

A Check-list and Atlas of the Seaweeds of Britain and Ireland

F. G. Hardy and M. D. Guiry

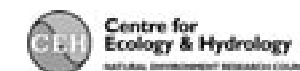


University of
Newcastle upon Tyne



National University of Ireland, Galway
Ollscoil na hÉireann, Gaillimh

University of Newcastle upon Tyne and
National University of Ireland, Galway



With maps prepared by H. R. Arnold

Biological Records Centre, Centre for Ecology & Hydrology, Monks Wood



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Institiúid Mháirtín Uí Ráin



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Fórsa na Mara

Sponsored by the Martin Ryan Institute, NUI, Galway and the Marine Institute, Dublin



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Dedicated to Linda Irvine and the late David Irvine who did so much to improve our knowledge of the seaweeds of these islands.

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Preface

When the British Phycological Society was inaugurated, 50 years ago, in July 1952, its aims included producing a revised check-list of British marine algae and the publication of a new British marine algal flora. But it also initiated an algal mapping scheme, which has now come to fruition in this Check-list and Atlas of the Seaweeds of Britain and Ireland. This volume therefore represents the cumulative efforts of a large number of individuals, professional and amateur, who have contributed their time and data to the project. It is particularly appropriate that it is being published at the end of the British Phycological Society's Jubilee year, for without our redoubtable founders, it would probably never have been initiated. When the Provisional Atlas appeared in 1986, the Chief Scientist of the Nature Conservancy Council acknowledged the value of such an atlas for the NCC, with respect to the designation of Sites of Special Scientific Interest, National Nature Reserves and Marine Nature Reserves. With continuing pressure on the coastal marine environment, distributional information is as important today as it was 15 years ago.

Over the life of the project, technology has changed dramatically. The advent of computers has revolutionised the production of maps in particular, but data entry still requires the human hand and eye, as well as quality control to ensure accuracy. At the same time, our understanding of the marine algae has moved forward

with concomitant impact on classification and nomenclature. Taxonomic revisions have therefore had to be assessed and incorporated where appropriate. The extensive synonymy, prepared by Michael Guiry, bears witness to this.

Throughout, the involvement of the Biological Records Centre at Monks Wood has been crucial, and the expertise and hard work of Henry Arnold in particular, cannot be underestimated. Gavin Hardy co-ordinated the transfer of data from individuals to the BRC, with the unenviable job of chivvying and chasing, travelling, liaising and pestering to see this atlas finally appear. As well as dealing with the preparation of the Check-list and the publishing practicalities, Michael Guiry also facilitated the inclusion of Irish records, so this is not simply a British Atlas, but one that truly encompasses the geographical region of Britain and Ireland, entirely appropriate as the Society becomes ever more international.

On behalf of the British Phycological Society, I would like to express thanks to all those, present and past, who have unselfishly contributed to this project, but in particular to mark our indebtedness to Gavin Hardy, Michael Guiry and Henry Arnold for completing the task.

Eileen J. Cox

President, The British Phycological Society

General introduction

The study of the marine algae of Britain and Ireland has a long and distinguished history. Until well into the nineteenth century it was regarded as the norm for those interested in the study of plants and in local and national floras to include the algae along with all the other groups of plants (a practise which has begun to be revived, for example, in the new *Flora of Dorset*). The nineteenth century itself was the heyday of the “amateur naturalist”, people who pursued the study of natural history with awe-inspiring diligence and in incredible detail. A considerable number of illustrated books were written to enable those interested in seaweeds to identify the species they found, giving advice on how to collect, and this fuelled the upsurge in an interest in flowering plants and ferns, fungi, butterflies, molluscs, birds, and, of course, seaweeds. For a time seaweed-hunting was a fashionable occupation, especially amongst ladies but certainly not exclusively so, and the many and large collections in national and provincial herbaria bear testimony to this occupation.

During the nineteenth century also there began a great tradition of scientific studies of the algae, on their anatomy and development in particular, and this blossomed further as the twentieth century progressed. However, the study of the ecology, physiology and biochemistry of the algae tended to eclipse the activities of the naturalist so that those amateurs interested in botany tended largely to exclude the algae from their endeavours, and the algae were in danger of becoming the preserve of scientific professionals.

The British Phycological Society was founded in 1952, and among its initial aims was the production of a check-list of all the British species of marine algae (the studies of the previous century or so had produced a very large number of names and synonyms, and there was a considerable degree of confusion in making a definitive and complete list of the correct position), the writing of a new flora so that there would be a definitive handbook for the identification of all the British species (the latest such handbook, by Newton, had been published in 1931 and a considerable volume of work had been published in the scientific literature since that date), and a study of the distribution of the British species. The check-list was the first of these projects to be completed, and this volume contains the most up-to-date lineal descendant of that work. To date, seven parts of the new *Seaweeds of the*

British Isles have been published, one is in press, and one further remains to be published in order to complete the series. Since its earliest days the Society has been asking its members to submit records of the species they have found. An initial scheme was rather complicated in its administration and methods and, as a result, it was decided in the late 1960s to launch a formal Marine Algal Mapping Scheme in conjunction with the Biological Records Centre at Monks Wood Experimental Station (now CEH Monks Wood).

From its very inception it has always been the practise of the mapping scheme to be very insistent and careful about the accuracy of the records being submitted to it, and to exclude any that might be regarded as being doubtful, and that might corrupt the dataset. During its first quarter century (from 1970) the mapping scheme was administered by Professor T.A. Norton; latterly (from 1994) it was in the hands of Dr F.G. Hardy. The co-ordinator was assigned the task of checking the validity of submitted records with the aid of two panels of referees who could be contacted on an individual basis: one set of referees included experts on particular species or groups of species (particularly important when one is working with a group of organisms some species of which are difficult to identify precisely without experience) and the other set included those with a local geographical expertise and these were able to rule on the likelihood of a particular species being found in a particular part of the country. At a later date, from Autumn 2001, when draft maps of all the submitted records were produced, these too were critically examined in the same way, the basic rule of play being essentially “if in doubt, throw it out” (even if this resulted in a species being under-recorded). At the end of the day one has to appreciate however that, although every effort has been made to verify records, and we have been extremely diligent in rooting out inaccuracies, only a very small proportion of the submitted records are supported by herbarium specimens. In the absence of such physical guarantees one is left making a judgement on the recorders (in whom the scheme was ultimately dependent and to whom the Society is extremely grateful) and in trusting the decisions made.

During the course of the scheme more than 300 persons were registered as recorders (Table 1). Even so, the final position undoubtedly reflects two issues: the small number

of keen amateur naturalists recording algae (phycology does not have a very large following of expert amateurs such as those who study flowering plants, butterflies or birds), and the paucity of full-time professional phycologists (so that some critical groups are in the hands of only one or two talented individuals from whom it would be impractical to expect complete coverage of the whole of the British and Irish coastlines). This means that some species are under-recorded – their apparent rarity being a reflection of the lack of professional or amateur expertise rather than signifying the lack of the plant on the shore – and this, of course, means that there are inherent difficulties in interpreting the data on some maps. At one extreme, very easily recognisable species such as *Fucus vesiculosus*, for example, are probably very well-recorded: a species such as that would be regarded as rare if there were dots on a map for only a few 10-km squares; at the other extreme, a microscopic, filamentous, endophytic species is almost certain to be under-recorded as it would be physically impossible to search every host plant (even if a suitable expert was available to do so on a full-time basis). As a result a map for such a species may have very few records: is this under-recording, or is it, actually, a fairly accurate representation of the status of the species? One would incline to the former interpretation, but a definitive conclusion is obviously not possible. For a few species, no records have been submitted (Table 2). Otherwise all records have been included as maps even though some have only a single record.

It is hoped that the publication of this Atlas will inspire the present and future generations of phycologists to go out onto the shore to fill gaps. At the same time, the spread of non-native species, such as *Sargassum muticum* and *Undaria pinnatifida* can be studied further (mercifully, British and Irish waters are too cold for the almost impossibly invasive species *Caulerpa taxifolia*, which is wreaking such havoc in the Mediterranean and has been introduced recently into New South Wales and California).

Although the British Phycological Society was not founded until 1952, and the Marine Algal Mapping Scheme was launched in 1970, records submitted to the scheme and stored in the database go back as far as the last quarter of the eighteenth century and it is hoped that, with the passage of time, an ever-increasing number of historical records can be added so that anyone concerned

with changes in algal distribution will have a comprehensive point of reference. The number of records submitted for each year is, however, very significantly higher from the early 1950s onwards (coincident with the founding of the Society) and for this reason the maps presented in this atlas depict records on a pre-1950 (open circle) and 1950-to date (filled circle) basis.

Acknowledgements

We are very grateful to: those who submitted records – some sadly no longer with us – and those who acted as referees for records, all of which are listed in Table 1; those who wrote the legends for the maps, and who cheerfully put up with our impossible demands and deadlines, viz, J. Brodie (Bangiophycidae and some Chlorophyceae), Y.M. Chamberlain (Corallinales), W.F. Farnham (some Florideophycidae), R.L. Fletcher (Phaeophyceae), C.A. Maggs (Ceramiales, *Cladophora* and *Enteromorpha*), R. Merritt (Xanthophyceae) and M. Wilkinson (part of the Chlorophyceae); and the late T. Christensen and P.J.G. Polderman for *Vaucheria* advice and records. The maps were produced using Alan Morton's DMAP software (<http://www.dmap.co.uk>). We are particularly indebted to Trevor Norton, who was responsible for the Mapping Scheme from its inception; he also provided cheerful encouragement and generous support in times of woe to the authors. Large amounts of data were submitted by: Royal Botanic Garden, Edinburgh (Bill and Eileen Marshall helped enormously with inputting post-1950 data); the Phycological Herbarium, National University of Ireland, Galway (GALW), entered by Fionnuala Ní Chualáin and Róisín Ní Raighne; the Joint Nature Conservation Committee's Marine Nature Conservation Review surveys and database (particularly Steve Wilkinson); data from the BioMar surveys of Ireland (M.J. Costello, B. Picton C. Emblow, E. Sides, C. Morrow and others); the Northern Ireland Sublittoral Survey (B. Picton, D.W. Connor, C.M. Howson and others); the Northern Ireland Littoral Survey (M. Wilkinson and others from Heriot-Watt University); Chris Preston and the staff of the Biological Records Centre, Centre for Ecology & Hydrology, Monks Wood were very helpful throughout the long gestation period. Fabio Rindi kindly checked the proofs.

Michael Guiry and Gavin Hardy

13 November 2002

Table 1 The recorders

Adey, W.J.	Cooke, P.J.	Gunning et al.
Ahmad, M.R.	Coppins, B.J.	Hainsworth, S.
Archer, A.	Costello, J.	Hammond, F. & Hammond, N.
Austwick, P.K.C.	Cotton, A.D.	Hammond, N.
Baker, I.	Cotton, J.H.	Hardy, F.G.
Ballantine, D.	Cremona, J.	Harvey, L.A.
Barilotti, D.	Cullinane, J.P.	Harvey, Mrs
Barker, D.	Davey, A.	Harvey, R.
Bartrop & Harvey	Davies, J.	Harvey, R. & Holme, N.
Bartrop & Knight	Davies, P.H.	Harvey, W.H.
Bartrop & Powell	Davis, J.	Harvey-Gibson, R.F.
Barwell, C.	Davis, P.	Hayward, J.
Batters, E.A.L.	De Valéra, M.	Healy, J.
Beaumont, A.J.	Dillenius	Hearn, Joan
Bennet, T.	Dinneen, P.	Hedley Brown
Berryman, J.	Dipper, F.	Henderson, D.M.
Berryman, M.	Dixon, P.S.	Hendey, N.I.
Blackler, M.C.H.	Doeg, C.	Hepton, C.G.L.
Blum, J.L.	Drew, K.M.	Heythorn, J.
Boalch, G.T.	Dunn, M.D.	Hiller, H.G.
Bonner, L.	Earll, R.	Hyndman, G.C.
Boswarva, J.	Edwards, A.J.	Hinton Clijpton
Boyd, W.D.	Egan, B.	Hiscock, K.
Bray, A.M.	Ellis, K.	Hiscock, S.
Brazier, P.	Emblow, C.S.	Holme, N.A.
Breeze, V.G.	Evans, A.	Holmes, E.M.
Brennan, A.T.	Exeter University NPS	Hood, W.
Briggs, R.J.	Exmoor Survey Group	Hooper, R.
Bristol University	Farnham, W.F.	Hornby, T.C.
Brodie, J.L.	Fletcher, D.	Horton et al.
Buchan, S.	Fletcher, R.L.	Howie, C.A.
Burkill, H.M.	Fletcher, W.	Howlett, R.M.
Burrows, E.M.	Fooks, W.F.	Howson, C.M.
Burrows, E.M. & Hiller, H.G.	Fowler, C.	Hruby, T.
Burrows, R.	Fowler, S.L.	Intertidal Survey Unit
Bursa, A. & Irvine	Fraser, R.S.	Irvine, D. & Irvine, L.
Bursa, Adam	Freamhainn, M.	Irvine, D.E.G.
Butler, T.M.	Freethy, R.	Irvine, F.R.
Caldwell, H.	Galbraith Krinos, M.H.	Irvine, L.M.
Cartlidge, D.	Garbary, D. J.	Irvine, R.
Castle, J.F.	Gardiner, D.	Jack, J.
Chamberlain, Y.M.	Garrad, L.S.	J.M.
Chapman, A.R.O.	Gee, J.	James, J.G.
Chapman, C.J.	George, D.	James, P.W.
Chapman, V.J.	Gilbert, O.L.	James, W.
Christensen, T.	Gilham, M.E.	Jephson, J.
Clarke, G.	Gillham, M.	Jephson, M.
Clayton, M.N.	Green, C.T.	Jephson, N.A.
Clokier, J.P.	Green, J.C.	Jermy, A.C.
Coastal Surveillance Unit	Greenpeace	John, D.M.
Coles, S.M.	Greville	Johnston, C.S.
Coll, J.	Guerin, J.	Jones & Williams
Connolly, N.	Guiry, M.D.	Jones, E.
Conran, O.F.	Guiterman, J.D.	Jones, J.E.L.
Conway, E.	Gulson, Mrs	Jones, W.E.

Jones, W.S.
 Jukes Coll.
 Kain, J.M.
 Kay, Q.O.N.
 Kerslake, Joy
 Kitching, J.A.
 Knight & Harvey
 Knight & Powell
 Knight, S. & S.J.T.
 Knott, C.
 Kozicki, K.
 Kraan, S.
 Krinris, M.G.
 Laing, I.
 Lambe, E.
 Lamplugh & Petts
 Lauret, M.
 Lawson, G.
 Lea, T.S.
 Leadbeater, B.S.C.
 Lewis & Powell
 Lewis, A.A.
 Lewis, I.D.
 Lewis, J.R.
 Little, A.E.
 Little, A.G.
 Lobban, C.
 Lodge, S.
 Lumb, C.
 MacKinnon, V.
 Machin, J.
 Macpherson
 Macpherson, G.
 Macpherson, W.
 Maggs, C.
 Mahony, J.A.
 Marine Nature Conservation Review
 Marshall, W.
 McAllister, H.A.
 McConnel, B.
 McCrea, M.M.
 McGee, J.A.
 McGrath, D.
 McGuighan
 McLachlan, J.
 Merrifield, M.P.
 Merritt, R.
 Mitchell, R.
 Moestrup, G.
 Moestrup, P.
 Mooney, E.
 Morris, J.E.G.
 Morrish, M.
 Morrow, C.C.
 Morton, O.
 Moss, B.L.
 Moyses & Nelson-Smith
 Muirhead, C.W.
 Murdoch, J.M.
 Murphy, P.
 Nature Conservancy
 Nelson-Smith
 Newroth, P.R.
 Newton, L.
 Newton, S.A.
 Nicholson, R.M.
 Nielsen, R.
 Nordstedt, O.
 Norton, T.A.
 Nugent, C.
 Nunn, J.
 Ó Céidigh, P.
 O'Connor, B.
 O'Connor, M.
 Ottway, B.
 Parkes, M.W.
 Parkes, H.M.
 Pedersen, P.M.
 Perring, F.H.
 Perry, S.
 Pickervance, E.
 Picton, B.
 Pizzey, J.M.
 Pocock, M.
 Polderman, P.J.G.
 Poole, J.M.
 Powell, H.T.
 Price, J.H.
 Pybus, C.
 Ralfs, J.
 Rees, T.K.
 Reith, A.
 Riding, R.
 Roberts, M.
 Roden, C.
 Ross, R.
 Russell, G.
 Saunders, J.
 Sawers, W.
 Scannell, M.J.P.
 Scott, G.M.
 Scott, W.
 Scottish Natural Heritage
 Sides, E.M.
 Sinclair, J.
 Smith, R.M.
 Smith, S.M.
 Spence, D.H.N.
 Spencer, D.
 Stroud, D.A.
 Sublittoral Survey
 Taylor, A.R.A.
 Taylor, R.
 Tesseman, B.
 Thompson, T.E.
 Tittley, I.
 Tomlinson, R.
 Traill, G.W.
 Tucker, D.
 Turk & Brewster
 Turk, F.A. & S.M.
 Turk, S.M. & Price, J.H.
 Turnbull, L.P.
 Tuson, M.
 Wallace, A.
 Wallace, I.D.
 Wallace, M.
 Wallace, N.
 Walton, C.L.
 Watling et al.
 Watling, R.
 Webster, A.M.
 Whelan, P.
 Wilkinson & Roberts
 Wilkinson, M.
 Williams, F.
 Wilson, K.
 Woollard, J.
 Wynne, M.J.

Check-list

Table 2 species for which no records have been obtained.

Acrochaetium lorrain-smithiae
Acrosiphonia sonderi
Aglaothamnion diaphanum
Aglaothamnion feldmanniae
Blidingia chadefaudii
Bonnemaisonia clavata
Chlorocccum submarinum

Cladophora globulina
Cladophora lehmanniana
Entocladia leptochaete
Myrionema magnusii
Protomonostroma undulatum
Pseudendoclonium marinum
Scinaia complanata

Stichococcus bacillaris
Stictyosiphon adriaticus
Streblonema helophorum
Streblonema intestinum
Stylonema cornu-cervi
Wittrockiella paradoxa

Introduction

This is a taxonomic listing of the red, brown and green marine benthic macroalgae of Britain and Ireland generally known as seaweeds. Not all of the species listed here are represented as maps as there were no field records submitted (see Table 2, page x). The reader is generally spared the repetitive mantra that taxonomic revisions are necessary, as this is probably true for virtually all the included entities; the futility of algal taxonomy is perhaps best allegorised by the Grimm Brothers fairytale task of emptying a lake using a spoon with a hole. Much of this information is, in any case, included in the series “*Seaweeds of the British Isles*” (Dixon & Irvine, 1977; Irvine, 1983; Fletcher, 1987; Christensen, 1987; Burrows, 1991; Maggs & Hommersand, 1993; Irvine & Chamberlain, 1994; Brodie & Irvine, 2003). The present list follows the format established by Parke & Dixon for the *Check-list of British Marine Algae*, the ultimate version of which was published in 1976 (Parke & Dixon, 1976). A departure from this format in the present treatment is that notes are included directly in the text. Generally, only changes made since the listing in “*The Species Directory of the Marine Fauna and Flora of the British Isles and Surrounding Seas*” (Guiry, 1997) have been annotated.

The taxonomic arrangement in general follows that of Silva, Basson & Moe (1996) for the green and red algae. We have chosen to adopt the arrangement of brown algal families in orders as suggested by De Reviere & Rousseau (1999), Rousseau & De Reviere (1999) and Rousseau *et al.* (2001). The extraordinary range of forms in some orders and families in this scheme has been remarked upon. Orders are generally arranged phylogenetically, as this is

mostly familiar to the reader; families, genera and species are arranged alphabetically. An innovation in the present list is the inclusion of subfamily and tribe names where widely used or useful (mainly within the Corallinaceae, Ceramiales and Dictyotales). Nomenclatural authorship is included in full, partly because of a lack of consistency in the use of abbreviations, but also to assist in tracing names. Should authors wish to use standardized abbreviations, the list of Brummitt & Powell (1992) is recommended, although this has been only rarely used by phycologists (e.g., Wynne, 2001). “*Nom. illeg.*” refers to a nomenclaturally illegitimate name; “*auct.*” refers to an opinion of authors as to synonymy that may not be in accordance with the nomenclatural type. In agreement with Article 46, Note 1 of the International Code of Botanical Nomenclature (Greuter *et al.*, 2000: 72), and as adopted by Silva, Basson & Moe (1996), the use of “in” as part of the authorship of a name has been discontinued. Synonyms given (in square brackets) are mostly those in common use in the last 150 years, but specifically refer to names used by Batters (1902), Newton (1931), Parke & Dixon (1976), and in the series “*Seaweeds of the British Isles*”.

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Henry Arnold, Juliet Brodie, Yvonne Chamberlain, Linda Irvine, David John, Bill Farnham, Bob Fletcher, Max Hommersand, Christine Maggs, Osborne Morton, Akira Peters, Charley O’Kelly, Fabio Rindi, and Mike Wynne made valuable and insightful comments on the list, some of which we have chosen not to incorporate for reasons of brevity or consistency.

RHODOPHYTA RHODOPHYCEAE BANGIOPHYCIDAE PORPHYRIDIALES

PHRAGMONEMATACEAE

NEEVEA Batters 1900
repens Batters

PORPHYRIDACEAE

PORPHYRIDUM Nägeli 1849
purpureum (Bory de Saint-Vincent) K. Drew & Ross
RHODELLA L. Evans 1970
maculata L. Evans

GONIOTRICHALES

GONIOTRICHACEAE

CHROODACTYLON Hansgirg 1885
ornatum (C. Agardh) Basson
[*Asterocytis ramosa* (Thwaites) Gobi ex F. Schmitz]
COLACODICTYON Feldmann 1955
reticulatum (Batters) Feldmann
[*Colaconema reticulatum* Batters]
STYLONEMA Reinsch 1875
alsidii (Zanardini) K. Drew
[*Goniotrichum alsidii* (Zanardini) M.A. Howe]
[*Goniotrichum elegans* (Chauvin) Zanardini]
cornu-cervi Reinsch
[*Goniotrichum cornu-cervi* (Reinsch) Hauck]

ERYTHROPELTIDALES

ERYTHROTRICHACEAE

ERYTHROCLADIA Rosenvinge 1909
irregularis Rosenvinge
ERYTHROPELTIS F. Schmitz 1896
discigera (Berthold) F. Schmitz
Note: Included on the authority of Brodie & Irvine (2003), who recognise *E. discigera* var. *flustrae* Batters, but who note that *Erythropeltis discigera* var. *discigera* may be part of the life history of a *Porphyrostromium*.
ERYTHROTRICHIA J.E. Areschoug 1850
bertholdii Batters
Note: Recognized as a separate entity by Brodie & Irvine (2003); included in synonymy by others.
carnea (Dillwyn) J. Agardh
investiens (Zanardini) Bornet

Note: Placed in synonymy with *Erythrotrichia carnea* by Heerebout (1968: 151). However, Silva, Basson & Moe (1996: 89), while agreeing with Heerebout (loc. cit.) that too many species have been recognised amongst these morphologically variable algae, tentatively treated it separately.

reflexa (P.L. Crouan & H.M. Crouan) Thuret ex De Toni

Note: See *Erythrotrichia investiens* above.

welwitschii (Ruprecht) Batters

PORPHYROPSIS Rosenvinge 1909

coccinea (J. Agardh ex J.E. Areschoug) Rosenvinge

[*Porphyra coccinea* J. Agardh ex J.E. Areschoug]

PORPHYROSTROMIUM Trevisan 1848

boryanum (Montagne) P. Silva

[*Erythrotrichia boryana* (Montagne) Berthold]

[*Erythrotrichopeltis boryana* (Montagne) Kornmann]

ciliare (Carmichael) M.J. Wynne

[*Erythrotrichia ciliaris* (Carmichael) Thuret]

[*Erythrotrichopeltis ciliaris* (Carmichael) Kornmann]

SAHLINGIA Kornmann 1989

subintegra (Rosenvinge) Kornmann

[*Erythrocladia subintegra* Rosenvinge]

[*Erythropeltis subintegra* (Rosenvinge) Kornmann & Sahling]

BANGIALES

BANGIACEAE

BANGIA Lyngbye 1819

atropurpurea (Roth) C. Agardh

[*Bangia fuscopurpurea* (Dillwyn) Lyngbye]

PORPHYRA C. Agardh 1824

Note: Specimens reported under the names *Porphyra laciniata* and *P. purpurea* could be *P. dioica*, *P. purpurea* or another species of the genus. Herbarium material is often difficult to ascribe (Brodie & Irvine, 2003).

amplissima (Kjellman) Setchell & Hus ex Hus

Note: Includes all material previously identified as *Porphyra miniata* from the area (Brodie & Irvine, 2003).

dioica J. Brodie & L.M. Irvine

Note: Not included in Guiry (1997); see Brodie & Irvine (1997).

drachii J. Feldmann

Note: See Brodie & Irvine (2003).

leucosticta Thuret

linearis Greville

purpurea (Roth) C. Agardh

[*Porphyra amethystea* Kützing]

Note: *Porphyra amethystea* was based on material collected by Shuttleworth from Renvyle, Co. Galway, Ireland. The type is representative of *P. purpurea* (Brodie & Irvine, 2003).

umbilicalis (Linnaeus) Kützing

FLORIDEOPHYCIDAE ACROCHAETIALES

Note: Harper & Saunders (2002), on the basis of DNA sequencing, have proposed the reinstatement of *Colaçonema* for acrochaetiaceous algae with one or more chloroplasts (with or without pyrenoids), of varying shape but never stellate. The authors referred a number of species to the monotypic Colaçonemataceae and to the new order Colaçonematales. Further species of *Colaçonema* are undoubtedly included in the family Acrochaetiaceae but additional study is required.

ACROCHAETIACEAE

ACROCHAETIUM Nägeli 1858

Note: The species of *Acrochaetium* listed here were included by Guiry (1997) under the name *Audouinella*. *Audouinella densa*, *A. humilis*, *A. irregularis*, *A. lanuginosa*, *A. leptonema*, *A. polyblasta*, and *A. pulvera*, were erroneously listed from the area in Guiry (1997); it was intended that these should be listed as being recorded from the north of France but the critical information was inadvertently omitted from the final publication. Nevertheless, it is possible that these entities do occur in the area.

alariae Jónsson Bornet

[*Chantransia alariae* Jónsson]

[*Audouinella alariae* (Jónsson) Woelkerling]

battersianum G. Hamel

[*Audouinella battersiana* (Hamel) P.S. Dixon]

brebneri (Batters) G. Hamel

[*Rhodochorton brebneri* Batters]

[*Audouinella brebneri* (Batters) P.S. Dixon]

chylocladiae (Batters) Batters

[*Audouinella chylocladiae* (Batters) P.S. Dixon]

corymbiferum (Thuret) Batters

[*Audouinella corymbifera* (Thuret) P.S. Dixon]

efflorescens (J. Agardh) Nägeli

[*Audouinella efflorescens* (J. Agardh) Papenfuss]

endozoicum (Darbishire) Batters

[*Chantransia endozoica* Darbishire]

[*Audouinella endozoica* (Darbishire) P.S. Dixon]

infestans M.A. Howe & Hoyt

[*Audouinella infestans* (M.A. Howe & Hoyt) P.S. Dixon]

lorrain-smithiae (Lyle) Lily Newton

[*Audouinella lorrain-smithiae* (Lyle) P.S. Dixon]

microscopicum (Nägeli ex Kützing) Nägeli

[*Audouinella microscopica* (Nägeli ex Kützing) Woelkerling]

minimum F.S. Collins

[*Audouinella minima* (F.S. Collins) G.R. South]

[*Audouinella emergens* (Rosenvinge) P.S. Dixon]

[*Acrochaetium mirabilis* (Suhr) Nägeli]

nemalii (De Notaris ex Dufour) Bornet

[*Audouinella nemalii* (De Notaris ex Dufour) P.S. Dixon]

Note: Listed in Dixon & Irvine (1977) and Guiry (1997) as "*nemalionis*". Records from the area may refer to *Acrochaetium corymbiferum* (Dixon & Irvine, 1977: 105).

- parvulum* (Kylin) Hoyt
[*Audouinella parvula* (Kylin) P.S. Dixon]
- rosulatum* (Rosenvinge) Papenfuss
[*Audouinella rosulata* (Rosenvinge) P.S. Dixon]
- sanctae-mariae* (Darbishire) G. Hamel
[*Audouinella sanctae-mariae* (Darbishire) P.S. Dixon]
- savianum* (Meneghini) Nägeli
[*Chantransia thuretii* (Bornet) Kylin]
[*Audouinella thuretii* (Bornet) Woelkerling]
[*Audouinella saviana* (Meneghini) Woelkerling]
- scapae* (Lyle) Papenfuss
[*Audouinella scapae* (Lyle) P.S. Dixon]
- secundatum* (Lyngbye) Nägeli
[*Audouinella secundata* (Lyngbye) Woelkerling]
- seiriolanum* (Gibson) Rosenvinge
[*Rhodochorton seiriolanum* Gibson]
[*Audouinella seiriolana* (Gibson) P.S. Dixon]
- sparsum* (Carmichael ex Harvey) Nägeli
[*Audouinella sparsa* (Harvey) P.S. Dixon]
- trifilum* (Buffham) Batters
[*Chantransia trifila* Buffham]
[*Audouinella trifila* (Buffham) P.S. Dixon]
- virgatulum* (Harvey) Bornet
[*Audouinella rhipidandra* (Rosenvinge) P.S. Dixon]
[*Audouinella virgatula* (Harvey) P.S. Dixon]
[*Chantransia virgatula* (Harvey) Thuret]

RHODOCHORTON Nägeli 1862

- concrescens* K. Drew
[*Audouinella concrescens* (K. Drew) P.S. Dixon]
Note: As *Audouinella concrescens* in Guiry (1997). Requires further taxonomic investigation and is likely to be closely related to *Meiodiscus spetsbergensis*.
- membranaceum* (Magnus) Hauck
[*Audouinella membranacea* (Magnus) Papenfuss]
- purpureum* (Lightfoot) Rosenvinge
[*Audouinella purpurea* (Lightfoot) Woelkerling]
[*Rhodochorton rothii* (Turton) Nägeli]
[*Rhodochorton parasiticum* Batters]
Note: As *Audouinella purpurea* in Guiry (1997).

SCHMITZIELLA Bornet & Batters 1892

- endophloea* Bornet & Batters
Note: Requires further investigation of its taxonomic position.

COLACONEMATALES

COLACONEMATACEAE

COLACONEMA Batters 1896

- asparagopsis* Chemin
[*Acrochaetium asparagopsis* (Chemin) Papenfuss]
[*Audouinella asparagopsis* (Chemin) P.S. Dixon]

bonnemaisoniae Batters

- [*Acrochaetium bonnemaisoniae* (Batters) Feldmann & G. Feldmann]
[*Audouinella bonnemaisoniae* (Batters) P.S. Dixon]
- caespitosum* (J. Agardh) Jackelman, Stegenga & J.J. Bolton
[*Audouinella botryocarpa* (Harvey) Woelkerling]
[*Audouinella caespitosa* (J. Agardh) P.S. Dixon]
[*Acrochaetium caespitosum* (J. Agardh) Nägeli]
Note: Includes *Audouinella botryocarpa* as described by Guiry, Kee & Garbary (1987) and listed in Guiry (1997), but the complex requires further study at the genus and species level. The combination *Colaconema caespitosum* was first made by Jackelman, Stegenga & Bolton (1991: 303) and was separately proposed by Harper & Saunders (2002: 473).
- daviesii* (Dillwyn) Stegenga
[*Acrochaetium daviesii* (Dillwyn) Nägeli]
[*Audouinella daviesii* (Dillwyn) Woelkerling]
[*Chantransia daviesii* (Dillwyn) Thuret]
- endophyticum* (Batters) J.T. Harper & G.W. Saunders
[*Acrochaetium endophyticum* Batters]
[*Audouinella endophytica* (Batters) P.S. Dixon]

PALMARIALES

PALMARIACEAE

PALMARIA Stackhouse 1801

- palmata* (Linnaeus) Kuntze
[*Rhodymenia palmata* (Linnaeus) Greville]
Note: *Rhodymenia palmata* var. *sobolifera* (M. Vahl) Harvey and *R. palmata* var. *sarniensis* (Roth) Greville represent morphological variants that do not merit recognition at the variety or forma level (Kraan & Guiry, pers. comm.).

RHODOPHYSEMATACEAE

HALOSACCIOCOLAX S. Lund 1959

kjellmanii S. Lund

MEIODISCUS Saunders & McLachlan 1991

- spetsbergensis* (Kjellman) Saunders & McLachlan
[*Audouinella spetsbergensis* (Kjellman) Woelkerling]

RHODOPHYSEMA Batters 1900

- elegans* (P.L. Crouan & H.M. Crouan ex J. Agardh) P.S. Dixon
[*Rhododermis elegans* P.L. Crouan & H.M. Crouan ex J. Agardh]
[*Rhododermis elegans* f. *polystromatica* Batters]
[*Rhododermis polystromatica* (Batters) Batters]
[*Rhodophysema elegans* var. *polystromaticum* (Batters) P.S. Dixon]
[*Peyssonnelia rupestris* P.L. Crouan & H.M. Crouan]
[*Rhododermis parasitica* Batters]

feldmannii Cabioch

Note: Inadvertently omitted from Guiry (1997).

georgei Batters

- [*Rhododermis georgei* (Batters) F.S. Collins]

RHODOTHAMNIELLACEAE

RHODOTHAMNIELLA Feldmann 1978

floridula (Dillwyn) Feldmann[*Audouinella floridula* (Dillwyn) Woelkerling][*Rhodochorton floridulum* (Dillwyn) Nägeli]

AHNFELTIALES

AHNFELTIACEAE

AHNFELTIA Fries 1836

plicata (Hudson) Fries[*Sterrocolax decipiens* F. Schmitz][*Porphyrodiscus simulans* Batters]

NEMALIALES

GALAXAURACEAE

SCINAIA Bivona-Bernardi 1822

complanata (F.S. Collins) A.D. Cotton

Note: Occurrence requires further investigation (see Maggs & Guiry, 1982a).

furcellata (Turner) J. Agardh[*Scinaia trigona* (Clemente) Trevisan][*Scinaia forcillata* Bivona-Bernardi]*interrupta* (A.P. De Candolle) M.J. Wynne[*Scinaia turgida* Chemin]Note: Erroneously listed as *Scinaia trigona* (a synonym of *S. furcellata*) in Guiry (1997).Formerly *Scinaia turgida* Chemin. However, many records from Britain and Ireland of *S.**furcellata*, particularly in the north-west of Ireland and western Scotland, may refer to this species and need individual checking.

LIAGORACEAE

HELMINTHOCLADIA J. Agardh 1851

calvadosii (J.V. Lamouroux ex Duby) Setchell[*Helminthocladia purpurea* (Harvey) J. Agardh]

HELMINTHORA J. Agardh 1851

divaricata (C. Agardh) J. Agardh

NEMALION Duby 1830

helminthoides (Vellay) Batters[*Nemalion multifidum* (F. Weber & D. Mohr) Endlicher]Note: Further studies are required of the relationship between *Nemalion helminthoides* and *N. multifidum*.

GELIDIALES

GELIDIACEAE

GELIDIELLA Feldmann & G. Hamel 1934

calicola Maggs & Guiry

GELIDIUM J.V. Lamouroux 1813

corneum (Hudson) J.V. Lamouroux[*Gelidium sesquipedale* (Clemente) Thuret]Note: Listed as *Gelidium sesquipedale* in Guiry (1997); see Silva, Basson & Moe (1996: 136) who argue that proposals to reject the name *Gelidium corneum* as ambiguous (e.g., Dixon, 1967: 60-61) are not justified.*crinale* (Turner) Gaillon*maggsiae* Rico & Guiry

Note: See Rico & Guiry (1997); currently known only from the type locality in Co. Galway.

pulchellum (Turner) Kützing*pusillum* (Stackhouse) Le Jolis*spinosum* (S.G. Gmelin) P.C. Silva[*Gelidium latifolium* Bornet ex Hauck][*Gelidium attenuatum* (Turner) Thuret]Note: Included as *Gelidium latifolium* in Guiry (1997); see Silva in Silva, Basson & Moe (1996: 141-142). Further studies are needed to establish if Mediterranean and Atlantic populations are indeed conspecific as inferred by Silva; if they are not, the Atlantic populations should continue to be treated under the name *Gelidium latifolium*.

PTEROCLADIELLA Santelices & Hommersand 1997

capillacea (S.G. Gmelin) Santelices & Hommersand[*Pterocladia pinnata* (Hudson) Papenfuss][*Pterocladia capillacea* (S.G. Gmelin) Bornet]Note: Included as *Pterocladia capillacea* in Guiry (1997); see Santelices & Hommersand (1997).

GRACILARIALES

GRACILARIACEAE

GRACILARIA Greville 1830

bursa-pastoris (S.G. Gmelin) P.C. Silva[*Gracilaria compressa* (C. Agardh) Greville]*gracilis* (Stackhouse) Steentoft, L.M. Irvine & Farnham[*Gracilaria confervoides* Greville, *nom. illeg.*][*Gracilaria verrucosa* (Hudson) Papenfuss]*multipartita* (Clemente) HarveyNote: This entity has passed under the name *Gracilaria foliifera* (Forsskål) Børgesen, an unrelated species from the Indian Ocean (see Guiry & Freamhainn, 1985).

GRACILARIOPSIS E.Y. Dawson 1949

longissima (S.G. Gmelin) Steentoft, L.M. Irvine & FarnhamNote: Records of *Gracilariopsis lemaneiformis* (Bory de Saint-Vincent) E.Y. Dawson from the area (Fredericq & Hommersand 1989) have been rejected by Steentoft *et al.* (1995) and the plants in question referred to this species. See also Steentoft & Farnham (1997).

PTEROCLADIOPHILACEAE

HOLMSELLA Sturch 1926

pachyderma (Reinsch) Sturch

BONNEMAISONIALES

BONNEMAISONIACEAE

ASPARAGOPSIS Montagne 1840

armata Harvey[*Falkenbergia rufolanosa* (Harvey) F. Schmitz]

BONNEMAISONIA C. Agardh 1822

asparagoides (Woodward) C. Agardh[*Hymenoclonium serpens* (P.L. Crouan & H.M. Crouan) Batters]*clavata* G. Hamel

Note: Although Hamel (1930) in his original description of this entity mentions plants from the south coast of England (see Dixon & Irvine, 1977), its specific status *vis-à-vis* *Bonnemaisonia asparagoides* requires further study.

hamifera Hariot[*Trailliella intricata* Batters]

NACCARIACEAE

ATRACTOPHORA P.L. Crouan & H.M. Crouan 1848

hypnoides P.L. Crouan & H.M. Crouan[*Rhododiscus pulcherrimus* P.L. Crouan & H.M. Crouan]

Note: See Maggs, Guiry & Irvine (1983) regarding the life history of *Rhododiscus pulcherrimus*.

NACCARIA Endlicher 1836

wiggii (Turner) Endlicher**CRYPTONEMIALES**

HALYMENIACEAE

CRYPTONEMIA J. Agardh 1842

hibernica Guiry & L.M. Irvine*seminervis* (C. Agardh) J. Agardh

DERMOCORYNUS P.L. Crouan & H.M. Crouan 1858

montagnei P.L. Crouan & H.M. Crouan

GRATELOUPIA C. Agardh 1822

dichotoma J. Agardh*filicina* (J.V. Lamouroux) C. Agardh[*Grateloupia minima* P.L. Crouan & H.M. Crouan]

Note: The variety *Grateloupia filicina* var. *luxurians* A. Gepp & E.S. Gepp, originally described from Australia, occurs mainly on the south coast of England and is likely to be adventive (Farnham, 1980: 892-895).

turuturu Yamada

Note: According to Gavio & Fredericq (2002) this is the correct name for an introduced entity, probably from the western Pacific, named as *Grateloupia doryophora* (Montagne) M.A. Howe in north-western Europe.

HALYMENIA C. Agardh 1817

latifolia P.L. Crouan & H.M. Crouan ex Kützing**HILDENBRANDIALES**

HILDENBRANDIACEAE

HILDENBRANDIA Nardo 1834

crouaniorum J. Agardh

Note: Formerly "*crouanii*". With respect to the spelling of the epithet, see note under *Phycocelis crouaniorum*.

rubra (Sommerfelt) Meneghini[*Hildenbrandia prototypus* Nardo]**CORALLINALES**

CORALLINACEAE

AUSTROLITHOIDEAE

BOREOLITHON A.S. Harvey & Woelkerling 1995

van-heurckii (Heydrich) A.S. Harvey & Woelkerling[*Melobesia van-heurckii* (Heydrich) De Toni]

CHOREONEMATOIDEAE

CHOREONEMA F. Schmitz 1889

thuretii (Bornet) F. Schmitz

CORALLINOIDEAE

CORALLINEAE

CORALLINA Linnaeus 1758

elongata J. Ellis & Solander[*Corallina mediterranea* J.E. Areschoug]*officinalis* Linnaeus

JANIEAE

HALIPTILON (Decaisne) Lindley 1846

squamatum (Linnaeus) H.W. Johansen, L.M. Irvine & A. Webster[*Corallina squamata* Linnaeus]

JANIA J.V. Lamouroux 1812

rubens (Linnaeus) J.V. Lamouroux[*Corallina rubens* Linnaeus]

Note: Irvine & Johansen (1994: 56) recognise *Jania rubens* var. *corniculata* (Linnaeus) Yendo.

LITHOPHYLLOIDEAE

LITHOPHYLLUM Philippi 1837

Note: See Bailey (1999) regarding the phylogenetic position of *Lithophyllum* and *Titanoderma*; the proposals of Woelkerling (1983), Campbell & Woelkerling (1990) and Woelkerling & Campbell (1992) regarding the genera of the Lithophylloideae are not adopted here.

crouaniorum Foslie

Note: See Chamberlain & Irvine (1994: 67) with respect to misidentification of this entity and of *Lithophyllum orbiculatum* Foslie. Records of *Dermatolithon crouaniorum* (Foslie) Hamel & Lemoine ("*crouanii*") from the area refer to *Titanoderma laminariae* (P.L. Crouan & H.M. Crouan) Y.M. Chamberlain and not to the present species. For a comment on the spelling of the epithet, see note under *Phycocelis crouaniorum*.

dentatum (Kützinger) Foslie

duckerae Woelkerling

Note: Included, incorrectly, in Woelkerling (1983), Chamberlain & Irvine (1994) and Guiry (1997) as “*duckeri*”. Only known from apparently dead material from Cornwall (see Chamberlain & Irvine, 1994: 70-72) and may be extinct in the area.

fasciculatum (Lamarck) Foslie

[*Melobesia fasciculata* (Lamarck) Harvey]

[*Lithothamnion fasciculatum* (Lamarck) J.E. Areschoug]

hibernicum Foslie

Note: Requires further investigation (see Chamberlain & Irvine, 1994: 74-75); no specimens have been found since the late 19th century.

incrustans Philippi

nitorum Adey & P.J. Adey

[*Pseudolithophyllum nitorum* (Adey & P.J. Adey) Mendoza & Cabioch]

orbiculatum (Foslie) Foslie

[*Lithothamnion orbiculatum* Foslie]

TITANODERMA Nägeli 1858

Note: Records of *Dermatolithon crouaniorum* (Foslie) Hamel & Lemoine (as “*crouanii*”) from the area are misidentifications of *Titanoderma laminariae* and do not refer to the type of *Lithophyllum crouaniorum* Foslie (q.v.) (“*crouanii*”).

corallinae (P.L. Crouan & H.M. Crouan) Woelkerling, Y.M. Chamberlain & P.C. Silva

[*Melobesia corallinae* P.L. Crouan & H.M. Crouan]

[*Dermatolithon corallinae* (P.L. Crouan & H.M. Crouan) Foslie]

[*Lithophyllum corallinae* (P.L. Crouan & H.M. Crouan) Heydrich]

laminariae (P.L. Crouan & H.M. Crouan) Y.M. Chamberlain

[*Dermatolithon laminariae* (P.L. Crouan & H.M. Crouan) Foslie]

pustulatum (J.V. Lamouroux) Nägeli

[*Dermatolithon pustulatum* (J.V. Lamouroux) Foslie]

[*Dermatolithon litorale* (Suneson) G. Hamel & Lemoine]

[*Dermatolithon hapalidioides* (P.L. Crouan & H.M. Crouan) Foslie]

[*Lithophyllum hapalidioides* (P.L. Crouan & H.M. Crouan) Hariot]

[*Tenarea confinis* (P.L. Crouan & H.M. Crouan) Adey & P. Adey]

[*Lithophyllum adplicitum* (Foslie) Lily Newton]

Note: Chamberlain & Irvine (1994: 96-112) include three additional varieties: *Titanoderma pustulatum* var. *canellatum* (Kützinger) Y.M. Chamberlain, *T. pustulatum* var. *confine* (P.L. Crouan & H.M. Crouan) Y.M. Chamberlain, and *T. pustulatum* var. *macrocarpum* (Rosanoff) Y.M. Chamberlain.

MASTOPHOROIDEAE

HYDROLITHON (Foslie) Foslie 1909

boreale (Foslie) Y.M. Chamberlain

cruciatum (Bressan) Y.M. Chamberlain

farinosum (J.V. Lamouroux) D. Penrose & Y.M. Chamberlain

[*Fosliella farinosa* (J.V. Lamouroux) M.A. Howe]

[*Melobesia farinosa* J.V. Lamouroux]

samoëse (Foslie) Keats & Y.M. Chamberlain

Note: The use of a diaeresis is permitted by the ICBN where it is an aid to correct pronunciation.

sargassi (Foslie) Y.M. Chamberlain

[*Pneophyllum sargassi* (Foslie) Y.M. Chamberlain]

PNEOPHYLLUM Kützinger 1843

confervicola (Kützinger) Y.M. Chamberlain

[*Fosliella minutula* (Foslie) Ganesan]

coronatum (Rosanoff) Penrose

[*Pneophyllum caulerpae* (Foslie) P.L. Jones & Woelkerling]

[*Fosliella tenuis* Adey & P.J. Adey]

Note: Chamberlain (1994a: 133) reported that the type of *Hapalidium zonale* P.L. Crouan & H.M. Crouan (Brittany, France) did not have the pore filaments characteristic of this entity. Many records from the area of *Melobesia zonalis* (P.L. Crouan & H.M. Crouan) Foslie and *Fosliella zonalis* (P.L. Crouan & H.M. Crouan) Feldmann, actually represent *Pneophyllum coronatum*. As *Pneophyllum caulerpae* in Chamberlain (1994b: 133) but later referred to *P. coronatum* by Penrose in Chamberlain (1994a).

fragile Kützinger

[*Fosliella lejolisii* (Rosanoff) M.A. Howe]

[*Pneophyllum lejolisii* (Rosanoff) Y.M. Chamberlain]

[*Melobesia lejolisii* Rosanoff]

[*Pneophyllum microsporum* (Rosenvinge) Y.M. Chamberlain]

limitatum (Foslie) Y.M. Chamberlain

[*Fosliella limitata* (Foslie) Rueness]

lobescens Y.M. Chamberlain

[*Pneophyllum plurivaldum* Y.M. Chamberlain]

myriocarpum (P.L. Crouan & H.M. Crouan) Y.M. Chamberlain

[*Pneophyllum concollum* Y.M. Chamberlain]

MELOBESIOIDEAE

EXILICRUSTA Y.M. Chamberlain 1992

parva Y.M. Chamberlain

LEPTOPHYTUM Adey 1966

Note: *Leptophyllum* was included in *Phymatolithon* by Düwel & Wegeberg (1996) but was subsequently reinstated by Adey, Athanasiadis & Lebednik (2001).

bornetii (Foslie) Adey

elatum Y.M. Chamberlain

laeve (Foslie) Adey

[*Lithothamnion laeve* Foslie]

LITHOTHAMNION Heydrich 1897

corallioides (P.L. Crouan & H.M. Crouan) P.L. Crouan & H.M. Crouan

glaciale Kjellman

[*Lithothamnion colliculosum* Foslie]

[*Lithothamnion granii* (Foslie) Foslie]

lemoineae Adey

sonderi Hauck

MELOBESIA J.V. Lamouroux 1812

membranacea (Esper) J.V. Lamouroux

[*Melobesia corticiformis* Kützinger]

[*Epilithon membranaceum* (Esper) Heydrich]

[*Lithothamnion membranaceum* (Esper) Foslie]

MESOPHYLLUM Lemoine 1928

lichenoides (J. Ellis) M. Lemoine[*Lithothamnion lichenoides* (J. Ellis) Foslie]

Note: Early records of an entity or entities referred to variously as *Millepora agariciformis* Pallas, *Lithothamnion agariciformis* (Pallas) Foslie and *Mesophyllum lichenoides* f. *agariciformis* (Pallas) G. Hamel & M. Lemoine from Roundstone, Co. Galway, Ireland may belong here (see Chamberlain & Irvine 1994b: 206). See also Woelkerling (1998).

PHYMATOLITHON Foslie 1898

brunneum Y.M. Chamberlain*calcareum* (Pallas) Adey & D.L. McKibbin[*Lithothamnion calcareum* (Pallas) J.E. Areschoug][*Phymatolithon polymorphum* (Linnaeus) Foslie][*Lithothamnion polymorphum* (Linnaeus) J.E. Areschoug]

Note: See *Phymatolithon purpureum*, below, regarding records of *Phymatolithon polymorphum*.

laevigatum (Foslie) Foslie[*Lithothamnion laevigatum* Foslie][*Lithothamnion embolooides* Heydrich]*lamii* (M. Lemoine) Y.M. Chamberlain[*Lithophyllum lamii* M. Lemoine][*Lithophyllum melobesioides* P.L. Crouan & H.M. Crouan ex M. Lemoine][*Phymatolithon rugulosum* Adey]

Note: Early records of *Clathromorphum compactum* (Kjellman) Foslie from Clew Bay, Co. Mayo, Ireland refer to this species (Chamberlain & Irvine, 1994: 162, 224).

lenormandii (J.E. Areschoug) Adey[*Lithothamnion lenormandii* (J.E. Areschoug) Foslie][*Lithothamnion squamulosum* Foslie]*purpureum* (P.L. Crouan & H.M. Crouan) Woelkerling & L.M. Irvine

Note: This species has been reported as *Phymatolithon polymorphum* (Linnaeus) Foslie and *Lithothamnion polymorphum* (Linnaeus) J.E. Areschoug, the type of which is a different entity, *Phymatolithon calcareum*.

GIGARTINALES

ARESCHOUGIACEAE

SOLIERIA J. Agardh 1842

chordalis (C. Agardh) J. Agardh

Note: Reports of *S. filiformis* (Kützing) Gabrielson [see Farnham, 1980, as *Solieria tenera* (J. Agardh) M.J. Wynne & W.R. Taylor] are based on misidentifications of *S. chordalis* (Farnham, pers. comm.)

SARCODIOTHECA Kylin 1932

gaudichaudii (Montagne) Gabrielson

Note: See Farnham (1980) for reports from the area.

CALOSIPHONACEAE

CALOSIPHONIA P.L. Crouan & H.M. Crouan 1852

vermicularis (J. Agardh) F. Schmitz

SCHMITZIA Lagerheim ex P.C. Silva 1959

biscockiana Maggs & Guiry*neapolitana* (Berthold) Lagerheim ex P.C. Silva

CAULACANTHACEAE

CATENELLA Greville 1830

caespitosa (Withering) L.M. Irvine[*Catenella repens* (Lightfoot) Batters][*Catenella opuntia* (Goodenough & Woodward) Greville, *nom. illeg.*]

CHOREOCOLACACEAE

CHOREOCOLAX Reinsch 1875

polysiphoniae Reinsch

HARVEYELLA F. Schmitz & Reinke 1889

mirabilis (Reinsch) F. Schmitz & Reinke

CRUORACEAE

CRUORIA Fries 1835

cruoriaeformis (P.L. Crouan & H.M. Crouan) Denizot*pellita* (Lyngbye) Fries[*Cruoria adhaerens* P.L. Crouan & H.M. Crouan ex J. Agardh]

CYSTOCLONIACEAE

CALLIBLEPHARIS Kützing 1843

ciliata (Hudson) Kützing*jubata* (Goodenough & Woodward) Kützing[*Calliblepharis lanceolata* Batters]

CYSTOCLONIUM Kützing 1843

purpureum (Hudson) Batters[*Cystoclonium purpurascens* (Hudson) Kützing]

RHODOPHYLLIS Kützing 1847

divaricata (Stackhouse) Papenfuss[*Rhodophyllis appendiculata* J. Agardh][*Rhodophyllis bifida* Kützing]

Note: An undescribed species of *Rhodophyllis* occurs in deep water (25-40 m) in the area. This is figured in Hiscock (1986: fig. 12, bottom left, "*Rhodophyllis* sp.").

DUMONTIACEAE

DILSEA Stackhouse 1809

carcosa (Schmidel) Kuntze[*Dilsea edulis* (Stackhouse) Stackhouse]

DUDRESNAYA P.L. Crouan & H.M. Crouan 1835

verticillata (Withering) Le Jolis

DUMONTIA J.V. Lamouroux 1813

contorta (S.G. Gmelin) Ruprecht[*Dumontia incrassata* (O.F. Müller) J.V. Lamouroux][*Dumontia filiformis* (Hornemann) Greville]

PIKEA Harvey 1853

californica Harvey

Note: See Maggs & Ward (1996).

FURCELLARIACEAE

FURCELLARIA J.V. Lamouroux 1813

- lumbicalis* (Hudson) J.V. Lamouroux
[*Furcellaria fastigiata* (Turner) J.V. Lamouroux]

HALARACHNION Kützing 1843

- ligulatum* (Woodward) Kützing
[*Cruoria rosea* (P.L. Crouan & H.M. Crouan) P.L. Crouan & H.M. Crouan]

GIGARTINACEAE

CHONDRACANTHUS Kützing 1843

- acicularis* (Roth) Fredericq
[*Gigartina acicularis* (Roth) J.V. Lamouroux]
teedei (Mertens ex Roth) Kützing
[*Gigartina teedei* (Mertens ex Roth) J.V. Lamouroux]

Note: The incorrect spelling “*teedii*” is frequently used for this entity.

CHONDRUS Stackhouse 1797

- crispus* Stackhouse

GIGARTINA Stackhouse 1809

- pistillata* (S.G. Gmelin) Stackhouse

GLOIOSIPHONIACEAE

GLOIOSIPHONIA Carmichael 1833

- capillaris* (Hudson) Carmichael

PLAGIOSPORA Kuckuck 1897

- gracilis* Kuckuck
[*Cruoriopsis gracilis* (Kuckuck) Batters]

HAEMESCHARIACEAE

HAEMESCHARIA Kjellman 1883

- hennedyi* (Harvey) K.L. Vinogradova & T. Yacovleva
[*Petrocelis hennedyi* (Harvey) Batters]

KALLYMENIACEAE

CALLOCOLAX F. Schmitz ex Batters 1895

- neglectus* F. Schmitz ex Batters

CALLOPHYLLIS Kützing 1843

- cristata* (C. Agardh) Kützing
[*Euthora cristata* (C. Agardh) J. Agardh]
laciniata (Hudson) Kützing
[*Callophyllis flabellata* P.L. Crouan & H.M. Crouan]

Note: A further species of the genus, presently unasccribed, may occur on the south coast of England (W.F. Farnham, pers. comm.).

KALLYMENIA J. Agardh 1842

- reniformis* (Turner) J. Agardh
[*Kallymenia larterae* Holmes]

MEREDITHIA J. Agardh 1892

- microphylla* (J. Agardh) J. Agardh
[*Kallymenia microphylla* J. Agardh]

NEMASTOMATACEAE

ITONOA Masuda & Guiry 1995

- marginifera* (J. Agardh) Masuda & Guiry
[*Platoma marginifera* (J. Agardh) Batters]

NEMASTOMA J. Agardh 1842

- canariense* (Kützing) J. Agardh
Note: See Guiry (1997). Known in the area only from the subtidal of Lough Hyne, Co. Cork, Ireland, from where fertile plants were collected recently but have not been examined fully yet.

TSENGIA K.C. Fan & Y.P. Fan 1962

- bairdii* (Farlow) K.C. Fan & Y.P. Fan
[*Platoma bairdii* (Farlow) Kuckuck]

PEYSSONNELIACEAE

PEYSSONNELIA Decaisne 1841

- armorica* (P.L. Crouan & H.M. Crouan) Weber-van Bosse
atropurpurea P.L. Crouan & H.M. Crouan
dubyi P.L. Crouan & H.M. Crouan
[*Cruoriella dubyi* (P.L. Crouan & H.M. Crouan) F. Schmitz]
harveyana P.L. Crouan & H.M. Crouan ex J. Agardh
immersa Maggs & L.M. Irvine

PHYLLOPHORACEAE

AHNFELTIOPSIS P.C. Silva & DeCew 1992

- devoniensis* (Greville) P.C. Silva & DeCew
[*Fucus devoniensis* Greville]
[*Gymnogongrus devoniensis* (Greville) Schotter]

CERATOCOLAX Rosenvinge 1898

- hartzii* Rosenvinge

COCCOTYLUS Kützing 1843

- truncatus* (Pallas) M.J. Wynne & J.N. Heine
[*Phyllophora brodiaei* (Turner) Endlicher]
[*Actinococcus subcutaneus* (Lyngbye ex Hornemann) Rosenvinge]
[*Phyllophora truncata* (Pallas) A.D. Zinova]

Note: The epithet “*brodiaei*” is here corrected to “*brodiei*”; see note to *Polysiphonia brodiei*.

ERYTHRODERMIS Batters 1900

- traillii* (Holmes ex Batters) Guiry & Garbary
[*Phyllophora traillii* Holmes ex Batters]
[*Erythrodermis allenii* Batters]

GYMNOGONGRUS Martius 1833

- crenulatus* (Turner) J. Agardh
[*Gymnogongrus norvegicus* (Gunnerus) J. Agardh, *auct.*]
[*Actinococcus peltaeformis* F. Schmitz]
griffithsiae (Turner) Martius
[*Actinococcus aggregatus* F. Schmitz]

MASTOCARPUS Kützing 1843

- stellatus* (Stackhouse) Guiry
[*Gigartina mamillosa* (Goodenough & Woodward) J. Agardh]
[*Gigartina stellata* (Stackhouse) Batters]
[*Petrocelis cruenta* J. Agardh]

PHYLLOPHORA Greville 1830

crispa (Hudson) P.S. Dixon[*Colacolepis incrustans* F. Schmitz][*Phyllophora rubens* (Goodenough & Woodward) Greville][*Phyllophora epiphylla* (O.F. Müller) Batters]*pseudoceranoides* (S.G. Gmelin) Newroth & A.R.A. Taylor[*Phyllophora membranifolia* Endlicher]

Note: The use of a diaeresis is allowed by the ICBN where it is an aid to correct pronunciation.

sicula (Kützinger) Guiry & L.M. Irvine[*Phyllophora palmettoides* J. Agardh]

SCHOTTERA Guiry & Hollenberg 1975

nicaeënsis (J.V. Lamouroux ex Duby) Guiry & Hollenberg

Note: The use of a diaeresis is permitted by the ICBN where it is an aid to correct pronunciation

("nicae'ensis").

STENOGRAMME Harvey 1840

interrupta (C. Agardh) Montagne ex Harvey

POLYIDACEAE

POLYIDES C. Agardh 1822

rotundus (Hudson) Greville

SCHIZYMENIACEAE

SCHIZYMENIA J. Agardh 1851

dubyi (Chauvin ex Duby) J. Agardh[*Haematocelis rubens* J. Agardh]

SPHAEROCOCCACEAE

SPHAEROCOCCUS Stackhouse 1797

coronopifolius Stackhouse[*Haematocelis fissurata* P.L. Crouan & H.M. Crouan]Note: See Maggs & Guiry (1982c) regarding the life history of *Haematocelis fissurata*.

PLOCAMIALES

PLOCAMIACEAE

PLOCAMIUM J.V. Lamouroux 1813

cartilagineum (Linnaeus) P.S. Dixon[*Fucus coccineus* Hudson, *nom. illeg.*][*Plocamium coccineum* Lyngbye]

RHODYMENIALES

CHAMPIACEAE

CHAMPIA Desvaux 1809

parvula (C. Agardh) Harvey

CHYLOCLADIA Greville 1833

verticillata (Lightfoot) Bliding[*Chylocladia squarrosa* (Kützinger) Le Jolis][*Chylocladia kaliformis* (Goodenough & Woodward) Greville]

GASTROCLONIUM Kützinger 1843

ovatum (Hudson) Papenfuss[*Chylocladia ovalis* (Hudson) Greville][*Chylocladia ovata* (Hudson) Batters]*reflexum* (Chauvin) Kützinger[*Chylocladia reflexa* (Chauvin) Zanardini]

LOMENTARIACEAE

LOMENTARIA Lyngbye 1819

articulata (Hudson) Lyngbye*clavellosa* (Turner) Gaillon*orcadensis* (Harvey) F.S. Collins ex W.R. Taylor[*Lomentaria rosea* (Harvey) Thuret ex Farlow][*Chrysomenia rosea* Harvey]

RHODYMENIACEAE

CORDYLECLADIA J. Agardh 1852

erecta (Greville) J. Agardh

RHODYMENIA Greville 1830

ardissonei Feldmann[*Rhodymenia corallicola* (Zanardini) Ardissonne]Note: Illustrated, as "*Rhodymenia* sp.", by Maggs & Guiry (1982b) and as *Rhodymenia pseudopalmata* by Hiscock (1986, fig. 19d, extreme right).*delicatula* P.J.L. Dangeard*holmesii* Ardissonne*pseudopalmata* (J.V. Lamouroux) P.C. Silva[*Rhodymenia palmetta* (J.V. Lamouroux) Greville]Note: *Rhodymenia palmetta* and *R. pseudopalmata* may not be the same species.

CERAMIALES

CERAMIACEAE

CALLITHAMNIOIDEAE

CALLITHAMNIEAE

AGLAOTHAMNION Feldmann-Mazoyer 1941

bipinnatum (P.L. Crouan & H.M. Crouan) Feldmann-Mazoyer*diaphanum* L.Hardy-Halos & Maggs*feldmanniae* Halos[*Callithamnion feldmanniae* (Halos) G.R. South & I. Tittley]*gallicum* (Nägeli) Halos ex Ardré*hookeri* (Dillwyn) Maggs & Hommersand[*Callithamnion brodiei* Harvey][*Callithamnion polyspermum* C. Agardh][*Callithamnion hookeri* (Dillwyn) S.F. Gray][*Callithamnion scopulorum* C. Agardh]*priceanum* Maggs, Guiry & Rueness*pseudobyssoides* (P.L. Crouan & H.M. Crouan) Halos

roseum (Roth) Maggs & L'Hardy-Halos

[*Callithamnion roseum* (Roth) Lyngbye]

sepositum (Gunnerus) Maggs & Hommersand

[*Callithamnion sepositum* (Gunnerus) P.S. Dixon & J.H. Price]

[*Callithamnion arbuscula* (Dillwyn) Lyngbye]

tenuissimum (Bonnemaison) Feldmann-Mazoyer

[*Callithamnion byssoides* Arnott ex Harvey]

[*Callithamnion furcellariae* J. Agardh]

[*Callithamnion tenuissimum* (Bonnemaison) Kützing]

[*Aglaothamnion byssoides* (Arnott ex Harvey) L'Hardy-Halos & Rueness]

[*Aglaothamnion furcellariae* (J. Agardh) Feldmann-Mazoyer]

tripinnatum (C. Agardh) Feldmann-Mazoyer

[*Callithamnion tripinnatum* C. Agardh]

CALLITHAMNION Lyngbye 1819

Note: Records from the area of *Callithamnion dudresnayi* (Bonnemaison) P.L. Crouan & H.M. Crouan (e.g., Newton, 1931) require further study.

corymbosum (J.E. Smith) Lyngbye

granulatum (Ducluzeau) C. Agardh

[*Callithamnion spongiosum* Harvey]

tetragonum (Withering) S.F. Gray

[*Callithamnion fruticosum* J. Agardh]

tetricum (Dillwyn) S.F. Gray

SEIROSPORA Harvey 1846

interrupta (J.E. Smith) F. Schmitz

[*Seirospora seirosperma* (Harvey) P.S. Dixon]

[*Seirospora griffithsiana* Harvey]

[*Seirospora hormocarpa* (Holmes) Batters]

PTILOTEAE

PLUMARIA F. Schmitz 1896

plumosa (Hudson) Kuntze

[*Plumaria elegans* (Bonnemaison) F. Schmitz]

PTILOTA C. Agardh 1817

gunneri P.C. Silva, Maggs & L.M. Irvine

[*Prilota plumosa* (Linnaeus) C. Agardh, *auct.*]

CERAMIOIDEAE ANTITHAMNIEAE

ANTITHAMNION Nägeli 1847

cruciatum (C. Agardh) Nägeli

densum (Suhr) M.A. Howe

villosum (Kützing) Athanasiadis

BORNETIEAE

BORNETIA Thuret 1855

secundiflora (J. Agardh) Thuret

CERAMIEAE

CERAMIUM Roth 1797

Note: Records of *Ceramium arborescens* J. Agardh, *C. areschougii* Kylin, *C. derbesii* Solier ex Kützing, *C. fruticosum* (Kützing) J. Agardh, *C. pedicellatum* (Duby) J. Agardh, *nom. illeg.*, *C. tenue* J. Agardh, *C. vimeneum* J. Agardh, mostly in Newton (1931), are excluded; see Maggs *et al.* (2002).

botryocarpum A.W. Griffiths ex Harvey

ciliatum (J. Ellis) Ducluzeau

cimbricum H.E. Petersen

[*Ceramium fastigiatum* Harvey, *nom. illeg.*]

circinatum (Kützing) J. Agardh

[*Ceramium decurrens* Harvey]

deslongchampsii Chauvin ex Duby

Note: As the species is named for the French paleontologist J.A. Eudes-Deslongchamps the specific epithet should be corrected from "*deslongchampii*" to "*deslongchampsii*".

[*Ceramium strictum* (Kützing) Rabenhorst, *nom. illeg.*]

diaphanum (Lightfoot) Roth

[*Ceramium tenuissimum* (Roth) J.E. Areschoug, *nom. illeg.*]

[*Ceramium gracillimum* (Kützing) Zanardini, *nom. illeg.*]

echionotum J. Agardh

flaccidum (Harvey ex Kützing) Ardissonne

[*Hormoceras flaccidum* Kützing]

gaditanum (Clemente) Cremades

[*Ceramium flabelligerum* J. Agardh]

pallidum (Nägeli ex Kützing) Maggs & Hommersand

secundatum Lyngbye

shuttleworthianum (Kützing) Rabenhorst

[*Acanthoceras shuttleworthianum* Kützing]

[*Ceramium acanthonotum* (Carmichael ex Harvey) J. Agardh]

siliquosum (Kützing) Maggs & Hommersand

[*Hormoceras siliquosum* Kützing]

virgatum Roth

[*Conferva nodulosa* Lightfoot]

[*Ceramium nodulosum* (Lightfoot) Ducluzeau]

[*Ceramium rubrum* C. Agardh, *auct.*]

Note: As *Ceramium nodulosum* in Guiry (1997). See Maggs *et al.* (2002) for an account of the confusion surrounding *C. rubrum* and *C. nodulosa*.

MICROCLADIA Greville 1830

glandulosa (Solander ex Turner) Greville

CROUANIEAE

CROUANIA J. Agardh 1842

attenuata (C. Agardh) J. Agardh

GRIFFITHSIEAE

ANOTRICHUM Nägeli 1862

barbatum (C. Agardh) Nägeli

[*Griffithsia barbata* C. Agardh]

furcellatum (J. Agardh) Baldock

GRIFFITHSIA C. Agardh 1817

corallinoides (Linnaeus) Trevisan[*Griffithsia corallina* (Lightfoot) C. Agardh]*devoniensis* Harvey

HALURUS Kützing 1843

equisetifolius (Lightfoot) Kützing*flosculus* (J. Ellis) Maggs & Hommersand[*Griffithsia flosculosa* (J. Ellis) Batters][*Griffithsia setacea* (Hudson) C. Agardh]

HETEROTHAMNIEAE

ANTITHAMNIONELLA Lyle 1922

floccosa (O.F. Müller) Whittick[*Antithamnion floccosum* (O.F. Müller) Kleen]*spirographidis* (Schiffner) E.M. Wollaston[*Antithamnion spirographidis* Schiffner]*ternifolia* (J.D. Hooker & Harvey) Lyle[*Antithamnionella sarniensis* Lyle]

PTEROTHAMNIEAE

PTEROTHAMNION Nägeli 1855

crispum (Ducluzeau) Nägeli[*Antithamnion crispum* (Ducluzeau) Thuret ex Le Jolis]*plumula* (J. Ellis) Nägeli[*Antithamnion plumula* (J. Ellis) Thuret ex Le Jolis]*polyacanthum* (Kützing) Nägeli[*Callithamnion polyacanthum* Kützing]

Note: Not included in Guiry (1997); see Athanasiadis (1996a).

SCAGELIEAE

SCAGELIA Wollaston 1972

pylaisaei (Montagne) M.J. Wynne

Note: Known only from Rockall (Maggs & Hommersand, 1993), which is not within the area mapped in the Atlas.

SCAGELOTHAMNIEAE

SCAGELOTHAMNION Athanasiadis 1996

pusillum (Ruprecht) Athanasiadis[*Scagelia pusilla* (Ruprecht) Athanasiadis ex Maggs & Hommersand]Note: As *Scagelia "pusilla"* in Guiry (1997).

SPHONDYLOTHAMNIEAE

SPHONDYLOTHAMNION Nägeli 1862

multifidum (Hudson) Nägeli

SPYRIDEAE

SPYRIDIA Harvey 1833

filamentosa (Wulfen) Harvey

COMPSOTHAMNIOIDEAE

COMPSOTHAMNIEAE

COMPSOTHAMNION (Nägeli) F. Schmitz 1889

decompositum (J. Agardh) Maggs & L'Hardy-Halos[*Callithamnion decompositum* J. Agardh]*gracillimum* De Toni*thuyoides* (J.E. Smith) Nägeli

MONOSPOREAE

MONOSPORUS Solier 1845

pedicellatus (J.E. Smith) Solier[*Corynospora pedicellata* (J.E. Smith) J. Agardh][*Monospora pedicellata* (J.E. Smith) J. Agardh]

SPERMOTHAMNIEAE

PTILOTHAMNION Thuret 1863

pluma (Dillwyn) Thuret[*Spermothamnion barbatum* (C. Agardh) Nägeli][*Ptilothamnion lucifugum* A.D. Cotton][*Spermothamnion mesocarpum* (Carmichael) Chemin]*sphaericum* (P.L. Crouan & H.M. Crouan ex J. Agardh) Maggs & Hommersand

SPERMOTHAMNION J.E. Areschoug 1847

Note: Reports from the area of *Spermothamnion irregulare* (J. Agardh) Ardissonne refer to *Ptilothamnion sphaericum* (Maggs & Hommersand, 1993: 139), above.*repens* (Dillwyn) Rosenvinge[*Spermothamnion turneri* (Mertens ex Roth) J.E. Areschoug]*strictum* (C. Agardh) Ardissonne

SPONGOCLONIEAE

PLEONOSPORIUM Nägeli 1862

borreri (J.E. Smith) Nägeli

DASYACEAE

DASYA C. Agardh 1824

corymbifera J. Agardh*hutchinsiae* Harvey[*Dasya arbuscula* Harvey]*ocellata* (Grateloup) Harvey*punicea* (Zanardini) Meneghini ex Zanardini

HETEROSIPHONIA Montagne 1842

plumosa (J. Ellis) Batters[*Heterosiphonia coccinea* (Hudson) Falkenberg]

DELESSERIACEAE

DELESSERIOIDEAE

APOGLOSSEAE

APOGLOSSOCOLAX Maggs & Hommersand 1993

pusilla Maggs & Hommersand

APOGLOSSUM J. Agardh 1898

ruscifolium (Turner) J. Agardh[*Delesseria ruscifolia* (Turner) J.V. Lamouroux]

DELESSERIEAE

DELESSERIA J.V. Lamouroux 1813

sanguinea (Hudson) J.V. Lamouroux

MEMBRANOPTERA Stackhouse 1809

alata (Hudson) Stackhouse[*Delesseria alata* (Hudson) J.V. Lamouroux]

Note: Maggs & Hommersand (1993: 199) and Athanasiadis (1996b: 114) include *Pantoneura angustissima* in this species. Further investigation is, however, required of the name and the records from the area.

HYPOGLOSSEAE

HYPOGLOSSUM Kützing 1843

hypoglossoides (Stackhouse) F.S. Collins & Hervey[*Hypoglossum woodwardii* Kützing][*Delesseria hypoglossum* (Woodward) J.V. Lamouroux]

NITOPHYLLOIDEAE

NITOPHYLLEAE

NITOPHYLLUM Greville 1830

punctatum (Stackhouse) Greville

RADICILINGUA Papenfuss 1956

thysanorhizans (Holmes) Papenfuss[*Nitophyllum thysanorhizans* Holmes][*Rhizoglossum thysanorhizans* (Holmes) Kylin]

PHYCODYOIDEAE

CRYPTOPLEUREAE

ACROSORIUM Zanardini ex Kützing 1869

Note: Wynne (1989) regarded the entity known as *Acrosorium reptans* (P.L. Crouan & H.M. Crouan) Kylin [*Nitophyllum reptans* P.L. Crouan & H.M. Crouan] as a prostrate form of *Cryptopleura ramosa* (see also Maggs & Hommersand, 1993: 254-255); many literature records from the area refer, however, to *Acrosorium venulosum*.

venulosum (Zanardini) Kylin[*Acrosorium uncinatum* (Turner) Kylin]

CRYPTOPLEURA Kützing 1843

ramosa (Hudson) Kylin ex Lily Newton[*Nitophyllum laceratum* (S.G. Gmelin) Greville]

GONIMOPHYLLUM Batters 1892

buffhamii Batters

MYRIOGRAMMEAE

HARALDIOPHYLLUM A.D. Zinova 1981

bonnemaisonii (Kylin) A.D. Zinova[*Myriogramme bonnemaisonii* Kylin][*Nitophyllum bonnemaisonii* (Kylin) Kylin]

PHYCODYEAE

ASTEROCOLAX Feldmann & G. Feldmann 1951

erythroglossi Feldmann & G. Feldmann

ERYTHROGLOSSUM J. Agardh 1898

Note: See Maggs & Hommersand (1993: 219) regarding the status of records of *Erythroglossum sandrianum* (Kützing) Kylin from the area.

laciniatum (Lightfoot) Maggs & Hommersand[*Polyneura gmelinii* (J.V. Lamouroux) Kylin]

PHYCODYS Kützing 1843

rubens (Linnaeus) Batters[*Delesseria sinuosa* (Goodenough & Woodward) J.V. Lamouroux]

POLYNEURA (J. Agardh) Kylin 1924

Note: Reports from the area of the entity known as *Polyneura litterata* are said to be based on "misidentifications of other species". No examination of the type in LD (from Torquay, Devon) seems to have been undertaken.

bonnemaisonii (C. Agardh) Maggs & Hommersand[*Polyneura hilliae* (Greville) Kylin]

SCHIZOSERIDEAE

DRACIELLA J. Ernst & Feldmann 1957

heterocarpa (Chauvin ex Duby) Maggs & Hommersand[*Myriogramme heterocarpum* (Chauvin ex Duby) J. Ernst & Feldmann][*Myriogramme versicolor* (Harvey) Kylin]*minuta* (Kylin) Maggs & Hommersand[*Myriogramme minuta* Kylin]*spectabilis* J. Ernst & Feldmann

RHODOMELACEAE

BOERGESENIELLA Kylin 1956

fruticulosa (Wulfen) Kylin[*Polysiphonia fruticulosa* (Wulfen) Sprengel][*Pterosiphonia fruticulosa* (Wulfen) L. Batten]*thuyoides* (Harvey) Kylin[*Pterosiphonia thuyoides* (Harvey) F. Schmitz]

BOSTRYCHIA Montagne 1842

scorpioides (Hudson) Montagne ex Kützing

BRONGNIARTELLA Bory de Saint-Vincent 1822

byssoides (Goodenough & Woodward) F. Schmitz

CHONDRIA C. Agardh 1817

capillaris (Hudson) M.J. Wynne[*Chondria tenuissima* C. Agardh]*coerulescens* (J. Agardh) Falkenberg*dasyphylla* (Woodward) C. Agardh

HALOPITHYS Kützing 1843

incurva (Hudson) Batters

LAURENCIA Nägeli 1862

obtusa (Hudson) J.V. Lamouroux*pyramidalis* Bory de Saint-Vincent ex Kützing[*Laurencia obtusa* var. *pyramidata* Bory de Saint-Vincent ex J. Agardh]

LOPHOSIPHONIA Falkenberg 1897

reptabunda (Suhr) Kylin

ODONTHALIA Lyngbye 1819

dentata (Linnaeus) Lyngbye

OSMUNDEA Stackhouse 1809

hybrida (A.P. De Candolle) K.W. Nam[*Laurencia hybrida* (A.P. De Candolle) T. Lestiboudois][*Laurencia caespitosa* J.V. Lamouroux]*osmunda* (S.G. Gmelin) K.W. Nam & Maggs[*Laurencia pinnatifida* var. *osmunda* (Turner) Kützing][*Laurencia osmunda* (S.G. Gmelin) Maggs & Hommersand]*pinnatifida* (Hudson) Stackhouse[*Laurencia pinnatifida* (Hudson) J.V. Lamouroux]*ramosissima* (Oeder) AthanasiadisNote: Most specimens identified previously as *Laurencia platycephala* belong here (Nam *et al.*, 2000).*truncata* (Kützing) K.W. Nam & Maggs[*Laurencia truncata* Kützing]Note: Most specimens identified as this species belong to *Osmundea ramosissima* but some (such as those listed as *Laurencia platycephala* by Maggs, Freamhainn & Guiry, 1983) may belong to a separate entity for which the name *Osmundea truncata* may be available (see Nam *et al.*, 2000).

POLYSIPHONIA Greville 1823

atlantica Kapraun & J.N. Norris[*Polysiphonia macrocarpa* Harvey, *nom. illeg.*]*brodiei* (Dillwyn) SprengelNote: Generally spelled “*brodiaei*”. As the species is named after James Brodie, the epithet is formed by adding an “i” (see Silva, Basson, & Moe, 1996: 537).*ceramiaeformis* P.L. Crouan & H.M. Crouan*denudata* (Dillwyn) Greville ex Harvey[*Polysiphonia variegata* (C. Agardh) Zanardini]*devoniensis* Maggs & Hommersand*elongata* (Hudson) Sprengel*elongella* Harvey*fibrata* (Dillwyn) HarveyNote: Records (e.g., Newton, 1931) of *P. rhunensis* Thuret and *P. sanguinea* C. Agardh from the area probably refer to this species (Maggs & Hommersand, 1993: 333).*fibrillosa* (Dillwyn) Sprengel[*Polysiphonia richardsonii* W.J. Hooker ex Harvey][*Polysiphonia spinulosa* Greville]*foetidissima* Cocks ex Bornet*fucoides* (Hudson) Greville[*Polysiphonia violacea* (Roth) Sprengel][*Polysiphonia nigrescens* (Hudson) Greville ex Harvey]*furcellata* (C. Agardh) Harvey*harveyi* J. Bailey[*Polysiphonia insidiosa* (J. Agardh) P.L. Crouan & H.M. Crouan, *nom. illeg.*]*lanosa* (Linnaeus) Tandy[*Polysiphonia fastigiata* (Roth) Greville]*nigra* (Hudson) Batters[*Polysiphonia atrorubescens* (Dillwyn) Greville]*opaca* (C. Agardh) Moris & De Notaris*simulans* Harvey*stricta* (Dillwyn) Greville[*Polysiphonia urceolata* (Lightfoot ex Dillwyn) Greville][*Polysiphonia spiralis* L. Batten]*subulifera* (C. Agardh) Harvey

PTEROSIPHONIA Falkenberg 1897

ardreana Maggs & Hommersand*complanata* (Clemente) Falkenberg*parasitica* (Hudson) Falkenberg*pennata* (C. Agardh) Sauvageau[*Polysiphonia pennata* (C. Agardh) J. Agardh]*pinnulata* (Kützing) Maggs & Hommersand

Note: probably introduced and presently confined to the Milford Haven area.

RHODOMELA C. Agardh 1822

confervoides (Hudson) P.C. Silva[*Rhodomela subfusca* (Woodward) C. Agardh]*lycopodioides* (Linnaeus) C. Agardh

CHLOROPHYTA
CHLOROPHYCEAE
CHLOROCOCCALES

CHARACIACEAE

CHARACIUM A. Braun 1849

marinum Kjellman

CHLOROCOCCACEAE

CHLOROCOCCUM Meneghini 1842

submarinum Alvik

SYKIDION E.P. Wright 1881

dyeri E.P. Wright

ENDOSPHAERACEAE

CHLOROCHYTRIUM Cohn 1872

cohnii E.P. Wright[*Chlorochytrium immersum* Masee]*dermatocolax* Reinke*facciolae* (Borzi) Bristol

GOMONTIA Bornet & Flahault 1888

polyrhiza (Lagerheim) Bornet & Flahault[*Gomontia manxiana* Chodat]

MICROSPORALES

MICROSPORACEAE

MICROSPORA Thuret 1850
ficulinae P.A. Dangeard

CHAETOPHORALES

CHAETOPHORACEAE

BOLBOCOLEON Pringsheim 1863
piliferum Pringsheim

ENTOCLADIA Reinke 1879
leptochaete (Huber) Burrows
[*Endoderma leptochaete* Huber]

PRINGSHEIMIELLA Höhnelt 1920
scutata (Reinke) Höhnelt ex Marchewianka
[*Pringsheimia scutata* Reinke]

PSEUDENDOCOLONIUM Wille 1901
fucicola (Rosenvinge) R. Nielsen
[*Ullwella fucicola* Rosenvinge]
[*Pseudopringsheimia fucicola* (Rosenvinge) Wille]
Note: Included in Guiry (1997) as *Pseudopringsheimia fucicola*; see Nielsen (1980).

marinum (Reinke) Aleem & E. Schulz
[*Protoderma marina* Reinke]
Note: According to Burrows (1991: 125), this is synonymous with *Pseudodendroclonium submarinum*.

submarinum Wille

PSEUDOPRINGSHEIMIA Wille 1909
confluens (Rosenvinge) Wille

TELLAMIA Batters 1895
contorta Batters
[*Tellamia intricata* Batters]
Note: Includes *Tellamia intricata* in Guiry (1997); see Nielsen & McLachlan (1986).

PHAEOPHILALES

PHAEOPHILACEAE

PHAEOPHILA Hauck 1876
dendroides (P.L. Crouan & H.M. Crouan) Batters

ULVALES

CAPSOSIPHONACEAE

CAPSOSIPHON Gobi 1879
fulvescens (C. Agardh) Setchell & N.L. Gardner
[*Capsosiphon aureolus* (Kützinger) Gobi]

MONOSTROMATACEAE

MONOSTROMA Thuret 1854
grevillei (Thuret) Wittrock
obscurum (Kützinger) J. Agardh
[*Ulvaria obscura* (Kützinger) Gayral]
oxyspermum (Kützinger) Doty
[*Monostroma orbiculatum* Thuret]
[*Monostroma crepidinium* Farlow]
[*Monostroma latissimum* Wittrock]
[*Monostroma wittrockii* Bornet]

PROTOMONOSTROMA K.L. Vinogradova
undulatum (Wittrock) K.L. Vinogradova
[*Monostroma undulatum* Wittrock]
Note: Only one record for Britain (see Burrows 1991: 69).

ULVARIA Ruprecht 1850
fusca Ruprecht
[*Monostroma fuscum* (Ruprecht) Wittrock]
Note: Included by Burrows (1991: 67) in *Monostroma obscurum* and not listed by Guiry (1997); retained here pending further investigation (see Nielsen *et al.*, 1995).

ULVACEAE

BLIDINGIA Kylin 1947
chadefaudii (Feldmann) Bliding
Note: See Burrows (1991:78); not seen by her.

marginata (J. Agardh) P.J.L. Dangeard
[*Enteromorpha marginata* J. Agardh]
minima (Nägeli ex Kützinger) Kylin
[*Enteromorpha micrococca* Kützinger]
[*Enteromorpha minima* Nägeli ex Kützinger]

ENTEROMORPHA Link 1820
Note: *Enteromorpha lingulata* J. Agardh is not included in Burrows (1991) and does not appear to have been reported since Newton (1931: 69).

compressa (Linnaeus) Nees
Note: Records of *E. usneoides* Bonnemaïson ex J. Agardh (e.g., Newton, 1931: 72) are included here, although the species was recognized by Stegenga *et al.* (1997).

flexuosa (Wulfen) J. Agardh
intestinalis (Linnaeus) Nees
linza (Linnaeus) J. Agardh
muscoïdes (Clemente) Cremades
[*Enteromorpha crinita* Nees]
[*Enteromorpha clathrata* (Roth) Greville]
[*Enteromorpha ramulosa* (J.E. Smith) Carmichael]
prolifera (O.F. Müller) J. Agardh
[*Enteromorpha torta* (Mertens) Reinbold]
ralfsii Harvey

PERCURSARIA Bory de Saint-Vincent 1823
percursa (C. Agardh) Rosenvinge

ULVA Linnaeus 1753
lactuca Linnaeus
rigida C. Agardh

UMBRAULVA E.H. Bae & I.K. Lee 2002

olivascens (P.J.L. Dangeard) E.H. Bae & I.K. Lee

[*Ulva olivascens* P.J.L. Dangeard]

[*Ulva olivacea* P.J.L. Dangeard, *nom. illeg.*]

Note: Phylogenetic analyses of ITS sequences strongly support the segregation of this and two other western Pacific species of *Ulva* to the new genus *Umbraulva* (Bae & Lee, 2002).

ULVELLACEAE

ACROCHAETE Pringsheim 1862

Note: Species listed here require further investigation of their generic placement.

heteroclada J.A. Correa & R. Nielsen

Note: Isolated in culture from *Chondrus crispus* plants collected on the south coast of England (Brodie & Plumb, pers. comm.).

operculata J.A. Correa & R. Nielsen

Note: Isolated in culture from *Chondrus crispus* plants collected on the south coast of England (Brodie & Plumb, pers. comm.).

repens Pringsheim

[*Acrochaete parasitica* Oltmanns]

viridis (Reinke) R. Nielsen

[*Entocladia viridis* Reinke]

[*Phaeophila viridis* (Reinke) Burrows]

[*Endoderma viride* (Reinke) De Toni]

Note: As *Entocladia viridis* in Guiry (1997).

wittrockii (Wille) R. Nielsen

[*Entocladia wittrockii* Wille]

[*Phaeophila wittrockii* (Wille) R. Nielsen]

[*Endoderma wittrockii* (Wille) De Toni]

Note: As *Entocladia wittrockii* in Guiry (1997).

EPICLADIA Reinke 1889

flustrae Reinke

[*Endoderma flustrae* (Reinke) Batters]

[*Entocladia flustrae* (Reinke) W.R. Taylor]

Note: As *Entocladia flustrae* in Guiry (1997); see Nielsen (1984).

perforans (Huber) R. Nielsen

[*Endoderma perforans* Huber]

[*Entocladia perforans* (Huber) Levring]

Note: As *Entocladia perforans* in Guiry (1997);

OCHLOCHAETE Thwaites ex Harvey 1849

hystrix Thwaites ex Harvey

[*Ochlochaete ferox* Huber]

[*Chaetobolus gibbus* Rosenvinge]

ULVELLA P.L. Crouan & H.M. Crouan 1859

lens P.L. Crouan & H.M. Crouan

[*Pseudulvella applanata* Setchell & N.L. Gardner]

PRASIOLALES

PRASIOLACEAE

PRASIOLA (C. Agardh) Meneghini 1838

calophylla (Carmichael ex Greville) Kützing

Note: See Rindi *et al.* (1999) for recent records of this species and *P. crispa* from the west of Ireland, mainly in urban situations.

crispa (Lightfoot) Kützing

furfuracea (Mertens ex Hornemann) Kützing

stipitata Suhr ex Jessen

ROSENGINGIELLA P.C. Silva 1957

polyrhiza (Rosenvinge) P.C. Silva

[*Gayella polyrhiza* Rosenvinge]

Note: See Rindi *et al.* (1999) for recent records of this species from the west of Ireland, mainly in urban situations. The taxonomic relationships between marine and terrestrial populations require further studies (Rindi, pers. comm.).

ACROSIPHONIALES

ACROSIPHONIACEAE

ACROSIPHONIA J. Agardh 1846

arcta (Dillwyn) Gain

[*Cladophora arcta* (Dillwyn) Kützing]

[*Spongomorpha arcta* (Dillwyn) Kützing]

[*Cladophora lanosa* (Roth) Kützing]

[*Spongomorpha centralis* (Lyngbye) Kützing]

Note: Included in Guiry (1997) as *Spongomorpha arcta*; see Silva (in Silva, Basson & Moe 1996: 931-934) who advocate treating *Acrosiphonia* as a separate genus on the basis of number of nuclei per cell.

sonderi (Kützing) Kornmann

[*Cladophora sonderi* Kützing]

Note: Requires confirmation as to occurrence in the area.

SPONGOMORPHA Kützing 1843

aeruginosa (Linnaeus) Hoek

[*Chlorochytrium inclusum* Kjellman]

[*Cladophora pallida* (Kjellman) Batters]

[*Cladophora uncialis* (O.F. Müller) Kützing]

[*Codiolum petrocelidis* Kuckuck]

[*Cladophora bombycina* (Kjellman) Batters]

UROSPORA J.E. Areschoug 1866

penicilliformis (Roth) J.E. Areschoug

[*Urospora bangioides* (Harvey) Holmes & Batters]

[*Urospora isogona* (J.E. Smith) Batters]

[*Urospora mirabilis* J.E. Areschoug]

wormskioldii (Mertens ex Hornemann) Rosenvinge

[*Codiolum gregarium* A. Braun]

[*Urospora collabens* (C. Agardh) Holmes & Batters]

CLADOPHORALES

CLADOPHORACEAE

CHAETOMORPHA Kützing 1845

Note: A complete revision of the genus *Chaetomorpha* is required.

aerea (Dillwyn) Kützing

Note: Included in *Chaetomorpha linum* by Burrows (1991), but the synonymy was not accepted by Silva, Basson & Moe (1996: 759).

crassa (C. Agardh) Kützing

Note: Included in *Chaetomorpha linum* by Burrows (1991), but the synonymy was not accepted by Silva, Basson & Moe (1996: 759).

linum (O.F. Müller) Kützing*litorea* Harvey

Note: *Conferva litorea* Harvey is a *nom. illeg.* and the name dates from Harvey (1858: 87); see Silva, Basson & Moe (1996: 766).

melagonium (F. Weber & D. Mohr) Kützing

CLADOPHORA Kützing 1843

Note: *Cladophora fracta* (O.F. Müller ex Vahl) Kützing and *C. glomerata* (Linnaeus) Kützing are considered here as freshwater species that occasionally extend into slightly saline waters. *Cladophora aegagropila* should perhaps also be included in this category (see Burrows, 1991: 4, 146, 174).

aegagropila (Linnaeus) Trevisan

[*Cladophora brownii* (Dillwyn) Harvey]

albida (Nees) Kützing

[*Cladophora neesiorum* (C. Agardh) Kützing]

[*Cladophora falcata* Harvey]

[*Cladophora corymbifera* Kützing]

[*Cladophora magdalenae* Harvey]

battersii Hoek*coelothrix* Kützing

[*Cladophora repens* Harvey]

dalmatica Kützing*flexuosa* (O.F. Müller) Kützing

[*Cladophora gracilis* Kützing]

globulina (Kützing) Kützing

Note: Mainly a freshwater species but also found in saltmarshes (Burrows, 1991:155).

hutchinsiae (Dillwyn) Kützing

[*Conferva hutchinsiae* Dillwyn]

[*Cladophora rectangularis* (A.W. Griffiths ex Harvey) Harvey]

laetevirens (Dillwyn) Kützing*lehmanniana* (Lindenberg) Kützing

[*Cladophora utriculosa* Kützing]

[*Cladophora macallana* Harvey]

liniformis Kützing*pellucida* (Hudson) Kützing

[*Cladophora pseudopellucida* Hoek]

[*Cladophora trichotoma* (C. Agardh) Kützing]

prolifera (Roth) Kützing*pygmaea* Reinke*retroflexa* (Bonnemaison ex P.L. Crouan & H.M. Crouan) Hoek*rupestris* (Linnaeus) Kützing*sericea* (Hudson) Kützing

[*Cladophora rudolphiana* (C. Agardh) Kützing]

[*Cladophora birta* Kützing]

[*Cladophora glaucescens* A.W. Griffiths ex Harvey]

[*Cladophora balliana* Harvey]

vagabunda (Linnaeus) Hoek

[*Cladophora expansa* (Mertens) Kützing]

RHIZOCLONIUM Kützing 1843

riparium (Roth) Harvey

[*Rhizoclonium implexum* (Dillwyn) Kützing]

Note: Burrows (1991: 175) considered *Rhizoclonium implexum*, *R. riparium* and *R. tortuosum* conspecific, but this has not been generally accepted. *Rhizoclonium implexum* is sometimes referred to *Rhizoclonium riparium* var. *implexum* (Dillwyn) Rosenvinge (Koster, 1955; Silva, Basson & Moe, 1996: 786).

tortuosum (Dillwyn) Kützing

[*Rhizoclonium lubricum* Setchell & N.L. Gardner]

[*Chaetomorpha capillaris* (Kützing) Børgesen, *nom. illeg.*]

[*Chaetomorpha tortuosa* (Dillwyn) Kleen]

[*Rhizoclonium arenosum* (Carmichael) Kützing]

WITROCKIELLACEAE

WITROCKIELLA Wille 1909

paradoxa Wille

BRYOPSIDALES

BRYOPSIDACEAE

BRYOPSIS J.V. Lamouroux 1809

hypnoides J.V. Lamouroux*plumosa* (Hudson) C. Agardh

CHAETOSIPHONACEAE

BLASTOPHYSA Reinke 1889

rhizopus Reinke

CODIACEAE

CODIUM Stackhouse 1797

adhaerens C. Agardh*bursa* (Linnaeus) C. Agardh

Note: Listed in Guiry (1997) as *Codium bursa* (Olivi) C. Agardh; the basionym is, however, *Alcyonium bursa* Linnaeus (1758: 803); see Silva, Basson & Moe (1996: 898).

fragile (Suringar) Hariot

Note: Two introduced subspecies have been found in the area: *C. fragile* subsp. *tomentosoides* (Goor) P.C. Silva and *C. fragile* subsp. *atlanticum* (A.D. Cotton) P.C. Silva. The former seems to be gradually displacing the latter except perhaps in more northerly locations. *Codium fragile* subsp. *atlanticum* includes *Codium amphibium* Moore.

tomentosum Stackhouse
vermilara (Olivi) Delle Chiaje

DERBESACEAE

DERBESIA Solier 1846

marina (Lyngbye) Solier
[*Halicystis ovalis* (Lyngbye) J.E. Areschoug]
tenuissima (Moris & De Notaris) P.L. Crouan & H.M. Crouan

OSTREOBIACEAE

OSTREOBIMUM Bornet & Flahault 1889

quekettii Bornet & Flahault

CHLOROCYSTIDALES

CHLOROCYSTIDACEAE

HALOCHLOROCOCCUM P.J.L. Dangeard 1965

moorei (N.L. Gardner) Kornmann & Sahling
[*Chlorochytrium moorei* N.L. Gardner]
[*Chlorochytrium willei* Printz]

KLEBSORMIDIALES

STICHOCOCCACEAE

STICHOCOCCUS Nägeli 1849

bacillaris Nägeli

ULOTRICHALES

ULOTRICHACEAE

EUGOMONTIA Kornmann 1960

sacculata Kornmann

ULOTHRIX Kützing 1833

flacca (Dillwyn) Thuret
[*Ulothrix consociata* Wille]
[*Ulothrix pseudoflacca* Wille]
implexa (Kützing) Kützing
speciosa (Carmichael) Kützing
[*Lyngbya speciosa* Carmichael]
subflaccida Wille

Note: Included in *Ulothrix flacca* by Burrows (1991).

HETEROKONTOPHYTA
PHAEOPHYCEAE
SPHACELARIALES

SPHACELARIACEAE

CLADOSTEPHUS C. Agardh 1817

spongiosus (Hudson) C. AgardhNote: *Cladostephus spongiosus* f. *verticillatus* (Lightfoot) Prud'homme van Reine is a generally recognised entity.

SPHACELARIA Lyngbye 1819

caespitula Lyngbye*cirrosa* (Roth) C. Agardh[*Sphacelaria bipinnata* (Kützing) Sauvageau][*Sphacelaria hystrix* Suhr ex Reinke]*fusca* (Hudson) S.F. Gray*mirabilis* (Reinke ex Batters) Prud'homme van Reine[*Battersia mirabilis* Reinke ex Batters]*nana* Nägeli ex Kützing[*Sphacelaria britannica* Sauvageau][*Sphacelaria olivacea* Pringsheim]*plumigera* Holmes*plumosa* Lyngbye[*Chaetopteris plumosa* (Lyngbye) Kützing]*plumula* Zanardini*racemosa* Greville*radicans* (Dillwyn) C. Agardh*rigidula* Kützing[*Sphacelaria furcigera* Kützing]*tribuloides* Meneghini

STYPOCAULACEAE

HALOPTERIS Kützing 1843

flicina (Grateloup) Kützing

STYPOCAULON Kützing 1843

scoparium (Linnaeus) Kützing[*Halopteris scoparia* (Linnaeus) Sauvageau]

DICTYOTALES

DICTYOTACEAE

DICTYOTEAE

ZONARIEAE

DICTYOPTERIS J.V. Lamouroux 1809

polypodioides (A.P. De Candolle) J.V. Lamouroux[*Dictyopteris membranacea* (Stackhouse) Batters]Note: As *Dictyopteris membranacea* in Guiry (1997); see Silva (in Silva, Basson & Moe 1996: 924) with respect to the "...confused status of this species".

DICTYOTA J.V. Lamouroux 1809

dichotoma (Hudson) J.V. Lamouroux*spiralis* Montagne[*Dilophus spiralis* (Montagne) G. Hamel][*Dictyota ligulata* Kützinger]

PADINA Adanson 1763

pavonica (Linnaeus) Thivy[*Fucus pavonicus* Linnaeus][*Padina pavonia* J.V. Lamouroux]

TAONIA J. Agardh 1848

atomaria (Woodward) J. Agardh*sandriana* (Zanardini) P.C. Silva[*Ectocarpus sandrianus* Zanardini][*Giffordia sandriana* (Zanardini) G. Hamel]*secunda* (Kützinger) P.C. Silva[*Ectocarpus secundus* Kützinger][*Giffordia secunda* (Kützinger) Batters]

POGOTRICHUM Reinke 1892

filiforme Reinke[*Litosiphon filiformis* (Reinke) Batters]

PYLAIELLA Bory de Saint-Vincent 1823

Note: As "*Pilayella*" in Guiry (1997) and others; see Silva *et al.* (1999) regarding nomenclatural conservation of the orthography "*Pylaiella*".*littoralis* (Linnaeus) Kjellman

ECTOCARPALES

ACINETOSPORACEAE

ACINETOSPORA Bornet 1891

crinita (Carmichael) Sauvageau[*Acinetospora pusilla* (A.W. Griffiths ex Harvey) De Toni]

FELDMANNIA G. Hamel 1939

irregularis (Kützinger) G. Hamel[*Ectocarpus irregularis* Kützinger]*lebelii* (J.E. Areschoug ex P.L. Crouan & H.M. Crouan) G. Hamel[*Ectocarpus lebelii* J.E. Areschoug ex P.L. Crouan & H.M. Crouan]

Note: Requires confirmation as a species present in the area (see Guiry, 1978).

padinae (Buffham) G. Hamel[*Ectocarpus padinae* (Buffham) Sauvageau]*paradoxa* (Montagne) G. Hamel[*Feldmannia globifera* (Kützinger) G. Hamel][*Ectocarpus globifer* Kützinger]*simplex* (P.L. Crouan & H.M. Crouan) G. Hamel[*Ectocarpus simplex* P.L. Crouan & H.M. Crouan]

HINCKSIA J.E. Gray 1864

fenestrata (Harvey ex Berkeley) P.C. Silva[*Ectocarpus fenestratus* Harvey ex Berkeley][*Giffordia fenestrata* (Harvey ex Berkeley) Batters]*granulosa* (J.E. Smith) P.C. Silva[*Ectocarpus granulatus* (J.E. Smith) C. Agardh][*Giffordia granulosa* (J.E. Smith) G. Hamel]*hincksiae* (Harvey) P.C. Silva[*Ectocarpus hincksiae* Harvey][*Giffordia hincksiae* (Harvey) G. Hamel]*mitchelliae* (Harvey) P.C. Silva[*Ectocarpus mitchelliae* Harvey][*Giffordia mitchelliae* (Harvey) G. Hamel]*ovata* (Kjellman) P.C. Silva[*Ectocarpus ovatus* Kjellman][*Giffordia ovata* (Kjellman) Kylin]

CHORDARIACEAE

ACROTHRIX Kylin 1907

gracilis Kylin[*Acrothrix norvegica* Levring]

ASPEROCOCCUS J.V. Lamouroux 1813

bullosus J.V. Lamouroux[*Asperococcus turneri* (Dillwyn ex J.E. Smith) W.J. Hooker]*compressus* A.W. Griffiths ex W.J. Hooker*fistulosus* (Hudson) W.J. Hooker[*Hecatonema reptans* (Kjellman) Kylin *nom. illeg.*][*Ectocarpus repens* Reinke]*scaber* Kuckuck

BOTRYTELLA Bory de Saint-Vincent 1822

micromora Bory de Saint-Vincent[*Sorocarpus uvaeformis* (Lyngbye) Pringsheim][*Sorocarpus micromorus* (Bory de Saint-Vincent) P.C. Silva]Note: As *Sorocarpus micromorus* in Guiry (1997); see Kornmann & Sahling (1988) and Wynne (1998).

BUFFHAMIA Batters 1895

speciosa Batters

CHILIONEMA Sauvageau 1898

hispanicum (Sauvageau) R.L. Fletcher[*Ascocyclus hispanicus* Sauvageau][*Hecatonema hispanicum* (Sauvageau) Loiseaux]*ocellatum* (Kützinger) Kornmann[*Chilionema nathaliae* Sauvageau]Note: This entity may be a phase in the life history of an *Asperococcus*, probably *A. fistulosus* (see Fletcher, 1987: 197).

CHORDARIA C. Agardh 1817

flagelliformis (O.F. Müller) C. Agardh

CLADOSIPHON Kützinger 1843

contortus (Thuret) Kylin[*Castagnea contorta* Thuret]*zosteriae* (J. Agardh) Kylin[*Castagnea zosteriae* (J. Agardh) Thuret]

- CORYNOPHLEA Kützing 1843
crispa (Harvey) Kuckuck
 [Leathesia *crispa* Harvey]
- CYLINDROCARPUS P.L. Crouan & H.M. Crouan 1851
microscopicus P.L. Crouan & H.M. Crouan
- DICHOSPORANGIUM Hauck 1884
chordariae Wollny
 [Streblonema *chordariae* (Wollny) A.D. Cotton, *nom. illeg.*]
- DICTYOSIPHON Greville 1830
 Note: Records of *Dictyosiphon ekmanii* from Britain (e.g., Newton, 1931) require confirmation.
chordarius J.E. Areschoug
 [Dictyosiphon *mesogloia* J.E. Areschoug]
 [Gobia *baltica* (Gobi) Reinke]
foeniculaceus (Hudson) Greville
 [Dictyosiphon *hippuroides* (Lyngbye) Kützing]
- ELACHISTA Duby 1830
flaccida (Dillwyn) Fries
fucicola (Velley) J.E. Areschoug
 [Elachista *grevillei* Arnott ex Harvey]
scutulata (J.E. Smith) Duby
stellaris J.E. Areschoug
- EUDESME J. Agardh 1882
virescens (Carmichael ex Berkeley) J. Agardh
 [Castagnea *virescens* (Carmichael ex Berkeley) Thuret]
- GIRAUDIA Derbès & Solier 1851
sphacelarioides Derbès & Solier
- HALOTHRIX Reinke 1888
lumbricalis (Kützing) Reinke
- HECATONEMA Sauvageau 1898
terminale (Kützing) Kylin
 [Ectocarpus *terminalis* Kützing]
 [Hecatonema *maculans* (F.S. Collins) Sauvageau]
 Note: Includes *Hecatonema maculans* in Guiry (1997). This entity probably represents a mixture of genotypes, with some culture studies showing an independent life history, whilst others indicate that it is connected to *Asperococcus/Punctaria* (see Fletcher, 1987: 204).
- HERPONEMA J. Agardh 1882
solitarium (Sauvageau) G. Hamel
 [Ectocarpus *solitarius* Sauvageau]
valiantei (Bornet ex Sauvageau) G. Hamel
 [Ectocarpus *valiantei* Bornet ex Sauvageau]
velutinum (Greville) J. Agardh
 [Ectocarpus *velutinus* (Greville) Kützing]
- ISTHMOPLEA Kjellman 1877
sphaerophora (Carmichael ex Harvey) Kjellman
- KUETZINGIELLA Kornmann 1956
battersii (Bornet ex Sauvageau) Kornmann
 [Ectocarpus *battersii* Bornet ex Sauvageau]
holmesii (Batters) Kornmann
 [Ectocarpus *holmesii* Batters]

- LAMINARIOCOLAX Kylin 1947
aecidioides (Rosenvinge) Burkhardt & Peters
 [Gononema *aecidioides* (Rosenvinge) P.M. Pedersen]
 [Myrionema *aecidioides* (Rosenvinge) Sauvageau]
 Note: As *Gononema aecidioides* in Guiry (1997); see Burkhardt & Peters (1998).
tomentosoides (Farlow) Kylin
 [Ectocarpus *tomentosoides* Farlow]
- LEATHESIA S.F. Gray 1821
difformis (Linnaeus) J.E. Areschoug
 [Leathesia *tuberiformis* (J.E. Smith) S.F. Gray]
- LEBLONDIELLA G. Hamel 1939
densa (Batters) G. Hamel
 [Myriotrichia *densa* Batters]
- LEPTONEMATELLA P.C. Silva 1959
fasciculata (Reinke) P.C. Silva
 [Leptonema *fasciculatum* Reinke]
- LIEBMANNIA J. Agardh 1842
leveillei J. Agardh
 [Mesogloia *leveillei* (J. Agardh) Meneghini]
- LITOSIPHON Harvey 1849
laminariae (Lyngbye) Harvey
 [Streblonema *volubile* (P.L. Crouan & H.M. Crouan) Thuret]
 [Litosiphon *hibernicus* (T. Johnson) Batters]
 [Litosiphon *pusillus* (Carmichael ex W.J. Hooker) Harvey]
- MESOGLOIA C. Agardh 1817
lanosa P.L. Crouan & H.M. Crouan
vermiculata (J.E. Smith) S.F. Gray
- MICROCORYNE Strömfelt 1888
ocellata Strömfelt
- MICROSPONGIUM Reinke 1888
gelatinosum Reinke
 Note: Inadvertently excluded from Guiry (1997).
globosum Reinke
 [Myrionema *polycladum* Sauvageau]
 [Hecatonema *globosum* (Reinke) Batters]
immersum (Levring) P.M. Pedersen
 [Streblonema *immersum* Levring]
- MIKROSYPHAR Kuckuck 1897
polysiphoniae Kuckuck
porphyrae Kuckuck
- MYRIACTULA Kuntze 1898
areschougii (P.L. Crouan & H.M. Crouan) G. Hamel
 [Myriactis *areschougii* (P.L. Crouan & H.M. Crouan) Batters]
chordae (J.E. Areschoug) Levring
 [Elachista *stellaris* var. *chordae* J.E. Areschoug]
clandestina (P.L. Crouan & H.M. Crouan) Feldmann
 [Elachista *clandestina* P.L. Crouan & H.M. Crouan]
 [Ectocarpus *clandestinus* (P.L. Crouan & H.M. Crouan) Sauvageau]
haydenii (Gatty) Levring
 [Myriactis *haydenii* (Gatty) Batters]

- rivulariae* (Suhr) Feldmann
[*Myriactis pulvinata* Kützing]
- stellulata* (Harvey) Levring
[*Myriactis stellulata* (Harvey) Batters]
- MYRIOCLADIA J. Agardh 1841
lovenii J. Agardh
tomentosa P.L. Crouan & H.M. Crouan
- MYRIONEMA Greville 1827
corunnae Sauvageau
liechtensternii Hauck
[*Hecatonema liechtensternii* (Hauck) Batters]
magnusii (Sauvageau) Loiseaux
Note: See Fletcher (1987: 111). Probably a life-history phase of another species.
orbiculare J. Agardh
[*Ascocyclus orbicularis* (J. Agardh) Kjellman]
Note: Probably a life history phase of another species.
papillosum Sauvageau
strangulans Carmichael ex Greville
- MYRIOTRICHIA Harvey 1834
clavaeformis Harvey
[*Streblonema sphaericum* (Derbès & Solier) Thuret ex Le Jolis]
[*Myriotrichia filiformis* Harvey]
[*Myriotrichia repens* Hauck]
Note: Inadvertently excluded from Guiry (1997). *Myriotrichia repens* is included in synonymy on the authority of Fletcher (1987).
- PETROSPONGIUM Nägeli ex Kützing 1858
berkeleyi (Greville) Nägeli ex Kützing
[*Cylindrocarpus berkeleyi* (Greville) P.L. Crouan & H.M. Crouan]
- PHAEOSTROMA Kuckuck 1893
pustulosum Kuckuck
[*Phaeostroma prostratum* (Gran) Kuckuck]
[*Streblonema aequale* Oltmanns]
- PHYCOCELIS Strömfelt 1888
crouaniorum Athanasiadis
[*Chilionema reptans* (P.L. Crouan & H.M. Crouan) Sauvageau]
[*Hecatonema reptans* Sauvageau]
Note: As *Chilionema reptans* in Guiry (1997); see Athanasiadis (1996b: 178, as *Phycocelis crouani*). M.J. Wynne (pers. comm.) points out that as the epithet commemorates the brothers Crouan it should be in the plural rather than in the singular as employed by Athanasiadis (1996b).
foecunda Strömfelt
[*Ascocyclus foecundus* (Strömfelt) Reinke]
[*Ascocyclus saccharinae* A.D. Cotton]
[*Hecatonema foecundum* (Strömfelt) Loiseaux]
[*Chilionema foecundum* (Strömfelt) R.L. Fletcher]
Note: As *Chilionema foecundum* in Guiry (1997); see Athanasiadis (1996b: 178).
- PROTECTOCARPUS Kuckuck ex Kornmann 1955
speciosus (Børgesen) Kuckuck ex Kornmann
[*Hecatonema speciosum* (Børgesen) A.D. Cotton]

- PUNCTARIA Greville 1830
crispata (Kützing) Batters
latifolia Greville
plantaginea (Roth) Greville
tenuissima (C. Agardh) Greville
[*Desmotrichum undulatum* (J. Agardh) Reinke]
[*Punctaria undulata* J. Agardh]
[*Punctaria baltica* (Kützing) Batters]
- SAUVAGEAUGLOIA G. Hamel ex Kylin 1940
griffithsiana (A.W. Griffiths ex Harvey) G. Hamel ex Kylin
[*Mesogloia griffithsiana* A.W. Griffiths ex Harvey]
[*Sauvageaugloia chordariaeformis* (P.L. Crouan & H.M. Crouan) Kylin]
Note: Includes *Sauvageaugloia chordariaeformis* in Guiry (1997).
- SPERMATOCHNUS Kützing 1843
paradoxus (Roth) Kützing
- SPHAEROTRICHIA Kylin 1940
divaricata (C. Agardh) Kylin
[*Chordaria divaricata* C. Agardh]
- SPONGONEMA Kützing 1849
tomentosum (Hudson) Kützing
[*Ectocarpus tomentosus* (Hudson) Lyngbye]
[*Ectocarpus luteolus* Sauvageau]
- STICTYOSIPHON Kützing 1843
adriaticus Kützing
griffithsianus (Le Jolis) Holmes & Batters
[*Phloeospora brachiata* Bornet]
soriferus (Reinke) Rosenvinge
tortilis (Ruprecht) Reinke
- STILOPHORA J. Agardh 1841
tenella (Esper) P.C. Silva
[*Stilophora rhizodes* (C. Agardh) J. Agardh]
- STILOPSIS Kuckuck 1929
lejolisii (Thuret) Kuckuck & Nienburg ex G. Hamel
[*Spermatochnus lejolisii* (Thuret) Reinke]
- STREBLONEMA Derbès & Solier 1851
breve (Sauvageau) De Toni
[*Ectocarpus brevis* Sauvageau]
fasciculatum Thuret
helophorum (Rosenvinge) Batters
infestans (H. Gran) Batters
[*Endodictyon infestans* H. Gran]
intestinum (Reinsch) Batters
parasiticum (Sauvageau) Levring
[*Ectocarpus parasiticus* Sauvageau]
stilophorae (P.L. Crouan & H.M. Crouan) Kylin
[*Ectocarpus stilophorae* P.L. Crouan & H.M. Crouan]
tenuissimum Hauck
zanardinii (P.L. Crouan & H.M. Crouan) De Toni

STREPSITHALIA Bornet ex Sauvageau 1896

buffhamiana (Batters) Batters[*Streblonema buffhamiana* Batters]

STRIARIA Greville 1828

attenuata (C. Agardh) Greville

ULONEMA Foslie 1893

rhizophorum Foslie

ECTOCARPACEAE

ECTOCARPUS Lyngbye 1819

fasciculatus Harvey[*Ectocarpus landsburgii* Harvey]*siliculosus* (Dillwyn) Lyngbye[*Ectocarpus penicillatus* (C. Agardh) Kjellman][*Ectocarpus confervoides* (Roth) Le Jolis]

SCYTOSIPHONACEAE

COLPOMENIA (Endlicher) Derbès & Solier 1851

peregrina (Sauvageau) Hamel

COMPSONEMA Kuckuck 1899

microspogium (Batters) Kornmann[*Ectocarpus microspogius* Batters]*minutum* (C. Agardh) Kornmann[*Ectocarpus minutus* C. Agardh]*saxicolum* (Kuckuck) Kornmann[*Myrionema saxicolum* Kuckuck]

PETALONIA Derbès & Solier 1850

fascia (O.F. Müller) Kuntze[*Phyllitis fascia* (O.F. Müller) Kützing]*filiformis* (Batters) Kuntze[*Phyllitis filiformis* Batters]*zosterifolia* (Reinke) Kuntze[*Phyllitis zosterifolia* Reinke]

SCYTOSIPHON C. Agardh 1820

dotyi M.J. Wynne*lomentaria* (Lyngbye) Link[*Scytosiphon pygmaeus* Reinke]

SORAPION Kuckuck 1894

simulans Kuckuck[*Lithoderma simulans* (Kuckuck) Batters]*kjellmanii* (Wille) RosenvingeNote: May be conspecific with *Sorapion simulans* (Fletcher, 1987: 90) or a phase in the life-history of *Porterinema fluviatile* (Porter) Waern (Pedersen, 1981).

STRAGULARIA Strömfelt 1886

clavata (Harvey) G. Hamel[*Ralfsia clavata* (Harvey) P.L. Crouan & H.M. Crouan][*Ralfsia disciformis* P.L. Crouan & H.M. Crouan]Note: In the area, this entity appears generally to be a phase in the life history of *Petalonia fascia* but there are reports of a direct life history (see Fletcher, 1987: 257).*spongiocarpa* (Batters) G. Hamel[*Ralfsia spongiocarpa* Batters]

SYMPHYOCARPUS Rosenvinge 1893

strangulans Rosenvinge

RALFSIALES

RALFSIACEAE

PETRODERMA Kuckuck 1897

maculiforme (Wollny) Kuckuck

PSEUDOLITHODERMA Svedelius ex Kjellman & Svedelius 1910

extensum (P.L. Crouan & H.M. Crouan) S. Lund[*Lithoderma extensum* (P.L. Crouan & H.M. Crouan) G. Hamel]*roscoffense* Loiseaux

RALFSIA Berkeley 1843

Note: *Ralfsia pusilla* (Strömfelt) Batters was excluded from the flora of the area by Fletcher (1987: 244).*verrucosa* (J.E. Areschoug) J.E. Areschoug

CUTLERIALES

CUTLERIACEAE

CUTLERIA Greville 1830

multifida (J.E. Smith) Greville[*Aglaozonia parvula* (Greville) Zanardini][*Aglaozonia reptans* (P.L. Crouan & H.M. Crouan) Kützing]

ZANARDINIA Zanardini 1841

typus (Nardo) G. Furnari[*Zanardinia prototypus* (Nardo) Nardo, *nom. illeg.*][*Zanardinia collaris* (Montagne) P.L. Crouan & H.M. Crouan]Note: As *Zanardinia prototypus* in Guiry (1997); see Furnari, Cormaci & Serio (1999).

SPOROCHNALES

SPOROCHNACEAE

CARPOMITRA Kützing 1843

costata (Stackhouse) Batters

SPOROCHNUS C. Agardh 1817

pedunculatus (Hudson) C. Agardh

TILOPTERIDALES

TILOPTERIDACEAE

HAPLOSPORA Kjellman 1872

globosa Kjellman

TILOPTERIS Kützing 1849

mertensii (Turner) Kützing

DESMARESTIALES

ARTHROCLADIACEAE

ARTHROCLADIA Duby 1830
villosa (Hudson) Duby

DESMARESTIACEAE

DESMARESTIA J.V. Lamouroux 1813
aculeata (Linnaeus) J.V. Lamouroux
dresnayi J.V. Lamouroux ex Leman
ligulata (Lightfoot) J.V. Lamouroux
viridis (O.F. Müller) J.V. Lamouroux

LAMINARIALES

ALARIACEAE

ALARIA Greville 1830
esculenta (Linnaeus) Greville

UNDARIA Suringar 1873
pinnatifida (Harvey) Suringar

CHORDACEAE

CHORDA Stackhouse 1797
filum (Linnaeus) Stackhouse

HALOSIPHONACEAE

HALOSIPHON Jaasund 1957
tomentosus (Lyngbye) Jaasund
[*Chorda tomentosa* Lyngbye]
Note: As *Chorda tomentosa* in Guiry (1997); see Peters (1998).

LAMINARIACEAE

LAMINARIA J.V. Lamouroux 1813
digitata (Hudson) J.V. Lamouroux
hyperborea (Gunnerus) Foslie
[*Laminaria cloustoni* Edmonston]
ochroleuca Bachelot de la Pylaie
saccharina (Linnaeus) J.V. Lamouroux
Note: *Laminaria longricruris* Bachelot de la Pylaie is listed in Guiry (1997) following Morton (1994); confirmation of its occurrence in the area is required.

PHYLLARIACEAE

SACCORHIZA Bachelot de la Pylaie 1829
polyschides (Lightfoot) Batters
[*Saccorhiza bulbosa* (Hudson) Bachelot de la Pylaie]

FUCALES

CYSTOSEIRACEAE

BIFURCARIA Stackhouse 1809
bifurcata R. Ross
[*Bifurcaria tuberculata* (Hudson) Stackhouse]
CYSTOSEIRA C. Agardh 1820
baccata (S.G. Gmelin) P.C. Silva
[*Cystoseira fibrosa* (Hudson) C. Agardh]
foeniculacea (Linnaeus) Greville
humilis Schousboe ex Kützting
Note: *Cystoseira humilis* var. *myriophylloides* (Sauvageau) J.H. Price & D.M. John occurs on the south-west coast of England (*fide* J. Feldmann via G.T. Boalch; see Parke & Dixon (1976: 562, 563, as *Cystoseira myriophylloides* Sauvageau).
nodicaulis (Withering) M. Roberts
[*Cystoseira granulata* C. Agardh]
tamariscifolia (Hudson) Papenfuss
[*Cystoseira ericoides* (Linnaeus) C. Agardh]
HALIDRYS Lyngbye 1819
siliquosa (Linnaeus) Lyngbye

FUCACEAE

ASCOPHYLLUM Stackhouse 1809
nodosum (Linnaeus) Le Jolis
[*Ascophyllum mackayi* (Turner) Holmes & Batters]
Note: *Ascophyllum nodosum* var. *mackayi* (Turner) Børgesen & Jónsson is generally regarded as an ecotype but is included here because of its legal status in Britain as a named entity in conservation legislation (as *Ascophyllum nodosum* ead. *mackaii*). The epithet "mackaii", named for James Townsend Mackay (1775-1862), is here corrected to "mackayi" to be consistent with "harveyi" and "hennedyi".
FUCUS Linnaeus 1753
ceranoides Linnaeus
cottonii M.J. Wynne & Magne
[*Fucus muscoides* (A.D. Cotton) Feldmann & Magne *nom. illeg.*]
distichus Linnaeus
[*Fucus anceps* Harvey & Ward ex Carruthers]
[*Fucus distichus* subsp. *anceps* (Harvey & Ward ex Carruthers) H.T. Powell]
evanescens C. Agardh
[*Fucus distichus* subsp. *evanescens* (C. Agardh) H.T. Powell]
[*Fucus distichus* subsp. *edentatus* (C. Agardh) H.T. Powell]
serratus Linnaeus
spiralis Linnaeus
vesiculosus Linnaeus
PELVETIA Decaisne & Thuret 1845
canaliculata (Linnaeus) Decaisne & Thuret
HIMANTHALIACEAE
HIMANTHALIA Lyngbye 1819
elongata (Linnaeus) S.F. Gray
[*Himantalia lorea* (Linnaeus) Lyngbye]

SARGASSACEAE

SARGASSUM C. Agardh 1820

muticum (Yendo) Fensholt

Note: Unattached species of *Sargassum* reported as cast-up plants in the 19th century are excluded (e.g., Harvey, 1849).

INCERTAE SEDIS

PILINIA Kützing 1843

rimosa Kützing[*Waerniella lucifuga* (Kuckuck) Kylin]

Note: Listed as *Waerniella lucifuga* in Guiry (1996); see Hooper, South & Nielsen (1987).

The taxonomic position of the genus within the Phaeophyceae is currently uncertain.

CHORISTOCARPACEAE

CHORISTOCARPUS Zanardini 1860

tenellus ZanardiniXANTHOPHYCEAE
VAUCHERIALES

VAUCHERIAEAE

VAUCHERIA A.P. De Candolle 1801

arcassonensis P.J.L. Dangeard*compacta* (F.S. Collins) F.S. Collins ex W.R. Taylor*coronata* Nordstedt*dichotoma* (Linnaeus) Martius[*Vaucheria pyrifer* Kützing]*erythrospora* T.A. Christensen*intermedia* Nordstedt*litorea* C. Agardh*longicaulis* Hoppaugh

Note: Note included in Christensen (1987); subsequently reported by the late T. Christensen.

medusa T.A. Christensen*minuta* Blum & Conover*piloboloides* Thuret*sescuplicaria* T.A. Christensen*subsimplex* P.L. Crouan & H.M. Crouan[*Vaucheria sphaerospora* Nordstedt]*synandra* Woronin*velutina* C. Agardh[*Vaucheria thuretii* Woronin]*vipera* Blum

Note: Christensen (1987: 30) notes that there are no authenticated records of this species in the area, although an illustration in Carter (1933: 151, as *Vaucheria woroniniana*) of material from Essex in his opinion resembles this species.

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Atlas