *Nitophyllum* than to the genus *Myriogramme* Kylin and so should remain in the genus *Nitophyllum* for the present; he considered, however, that they are sufficiently different from the type species *N. punctatum* to warrant their being placed in a new genus.
- (42) *Ctenosiphonia* Falkenberg, 1897; *C. hypnoides* (Welw.) Fkbg. recorded for Guernsey by Lyle (1920, 1923).
- (43) Form-range of species on British coast needs revision.
- (44) Form-range of species on British coast requires investigation.
- (45) Considered by some workers a form of *P. violacea*; British material needs investigation.
- (46) The forms of this species on the British coast need investigation, see Kolderup Rosenvinge (1924), Kylin (1944), Veldkamp (1950). *P. subulata* (Ducluz.) J. Ag. considered a distinct species by some workers and not a variety of *P. violacea*.
- (47) Forms of *R. confervoides* require revision before any new combinations are made. *R. lycopodioides* should possibly be included as a variety under *R. confervoides*.

## CYANOPHYCEAE (1)

**Chroococcaceae** (2)

- ANACYSTIS Meneghini, 1837.  
*marina* (Hansg.) Dr. et Daily  
 (*Aphanocapsa marina* Hansg.)  
 ? *parasitica* Kütz.  
 ? APHANOCAPSA Nägeli, 1849.  
 ? *litoralis* Hansg.  
 ? APHANOTHECE Nägeli, 1849.  
 ? *pallida* (Kütz.) Rabenh.  
 ? CHROOCOCCUS Nägeli, 1849.  
 ? *calcicola* Anand  
 ? *turgidus* (Kütz.) Näg.  
 ? GLOEOCAPSA Kützing, 1843.  
 ? *crepidinum* Thur.  
 ? GLOEOTHECE Nägeli, 1849.  
 ? *palea* (Kütz.) Rabenh.  
 ? HOLOPEDIA Lagerheim, 1883.  
 ? *sabulicola* (Lagerh.) Kirchn.  
 MERISMOPEDIA Meyen, 1839.  
 ? *convoluta* Bréb. ex Kütz.

- ? *glauca* (Ehrb.) Näg.  
 f. *glauca*  
 f. ? *mediterranea* (Näg.) Collins  
 ? *revoluta* Ask.  
 ? SYNECHOCOCCUS Nägeli, 1849.  
 ? *bacillaris* Butcher

**Chamaesiphonaceae** (2, 3)

- ? CHAMAESIPHON A. Braun. et Grunow,  
 1865.  
 ? *marinus* Wille (4)  
 ? CHLOROGLOEA Wille, 1900.  
 ? *tuberculosa* (Hansg.) Wille  
 ? DERMOCARPA Crouan, 1858.  
 ? *enteromorphae* Anand  
 ? *leibleinii* (Reinsch) Born. et Thur.  
 ? *olivacea* (Reinsch) Tilden  
 ? *incrustans* (Reinsch) Batt.  
 ? *rosea* (Reinsch) Batt.  
 ? *sphaerica* Setch. et Gardn. ex Gardn.

- ? **DERMOCARPA** (*cont.*)  
 ? *violacea* Crn.
- ENTOPHYSALIS** Kützing, 1843.  
*conferta* (Kütz.) Dr. et Daily  
 (*Dermocarpa prasina* (Reinsch)  
 Born. et Thur.)  
 (*Xenococcus schousboei* Thur.)  
*crustacea* (Ag.) Dr. et Daily  
 (*granulosa* Kütz.)  
 (*Hyella caespitosa* Born. et Flah.)  
 (*Pleurocapsa fuliginosa* Hauck)
- ? **ONCOBYRSA** Agardh, 1827.  
 ? *marina* (Grun.) Rabenh.
- ? **PLEUROCAPSA** Thuret, 1885.  
 ? *amethystea* K. Rosenv.  
 ? *crepidinum* Collins  
 ? *entophysaloides* Setch. et Gardn.  
 ex Gardn.  
 ? *kernerii* (Hansg.) Dr.
- ? **XENOCOCCUS** Thuret ex Bornet et  
 Thuret, 1880.  
 ? *gilkeyae* Setch. et Gardn. ex Gardn.  
 (forma)  
 ? *pyriformis* Setch. et Gardn.  
 ex Gardn.  
 ? *violacea* Anand
- Stigonemataceae**  
**BRACHYTRICHIA** Zanardini; Bornet et  
 Flahault, 1886.  
*balani* (Lloyd) B. et F.
- MASTIGOCOLEUS** Lagerheim; Bornet et  
 Flahault, 1887.  
*testarum* Lagerh. ex. B. et F.
- Nostocaceae**  
**ANABAENA** Bory; Bornet et Flahault,  
 1888.  
 ? *berkeleyana* (Thwaites) Batt.  
 ? *broomei* (Thwaites) Batt.  
*torulosa* (Carm.) Lagerh. ex B. et F.  
*variabilis* Kütz. ex B. et F.
- NODULARIA** Mertens; Bornet et  
 Flahault, 1888.  
*harveyana* (Thwaites) Thur. ex. B.  
 et F.  
*spumigena* Mert. ex. B. et F.  
 var. *litorea* (Kütz.) B. et F.
- NOSTOC** Vaucher; Bornet et Flahault,  
 1888.  
*commune* Vauch. ex B. et F.  
*entophytum* B. et F.  
*linckia* (Roth) Born. ex B. et F.
- PSEUDANABAENA** Lauterborn, 1916.  
*brevis* Carter
- Rivulariaceae**  
**AMPHITHRIX** Kützing; Bornet et  
 Flahault, 1886.  
*violacea* (Kütz.) B. et F.
- CALOTHRIX** Agardh; Bornet et Flahault,  
 1886.  
*aeruginosa* (Kütz.) Thur. ex B. et F.  
*confervicola* Ag. ex B. et F.  
 var. *confervicola*  
 var. *purpurea* B. et F.
- ? *consociata* (Kütz.) B. et F. (5)  
 ? *contarenii* B. et F. (6)  
*cottonii* nov. nom. (7)  
 (*endophytica* Cotton)  
*crustacea* Thur. ex B. et F.  
*fusca* (Kütz.) B. et F.  
*litoralis* Anand  
*parasitica* (Chauv.) Thur. ex. B. et F.  
*pulvinata* (Ag.) B. et F.  
 var. *pulvinata*  
 var. *prostrata* Anand  
*scopulorum* (Web. et Mohr) Ag.  
 ex B. et F.  
 (*fasciculata* Ag. ex B. et F.) (8)  
*vivipara* Harv. ex B. et F.
- DICHOTHRIX** Zanardini; Bornet et  
 Flahault, 1886.  
*gypsophila* (Kütz.) B. et F.
- ISACTIS** Thuret; Bornet et Flahault,  
 1886.  
*plana* Thur. ex B. et F.  
 var. *plana*  
 var. *fissurata* B. et F.
- RIVULARIA** Roth; Bornet et Flahault,  
 1886.  
*atra* Roth ex B. et F. (9)  
*australis* Harv. ex B. et F.  
*biasoletiana* Menegh. ex B. et F.  
*bullata* (Poir.) Berk. ex B. et F.  
*mesenterica* Thur. ex B. et F.  
*nitida* Ag. ex B. et F. (9)
- Scytonemataceae**  
 ? **DIPLOCOLON** Nägeli; Bornet et  
 Flahault, 1887. (10)  
 ? *codii* Batt. (10)
- FREMYELLA** J. De Toni, 1936.  
 (*MICROCHAETE* Thuret, 1875)  
*aeruginosa* (Batt.) nov. comb.  
 (*Microchaete aeruginosa* Batt.)  
*grisea* (Thur. ex B. et F.) J. De Toni  
 (*Microchaete grisea* Thur.)
- PLECTONEMA** Thuret; Gomont, 1893.  
*battersii* Gom.  
*atorale* Anand  
*norvegicum* Gom.  
*nostocorum* Born. ex Gom.  
*terebrans* Born. et Flah. ex Gom.
- TOLYPOTHRIX** Kützing; Bornet et  
 Flahault, 1887.  
*tenuis* Kütz. ex B. et F.
- Oscillatoriaceae**  
**HYDROCOLEUM** Kützing; Gomont, 1892.  
*glutinosum* (Ag.) Gom.  
*lyngbyaceum* Kütz. ex Gom.  
 var. *lyngbyaceum*  
 var. *rupestre* Kütz. ex Gom.
- LYNGBYA** Agardh; Gomont, 1893.  
*aestuarii* Liebm. ex Gom. (11)  
 f. *aestuarii*  
 f. *aeruginosa* Gom.  
 f. *ferruginea* Gom.  
 f. *limicola* Gom.  
 f. *natans* Gom.

- LYNGBYA (*cont.*)  
*aestuarii* (*cont.*)  
 f. *spectabilis* Gom.  
 f. *symplocoidea* Gom.  
*agardhii* Gom.  
*confervoides* Ag. ex Gom.  
*gracilis* Rabenh. ex Gom.  
 var. *maritima* Anand  
*lutea* Gom. ex Gom.  
*majuscula* Harv. ex Gom.  
*meneghiniana* Gom. ex Gom.  
*reticulariarum* Gom.  
*semiplena* J. Ag. ex Gom.
- MICROCOLEUS Desmazières; Gomont, 1892.  
*acutirostris* Gom.  
*chthonoplastes* Thur. ex Gom.  
*tenerrimus* Gom.
- OSCILLATORIA Vaucher; Gomont, 1893. (12)  
*amphibia* Ag. ex Gom.  
*bonnemaisonii* Crn. ex Gom.  
*brevis* Kütz. ex Gom.  
 var. *neapolitana* Gom.  
*corallinae* Gom. ex Gom.  
*formosa* Bory ex Gom.  
*laetevirens* Crn. ex Gom.  
*limosa* Ag. ex Gom.  
*margaritifera* Kütz. ex Gom.  
*nigro-viridis* Thwaites ex Gom.  
*sancta* Kütz. ex Gom.
- PHORMIDIUM Kützing; Gomont, 1893.  
*ambiguum* Gom.  
*angustissimum* W. et G. S. West  
*autumnale* Gom.  
*corium* Gom.
- ectocarpi* Gom.  
*foveolarum* Gom.  
 f. *foveolarum*  
 f. *minus* Anand  
 f. *moniliforme* Anand  
*fragile* Gom.  
*monile* Setch. et Gardn. (forma)  
*papyraceum* Gom. ex Gom.  
*persicinum* Gom.  
*submembranaceum* Gom.  
 var. *minor* Anand  
*subuliforme* Gom.  
*tenue* Gom.  
*uncinatum* Gom. ex Gom.  
*valderianum* Gom.
- SCHIZOTHRIX Kützing; Gomont, 1892.  
*crewellii* Harv. ex Gom.  
*fritschii* Anand  
*lardacea* Gom.  
*vaginata* Gom.
- SPIRULINA Turpin; Gomont, 1893.  
*major* Kütz. ex Gom.  
*subsalsa* Oerst. ex Gom.  
 f. *subsalsa*  
 f. *oceanica* Gom.  
*subtilissima* Kütz. ex Gom.  
*versicolor* Cohn ex Gom. (13)
- SYMPLOCA Kützing; Gomont, 1893.  
*atlantica* Gom.  
 var. *atlantica*  
 var. *purpurea* Batt.  
*dubia* Gom.  
*hydroides* Kütz. ex Gom.  
 var. *hydroides*  
 var. *fasciculata* Gom.

#### Notes on Cyanophyceae

- (1) For various systems of classification see Geitler (1932), Frémy (1934), Fritsch (1945), Smith (1950); families only given in list.
- (2) See Drouet (1951) and Drouet & Daily (1952) who are also preparing for publication a detailed revision of the coccoid Cyanophyceae. Dr F. Drouet has very kindly given the following information for inclusion here. In the revision of the Chroococcaceae the genus *Anacystis* Menegh. will include *Aphanocapsa*, *Chroococcus* and *Gloeocapsa* of this list and the genus *Coccochloris* Spreng. will include *Aphanothece*, *Gloeothece*, and *Synechococcus* of this list. In the revision of the Chamaesiphonaceae the genus *Entophysalis* Kütz. will include all the genera given under this family in this list including *Plurocapsa* Thur. as to type, but not as to many of the species which largely are forms of *Anacystis*.
- (3) See also Nadson (1932).
- (4) Probably not a member of the Cyanophyceae.
- (5) = *C. confervoides* Ag.?
- (6) Possibly a form of *C. scopulorum* Ag.
- (7) = *Calothrix endophytica* Cotton, *Proc. Roy. Irish Acad.*, Vol. 31, p. 104, 1912 [non *Calothrix endophytica* Lemmerman, *Forsch. Ber. d. Biolog. Stat. zu Plön*, p. 184, 1896 = *Homoeothrix endophytica* (Lemm.) Lemm., *Krypt. Flor. Mark Brandenburg*, Bd. 3, p. 240, 1910.]
- (8) Both Lindstedt (1943) and Du Rietz (1947) consider that *C. fasciculata* Ag. is a luxuriant growth form of *C. scopulorum*. The plant figured and described as *C. fasciculata* by Harvey in *Phyc. Brit.*, may be, according to some authorities, a species quite distinct from the true *C. fasciculata* Ag.
- (9) Geitler (1932) suggests that *R. atra* is possibly the young stage of *R. nitida*.

- (10) The value of this genus appears to be debatable since *D. heppii* Näg., on which the genus was founded, is, according to some authorities, only a form of *Scytonema crustaceum* Ag. There also seems to be doubt concerning Batters' plant (Frémy, 1934) since his diagrams do not show false branching but true branching—this requires investigation.
- (11) Intermediates occur between all the described forms (Frémy, 1934).
- (12) Two species omitted from list as they are in need of investigation. (a) *O. rosea* (Crn.) Batt. [non *O. rosea* Utermöhl, 1925, = *O. utermoehlii* J. De Toni, 1939] given as a sp. inquir. in Gomont. (b) *O. subuliformis* Thwaites ex Harv., Phyc. Brit.; does Thwaites' plant = *O. subuliformis* Kütz.?
- (13) Probably a form of *S. subsalsa*—no essential difference between the two species (Geitler, 1932).

## REFERENCES

- BATTERS, E. A. L., 1906. New or critical British marine Algae. *Journ. Bot., Lond.*, Vol. 44, pp. 1-3.
- BLIDING, C., 1944. Zur Systematik des schwedischen Enteromorphen. *Bot. Notiser*, 1944, pp. 331-56.
- CHADEFAUD, M., 1941. Sur l'organisation et la position systématique des Flagellés du genre *Pyramidomonas*. *Rev. Sci., Paris*, 79 année, pp. 113-14.
- 1945. Sur la position systématique des Vauchéries. *Bull. Soc. bot. Fr.*, T. 92, pp. 47-50.
- 1951. Les Vauchéries sont des Xanthophycées. *Bull. Soc. bot. Fr.*, T. 98, pp. 210-11.
- CHAPMAN, V. J., 1939. Some algal complexities. *Rhodora*, Vol. 41, pp. 19-28.
- 1952. New entities in the Chlorophyceae of New Zealand. *Trans. Roy. Soc. N.Z.*, Vol. 80, pp. 47-58.
- CHRISTENSEN, T., 1952. Studies on the genus *Vaucheria*. I. A list of finds from Denmark and England with notes on some submarine species. *Bot. Tidsskr.*, Bd. 49, pp. 171-88.
- COTTON, A. D., 1912. Clare Island Survey. Pt. 15. Marine Algae. *Proc. Roy. Irish Acad.*, Vol. 31, 178 pp.
- DREW, K. M., 1949. *Conchocelis*—phase in the life-history of *Porphyra umbilicalis* (L.) Kütz. *Nature, Lond.*, Vol. 164, p. 748.
- DROUET, F., 1951. Cyanophyta. Chapter 8 in *Manual of Phycology*. Ed. G. M. Smith. Waltham, Mass.
- DROUET, F. & DAILY, W. A., 1952. A synopsis of the coccoid Myxophyceae. *Butler Univ. Bot. Stud.*, Vol. 10, pp. 220-23.
- DU RIETZ, G. E., 1940. On the identity of *Dictyosiphon chordaria* Areschoug and *Gobia baltica* (Gobi) Reinke. *Svensk bot. Tidskr.*, Bd. 34, pp. 35-46.
- 1947. Wellengrenzen als ökologische Äquivalente der Wasserstandslinien. *Zool. Bidr. Uppsala*, Bd. 25, pp. 534-50.
- FELDMANN, J., 1941. Les Algues Marines de la Côte des Albères. IV. Rhodophycées. Fasc. II (Gigartinales, Rhodymeniales). *Rev. Algol.*, T. 12, pp. 77-100.
- 1942. Les Algues Marines de la Côte des Albères. IV. Rhodophycées. Fasc. III (Ceramiales). *Trav. Algol.*, Vol. 1, pp. 29-113.
- 1949. L'ordre des Scytosiphonales. *Mém. Soc. Hist. Nat. Afr. N.*, Hors-série, T. 2, pp. 103-15.
- 1952. Les cycles de reproduction des algues et leurs rapports avec la phylogénie. *Rev. Cytol., Paris*, T. 13, pp. 1-49.
- FELDMANN, J. & G., 1942. Recherches sur les Bonnemaisoniacées et leur alternance de générations. *Ann. Sci. nat. (Bot.)*, 11e Série, T. 3, pp. 75-175.

- FELDMANN, J. & G., 1952. Nouvelles recherches sur le cycle des Bonnemaisoniacées: le développement des Tétraspores du *Falkenbergia rufolanosa* (Harv.) Schmitz. *Rev. gén. Bot.*, T. 59, pp. 313-23.
- FELDMANN-MAZOYER, G., 1940. *Recherches sur les Céramiacées de la Méditerranée Occidentale*. 510 pp., Alger.
- FRÉMY, P., 1934. Cyanophycées des côtes d'Europe. *Mém. Soc. nat. Sci. Cherbourg*, T. 41, pp. 1-235.
- FRITSCH, F. E., 1945. *The Structure and Reproduction of the Algae*, Vol. 2. Cambridge.
- GEITLER, L., 1932. Cyanophyceae. Rabenhorst's *Kryptogamen-Flora*, Bd. 14. Leipzig.
- HAMEL, G., 1924. Floridées de France. I. *Rev. Algol.*, T. 1, pp. 278-92.
- 1931. Chlorophycées des côtes françaises (Fin). *Rev. Algol.*, T. 6, pp. 9-73.
- 1931-1939. *Pheophycées de France*. Paris.
- HARVEY, W. H., 1846-1851. *Phycologia Britannica*, Vols. 1-4. London.
- HOLLENBERG, G. J., 1941. Observations on Ralfsiaceae. *Amer. Journ. Bot.*, Vol. 28, p. 728.
- JAASUND, E., 1951. Marine algae from northern Norway. I. *Bot. Notiser*, pp. 128-42.
- KOLDERUP ROSENINGE, L., 1924. The marine algae of Denmark. Pt. III. Rhodophyceae. III (Ceramiales). *K. danske vidensk. Selsk.*, Ser. Nat., Math. Afd., 7, pp. 287-486.
- KOLDERUP ROSENINGE, L., with contributions by SÖREN LUND, 1935. On some Danish Phaeophyceae. *K. danske vidensk. Selsk.*, Nat. Math. Afd., 9, Ser. VI, pp. 1-40.
- KOLDERUP ROSENINGE, L. (†) & LUND, SÖREN, 1947. The marine algae of Denmark. Vol. II. Phaeophyceae. III. *Biol. Skr.*, Bd. 4, pp. 1-99.
- KORNMANN, P., 1953. Der Formenkreis von *Acinetospora crinita* (Carm.) nov. comb. *Helgoländ. Wiss. Meeresunters.*, Bd. 4, pp. 205-24.
- KOSTER, J. Th., 1952. Rare or otherwise interesting marine algae from the Netherlands. *Acta Bot. Néerland.*, Vol. 1, pp. 201-15.
- KUCKUCK, P. (†), 1953. (Ed. by P. Kornmann.) Ectocarpaceen-Studien. I. *Hecatonema*, *Chilionema*, *Compsomena*. *Helgoländ. Wiss. Meeresunters.*, Bd. 4, pp. 316-52.
- KYLIN, H., 1933. Über die Entwicklungsgeschichte der Phaeophyceen. *K. fysiogr. Sällsk. Lund Förh.*, Bd. 44, 102 pp.
- 1934. Bemerkungen über einige Nitophyllaceen. *K. fysiogr. Sällsk. Lund Förh.*, Bd. 4, pp. 1-8.
- 1935. Über einige kalkbohrende Chlorophyceen. *K. fysiogr. Sällsk. Lund Förh.*, Bd. 5, 19 pp.
- 1944. Die Rhodophyceen der schwedischen westküste. *K. fysiogr. Sällsk. Lund Förh.*, N.F., Bd. 55, 104 pp.
- 1947. Die Phaeophyceen der schwedischen westküste. *K. fysiogr. Sällsk. Lund Förh.*, N.F., Bd. 58, 99 pp.
- 1949. Die Chlorophyceen der schwedischen westküste. *K. fysiogr. Sällsk. Lund Förh.*, N.F., Bd. 60, 79 pp.
- LANJOUW, J. (ed. by), 1952. *International Code of Botanical Nomenclature adopted by the Seventh International Botanical Congress, Stockholm, July 1950*, Utrecht.
- LEMOINE, Mme P., 1928. Sur la présence de *Lithophyllum orbiculatum* Fosl. dans la Manche et son attribution au genre *Pseudolithophyllum*. *Rev. Algol.*, T. 4, pp. 1-6.
- LEVRING, T., 1937. Zur Kenntnis der Algenflora der norwegischen Westküste. *K. fysiogr. Sällsk. Lund Förh.*, N.F., Bd. 48, 147 pp.

- LEVRING, T., 1940. *Studien über die Algenvegetation von Blekinge, Südschweden.* 178 pp., Lund.
- 1945. Zur Kenntnis zweier endophytischer Phaeophyceen. *Acta Hort. gothoburg.*, Bd. 16, pp. 185-90.
- LINDSTEDT, A., 1943. *Die Flora der marinen Cyanophyceen der schwedischen Westküste.* 121 pp., Lund.
- LUCAS, J. A. W., 1950. The algae transported on drifting objects and washed ashore on the Netherlands' coast. *Blumea*, Vol. 6, pp. 527-43.
- LUND, S., 1950. The marine algae of Denmark. Vol. II. Phaeophyceae. IV. *Biol. Skr.*, Bd. 6, pp. 1-80.
- LYLE, L., 1920. The marine algae of Guernsey. *Journ. Bot., Lond.*, Vol. 58, suppl. 2, 53 pp.
- 1923. Distribution of the marine flora of the Channel Islands compared with that of the coasts of Western Europe. *Journ. Ecol.*, Vol. 11, pp. 77-92.
- MARSHALL, S. M., NEWTON, L., ORR, A. P. *et al.*, 1949. *A Study of certain British Seaweeds and their Utilization in the Preparation of Agar.* 184 pp. London: H.M. Stationery Office.
- NADSON, G. A., 1932. Contribution à l'étude des algues perforantes. *Bull. Acad. Sci. U.R.S.S.*, VIII Sér., no. 7, pp. 833-45.
- NEWTON, L., 1931. *A Handbook of British Seaweeds.* London.
- PAPENFUSS, G. F., 1950. Review of the genera of algae described by Stackhouse. *Hydrobiologia*, Vol. 2, pp. 181-208.
- SCHOTTER, G., 1952. Note sur le *Gymnogongrus nicaeensis* (Dub.) Ardiss. et Straff. *Bull. Soc. Hist. nat. Afr. N.*, T. 43, pp. 203-10.
- SETCHELL, W. A. & GARDNER, N. L., 1925. The marine algae of the Pacific coast of North America. Pt. III. Melanophyceae. *Univ. Calif. Publ. Bot.*, Vol. 8, pp. 383-898.
- SILVA, P. C., 1952. A review of nomenclatural conservation in the algae from the point of view of the type method. *Univ. Calif. Publ. Bot.*, Vol. 25, pp. 241-324.
- SINCLAIR, J., 1949. The marine algae of Stronsay. *Notes R. Bot. Gdn. Edinb.* Vol. 20, pp. 160-79.
- SMITH, G. M., 1950. *The Fresh-water Algae of the United States.* 2nd ed. London.
- VELDKAMP, H., 1950. The genus *Polysiphonia* in the Netherlands. *Blumea*, Vol. 6, pp. 517-26.
- WAERN, M., 1945. Remarks on some Swedish Sphacelariaceae. *Svensk. bot. Tidskr.*, Bd. 39, pp. 396-418.
- 1952. Rocky-shore algae in the Öregrund Archipelago. *Acta phytogeogr. suec.*, Bd. 30, 298 pp.