

THE ALGAE OF SOMERSET

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A general account of the Botany of Somerset was given in the *Victoria County History of Somerset* which was published in 1906. Since that time the flowering plants and vascular cryptogams have been dealt with by Murray,¹⁶ Marshall¹⁷ and many others in the Botanical Section Reports,² in Bristol Botany,²¹ so that a fairly accurate and full account of their distribution in Somerset is known. The occurrence and distribution in Somerset of the mosses,²⁷ liverworts²⁸ and lichens²⁹ have been dealt with. Even the Mycetozoa occurring in the county have been listed^{12 & 33} but, as these organisms are on the border-line between animals and plants, it is very doubtful whether they should be mentioned in regard to Somerset botany. The British Mycological Society has organised several forays in our county and, as a result, a large number of fungi have been recorded as Somersetshire plants in their *Transactions*.⁵

The algae have been very inadequately studied since the *V.C.H.*²⁶ was published. Mention is made there of the work done by Miss Isabella Gifford in the middle portion of the 19th century. She devoted a great deal of time and energy in studying the marine algae about Minehead. Her collections, which are now in the Taunton Museum, were examined by E. M. Holmes and an account with revision of some names was given by him in the *V.C.H.*²⁶ in which he referred to the work done by Dr. G. K. Thwaites and Mr. C. E. Broome in the Bath neighbourhood, and by Dr. H. F. Parsons in the Frome and Beckington areas. A few species collected by the last-named are in the herbarium of Taunton Castle. Since that time (1906) no thorough systematic work on the Somerset algae has been published. Some sporadic work has been done by Miss Bracher,³ Mr. O. V. Pullen and myself, whilst Prof. Lily Newton's intensive work on the marine algae is shown in her book on British Seaweeds¹⁹ and in many articles to scientific journals. For help in my own sporadic work on the algae I am especially indebted to Mr. G. T. Harris, the Devon algologist, who resided at Buckrell near Honiton. He devoted much time to the examination of the algae of the Blackdown hills, chiefly on the Devonshire side, though sometimes he strayed over the border into Somerset. He kindly gave me lists of his finds besides helping me with the identification of some desmids and diatoms. For similar help in the determination of other algae my thanks are due to Prof. G. S. West, Prof. Fritsch, Prof. Lily Newton and Dr. Nellie Carter.

My algal work has been chiefly in regard to scholastic material or ecological studies so that I have had to rely to a great extent on

the work of others who were definite algal collectors and determiners. The following list is largely a record of other people's work and my share in it has been largely editorial. The county provides many varied and excellent habitats for the algae and there are probably many species in inland situations which have not been mentioned in the list. The marine algae are fairly represented but there are some omissions of species which are probably present, even though the influx of the fresh water from the Severn, Avon, Usk and Wye prevents a full representation of marine species. In E. Somerset they are relatively fewer than in W. Somerset and even at Minehead they are not so numerous as on the more saline waters of the Devon coast.

In the following list, where no collector's name is given, I am responsible. 5 and 6 refer to the botanical vice-counties, 5 to South (or West) Somerset, 6 to North (or East) Somerset.

SYSTEMATIC LIST

Class CHLOROPHYCEAE. Subclass ISOKONTAE

Order Volvocales. Family Sphaerellaceae.

Sphaerella lacustris (Girod.) Wittr.—*Haematococcus pluvialis*. Flot.

5. Common about Taunton, etc. 6. Common about Bruton, Wincanton, Catcott, etc.

Family Volvocaceae.

Chlamydomonas pulvisculus Ehrenb.—*C. ehrenbergii* Girod.

5. Common about Taunton, Pickney, Selworthy, etc.
6. Catcott.

C. debaryana Gorosch. 5. Taunton. Staplegrove (in water-butt).

Gonium sociale (Dug.) Warm.—*G. lacustre* West.

5. Staplegrove.

Pandorina morum (Müll.) Bory. 5. Taunton, Staplegrove, Halse, Norton, Pickney.

Eudorina elegans Ehrh. 5. Pickney near Taunton. Stoke St. Mary.

Volvox aureus Ehrh. 5. Combe Sydenham.

Order Tetrasporales.

Family Palmellaceae.

Palmella mucosa Kutz. 5. Taunton, Staplegrove, Bicknoller Combe, Hodder's C., Selworthy, Brendon Hill Incline.

6. Bruton, Shipham.

Coccomyxa subellipsoides Acton. With *Botrydina vulgaris*.

5. Exmoor, etc. 6. Shapwick, etc.

Gloeocystis gigas (Kutz.) Lagerh. *G. ampla* (Kutz.) Rabenh.

5. Common Taunton, Bagborough, Wambrook, Brendon Hill, etc.

G. vesiculosa Naeg. 5. Selworthy at 700 feet. 6. Blackdown, Mendip (Pullen,²⁰), Shapwick.

Dactylococcus braunii Lagerh. 5. Horner Combes.

Botrydina vulgaris Bréb. Common and considered to be a primitive lichen.

Family Tetrasporae.

Tetraspora gelatinosa (Vauch.) Desv. 5 Taunton.

T. bullosa (Roth.) Ag. See **Monostroma bullosum** (Roth.) Wittr. on page 10.

T. lubrica Ag. 5. Staplegrove. 6. Berkeley (Parsons,²⁰).

T. lacustris Lemm. 5. Staplegrove.

Apicystis brauniana Naeg. 5. Taunton, Norton.

Order Chlorococcales (Protococcales).

Family Chlorococcaceae.

Chlorococcum humicolum (Naeg.) Rabenh. 5. Taunton district. 6. Black Down, Mendip (Pullen²³) Bruton.

C. infusionum (Schrank.) Menegh. 5. Staplegrove.

Trebouxia humicola (Treboux) Fritsch. 5. Taunton, etc. 6. Bruton, etc.

Characium subulatum A. Br. 6. Catcott Burtle.

C. sieboldi A. Br. 5. Taunton district.

C. pringsheimii A. Br. 5. Taunton, Pickney. 6. Catcott Burtle.

C. tenue Herm. 5. Taunton.

C. heterorhynchum Reinsch. 5. Taunton, Selworthy.

Family Hydrodictyaceae.

Pediastrum tetras (Ehren.) Ralfs.=*P. ehrenbergii* A. Br. 5. Taunton. 6. Bruton.

Family Eremosphaeraceae.

Eremosphaera viridis de Bary. 5. Taunton, Norton, Bathpool, Widcombe moor. 6. Pool at Lisbury, Bruton, Catcott.

Family Chlorellaceae.

Chlorella vulgaris (Beij.) A. Br. In *Hydra viridis*, etc. 5. Staplegrove, Taunton. 6. Bruton.

Trochiscia aspera (Reinsch.) Hansg. 5. Taunton. On wet calciferous rock, Kingston. 6. Black Down, Mendip (Pullen), Catcott.

Family Oocystaceae.

Oocystis solitaria With. 5. Taunton, Buckland Hill, Blackdowns, Simonsbath.

O. parva West. 5. Staplegrove.

O. elliptica West. 5. Staplegrove, Castle Neroche, Street Ash, Wambrook, Minehead. 6. Berrow, Catcott Burtle.

Family Selenastraceae.

Dactylococcus infusionum Naeg. is merely a stage in the life-history of *Scenedesmus obliquus*. Bruton.

D. bicaudatus A. Br.=*D. caudatus* Hansg. 5. Taunton.

D. dispar W. and G. S. West. 5. Cheddon Fitzpaine.

Ankistrodesmus falcatus (Corda) Ralfs.=*Rhaphidium polymorphum* var. *falcatum* Rab. 5. Selworthy, Horner Water, Wilmersham, Taunton. 6. Bruton, Catcott. var. *acicularis* (A. Br.) G. S. West. 5. Taunton. 6. Bruton. var. *spirilliformis* G. S. West. 5. Bathpool.

Family Dictyosphaeriaceae.

Dictyosphaeria pulchellum Wood. 5. Staplegrove.

Westella botyroides De Wildem.=*Tetracoccus b.* W. West. 5. Winsford Hill at 1,000 feet.

Family Coelastraceae.

Scenodesmus obliquus (Turp.) Kutz.=*S. acutus* Meyen. 5. Bishop Lydeard. 6. Bruton.

S. quadricaudatus (Turp.) Bréb. 5. 6. Catcott Burtle.

Crucigenia quadrata Morrens. 5. Taunton. 6. Ditches at Catcott Burtle.

C. rectangularis (Naeg.) Gray. 5. Taunton. 6. Shapwick.

Coelastrum sphaericum Naeg. 5. Taunton, Staplegrove.

Family Pleurococcaceae.

Pleurococcus vulgaris auct. mult., Naeg.=*P. naegelii* Chod. =*Protococcus viridis* Ag. Very common on trunks of trees, etc., all over the county.

P. angulare (Corda) Meneg. 6 Bruton.

P. rufescens (Kutz.) Bréb. is probably a species of *Chlorococcum*. Order Conjugatales (Zygnemales). This order is usually given as Conjugatae from Conjugata which was used as a generic name for *Spirogyra* by Vauch. Akontae could be used as a subclass name but it seems better to discard the subclasses and place the species of Conjugatales under two families, Desmidiaceae (including Gonatozygonaceae and Mesotaeniaceae) and Zygnemaceae (including Mougeotiaceae).

Family Desmidiaceae. There are many genera in this family and some genera have many British species, e.g. *Cosmarium* has over 200 species which have been recorded as British. Little work has been done in Somerset in regard to specific determination. Many species listed have no locality given and owe their inclusion to a list made by G. T. Harris (H.) of those collected on the Blackdowns on the borders of Somerset and Devon.^{13 & 14}

Closterium moniliferum (Bory.) Ehrh. 5. Taunton, Blackdowns. 6. Bruton, etc.

C. gracile Bréb. 5. Frequent on the Blackdowns and *v. tenue* West is common.

- C. ehrenbergii* Menegh. 5. Frequent (H.). Taunton, etc.
C. pronum Bréb. 6. Catcott.
C. turgidum Ehren. 5. Pickney near Taunton. 6. Catcott.
C. aciculare Tuffen West. 6. Catcott.
C. intermedium Ralfs. 5. Near Beacon Hill, Blackdowns (H.).
C. parvulum Naeg., *C. striolatum* Ehren., and *C. lunula* (Müll.) Nitsch. are very common on the Blackdowns; *C. rostratum* Ehren and its var. *brevirostratum* West., *C. costatum* Corda., *C. juncidum* Ralfs. and its var. *brevior* Roy. are common on the Blackdowns. *C. diana* Ehren., *C. abruptum* West., *C. attenuatum* Ehren., *C. cynthia* DN., *C. jenneri* Ralfs., *C. didymotocum* Corda, *C. lineatum* Ehrh., *C. leiblenii* Kutz., *C. venus* Kutz. are frequent on the Blackdowns. *C. acutum* (Lyngb.) Bréb., *C. cornii* Ehren., *C. pritchardianum* Arch. and *C. siliqua* W. and G. S. West also occur (H.).
- Penium navicula* Bréb. 5. Common on the Blackdowns.
P. polymorphum Perty. 5. Blackdowns (H.). Widcombe Moor.
P. cuticulare W. and G. S. West, *P. libellula* (Focke) Norsdt., *P. cylindricum* (Ehr.) Bréb., *P. cucurbitinum* Biss., also occur on the Blackdowns. (H.).
- Docidium baculum* Bréb. 5. Frequent on the Blackdowns (H.).
Pleurotaenium ehrenbergii (Bréb.) DB. Very common (H.). Yarty Head.
- P. coronatum* (Bréb.) Rabh. 6 Catcott.
Tetremorus granulatus (Bréb.) Ralfs. *T. brebissoni* (Menegh.) Ralfs. 5. Very common, Blackdowns (H.). Widcombe Moor.
T. laevis (Kutz.) Ralfs. 5. Blackdowns (H.). Widcombe Moor.
- Euastrum ansatum* Ralfs. 5. Common on the Blackdowns (H.). Widcombe.
E. oblongum (Grev.) Ralfs. 5. Blackdowns (common) (H.). Widcombe Moor.
E. ventricosum Lund. 5. Widcombe Moor
E. insigne Hass 5. Widcombe Moor.
E. binale (Turp.) Ralfs. 5. Very common on the Blackdowns and its forms *secta* Turn., and *hians* West, are frequent (H.).
E. elegans (Bréb.) Kutz., *E. pectinatum* Bréb., *E. didella* (Turp.) Ralfs., *E. dubium* Nag., *E. montanum* W. and G. S. West, *E. crassum* (Bréb.) Kutz., and *E. denticulatum* (Kirch). Gray, are frequent on the Blackdowns (H.).
- Micrasterias crux-melitensis* (Ehrh.) Hass. 5. Widcombe Moor.
M. denticulata Bréb. Very common on the Blackdowns (H.). Widcombe.
M. truncata (Corda) Bréb. and *M. rotata* (Grev.) Ralfs. are very common on the Blackdowns whilst *M. papillifera* Bréb. is frequent (H.).

- Cosmarium cucumis** (Corda) Ralfs. 5. Very common on the Blackdowns. 6. Catcott Burtle.
- C. decedens** (Reinsch.) Rabh. var. *sinuosum* (Lund.) Racib. 5. Widcombe.
- C. margaritifera** Menegh. 5. Frequent on Blackdowns. 6. Catcott.
- C. pygmaeum** Arch. 5. Common on Blackdowns (H). 6. Catcott.
- C. botrytis** (Borr.) Menegh., **C. blytii** Wille, **C. brebissoni** Menegh., **C. cucurbita** Bréb., **C. difficile** Luckem, **C. spalero-stichum** Nordst., **C. sphagnicolum** W. and G. S. West, **C. sportella** Bréb., and **C. tinctum** Ralfs are common on the Blackdowns whilst **C. crenatum** Ralfs, **C. coelatum** Ralfs, **C. elegantissimum** form *minor* West, **C. impressulum** Elf., **C. ochthodes** Nordst., **C. pusillum** (Bréb.) Arch., **C. quadratum** (Gay) De Toni, **C. reniforme** (Ralfs) Arch., **C. subcrenatum** Hantzsch., **C. subcucumis** Schmid., **C. undulatum** Corda, **C. venustum** (Bréb.) Arch., **C. corni** Ehren., **C. pritchardianum** Arch. and **C. acutum** (Lyngb.) Bréb. are frequent.
- Xanthidium armatum** (Bréb.) Rab. Very common on Blackdowns (H.). 5. Widcombe bog.
- Arthodesmus incus** (Bréb.) Hass. Frequent on Blackdowns (H.)
- Staurastrum margaritaceum** (Ehr.) Menegh. 5. Frequent on the Blackdowns (H.). 6. Stoke Hill near Wells.²⁶
- S. pygmaeum** Bréb. Beacon Hill (H.). 5. Taunton.
- S. punctulatum** Bréb., and var. *kjellmanni* Wille. Common, Blackdowns (H.).
- S. dejectum** Bréb.—*Goniocystis mucronata* Hass. Common. Blackdowns.
- S. hirsutum** (Ehren.) Ralfs, **S. teliferum** Ralfs, **S. polytrichum** Perty are all common on the Blackdowns (H.).
- S. orbiculare** (Ehren.) Ralfs, and its var. *ralfsii* W. and G. S. West, **S. cyrtoceram** Bréb., **S. polymorphum** Bréb., **S. gracile** Ralfs, **S. apiculatum** Men., **S. capitulum** Bréb., **S. omeari** Arch., **S. meriana** Reins., and **S. reinschii** Roy are all frequent on the Blackdowns (H.).
- S. dilatatum** Ehren. and **S. controversum** Bréb. are rare on the Blackdowns but have been found on Beacon Hill near V.C.5.
- Spondylosium papillosum** W. and G. S. West. 5. Widcombe bog, Blackdowns.
- Hyalotheca dissiliens** (Sm.) Bréb. Very common in both 5 and 6. var. *hians* Wolle. 5. Common on the Blackdowns (H.).
- H. mucosa** (Dillw.) Ehrenb. 5. Frequent on the Blackdowns (H.).
- Desmidium cylindricum** Grev. 5. Frequent on the Blackdowns (H.).
- Gymnozyga moniliformis** Ehrenb. *Desmidium borneri* Ralfs. 5. Frequent on the Blackdowns (H.). Widcombe.

- Spirotaenia condensata** Bréb. 5. Frequent on the Blackdowns (H.). **S. obscura** Ralfs, **S. trabeculata** A. Br., **S. minuta** Thur., and **S. fusiformis** W. and G. S. West. Beacon Hill, Blackdowns (H.).
- Mesotaenium violascens** DB. 5. Rare on Blackdown Hills (H.). 6. Blackdown, Mendip (Pullen).
- Cylindrocystis brebissonii** Menegh. 5. Very common on Blackdowns (H.). Widcombe Moor.
- C. crassa** DB. 5. Frequent on Blackdowns (H.).
- Netrium digitus** (Ehrh.) Itzig and Rothe.=*Penium lamellosum* Kutz. 5. Widcombe. Castle Neroche. Near Wambrook. Selworthy. Very common on the Blackdowns, and var. *constrictum* W. and G. S. West is frequent (H.).
- N. oblongum** (DB.) Lütkem.=*Penium* o. DB. 5. Very common on Blackdowns (H.).
- N. interruptum** (Bréb.) Lutkem. 5. Common on the Blackdowns (H.).
- Roya obtusa** (Bréb.) W. and G. S. West. 5. Taunton. Frequent on the Blackdowns (H.).
- Gonatozygon brebissonii** DB. 5. Blackdowns (H.). Widcombe bog pool. 6. Catcott. var. *laeve* (Hilse) W. and G. S. West. 5. Widcombe.
- G. monotaenium** DB.=*G. ralfsii* DB. 5. Staplegrove.
- Family Zygnemaceae.
- Mougeotia scalaris** Hass. Common. 5. Taunton, Horner, Treborough, etc. 6. Bruton, Castle Cary, Catcott Burtle, etc.
- M. genuflexa** (Dillw.) Ag. 5. Frequent in Taunton district.
- M. parvula** Hass. Infrequent. 5. Taunton, Staplegrove (sometimes on damp earth), Widcombe in Sphagnum pool.
- M. recurva** (Hass.) De Toni. 6. Berrow.
- M. viridis** (Kutz.) Wittr. 5. Taunton, Curland, Castle Neroche.
- M. depressa** (Hass.) Wittr. 5. Infrequent, Taunton.
- M. gracillima** (Hass.) Wittr. 5. Taunton district.
- Zyogonium ericetorum** Kutz. 5. Frequent to abundant in moorland, Exmoor, Winsford Hill, Withypool. 6. Mendip.
- Zygnema pectinatum** (Vauch.) Ag. Frequent. 5. Taunton, Langford Heathfield, etc. 6. Bruton, Collingshays, etc.
- Z. insigne** (Hass.) Kutz. 5. Orchard Portman. 6. Compton Dundon.
- Z. stellinum** (Vauch.) Ag. Infrequent. 5. Taunton.
- Z. vaucherii** Ag. 5. Castle Neroche, Orchard Portman, Widcombe Moor; var. *subtile* (Rab.) Cooke. 5. Orchard Portman, Widcombe.
- Spirogyra bellis** Hass. 5. Orchard Portman.
- S. varians** (Hass.) Kutz. 5. Staplegrove.

- S. crassa* Kutz. 5. Staplegrove, Taunton.
S. jugalis Dillw. 5. Ilminster.
S. nitida (Dillw.) Link.=*S. princeps* (Vauch.) Cleve. 6. Frome (Parsons). Berrow.
S. majuscula Kutz. Frequent. 5. Taunton, Curland. 6. Bruton, Compton Dundon, Berrow.
S. tenuissima (Hass.) Kutz. Common. 5. Taunton, Orchard Portman, Milverton, Porlock, etc. 6. Bruton, etc.
S. inflata (Vauch.) Rab. 5. Taunton, Staplegrove (frequent).
S. quadrata Hass. 5. Taunton, Halse. 6. Bruton.
S. grevilleana (Hass.) Kutz.=*S. weberi* form *inaequalis* Cooke.
S. grevilleana (Hass.) Kutz.=*S. weberi* form *inaequalis* Cooke. 5. Bathpool (azygospores in June).
S. weberi Kutz. 5. Bathpool.
S. porticalis (Vauch.) Cleve. *S. quinina* (Ag.) Kutz. Common. 5. Taunton, Halse, Curland, etc. 6. Burton, Compton Dundon, etc. var. *decimina* Cooke. 5. Taunton. 6. Bruton. var. *rivularis* (Hass.) Cooke. 5. Orchard Portman.
S. cataeniformis (Hass.) Kutz.=*S. longata* var. *turpis* Cooke. Common. 5. Taunton district, Blackdowns, Treborough, Horner Combes, Triscombe.
S. longata (Vauch.) Kutz. Frequent. 5. Taunton district. 6. Bruton district.
S. communis (Hass.) Kutz. Frequent. 5. Taunton, Bathpool, Staplegrove. 6. Bruton, Catcott.
S. insignis (Hass.) Kutz. Frequent. 5. Taunton. 6. Catcott.
S. gracilis (Hass.) Kutz. Common. 5. Taunton (common with zygospores in June), etc. 6. Catcott Burtle, etc.
S. flavescens (Hass.) Rabenh. 5. Pool at Milverton. 6. Catcott.
S. spreeciana Rabenh. 5. Staplegrove.
S. calospora Cleve. 5. Stoke St. Mary. 6. Bruton.

Order Siphonales.

Family Vaucheriaceae.

- Vaucheria sessilis* (Vauch.) DC. Very common in both 5 and 6. var. *repens* (Hass.) 5. Staplegrove. var. *caespitosa* (Vauch.) Rabenh. 5. Norton, Orchard Portman, Horner Combes.
V. geminata (Vauch.) DC. 5. Taunton, Staplegrove, Orchard Pottman, Wiveliscombe, etc. 6. Harptree Combe.
V. ornithocephala Ag.=*V. setricea* Lyngb. 5. Near Kents, Exton.
V. hamata (Vauch.) Lyngb. 5. Washford (hedgebank). Taunton.
V. dichotoma (Lyngb.) (Ag.) 5. Canal at Taunton. 6. Catcott Burtle, Berrow.
V. terrestris Lyngb. 5. Taunton district with a polyandrous form having several antheridia below the terminal group of antheridia and oogonia.

Family Bryopsidaceae.

Bryopsis plumosa C. Ag. 5. Minehead Warren pool (Gifford, 1853).

Order Siphonocladales (Cladophorales).

Family Cladophoraceae.

Cladophora glomerata (L.) Kutz. Common in fresh water.
5. Taunton, etc.³² 6. R. Frome (Parsons, 1866, *V.C.H.*), Bruton, Wincanton, Shapwick.

C. flavescens Ag. 5. Taunton Canal, Trull.

C. fracta (Dillw.) Kutz. 6. Pool at Berrow (var. *marina* Hauck).

C. insignis Kutz. 6. Bath thermal water (Th. and Br.).

C. rupestris Kutz. 5. Minehead (G.1849 as *Conferva* r.).

C. utriculosa Kutz. 5. Minehead (G.1849 as *C. laetevirens* Harv.).

C. hirta Kutz. 5. Minehead (G.) as *Conferva flexuosa* Harv.

Chaetomorpha sutoria (Berk.) Rab.=*C. linum* (O. F. Mull.) Kutz. 5. Canal at Norton and Taunton.

C. aerea Kutz. 5. Minehead (Gifford, 1849 as *Conferva a.*).

C. melagonia Kutz. 5. Minehead (Gifford, 1849, confirmed Holmes).

Rhizoclonium hieroglyphicum Kutz. emend. Stock. Common. 5. Taunton, etc. 6. Bruton, Calcott Burtle, etc.

var. *riparium* (Harv.) Stock.=*R. riparium* Harv. 5. Minehead (Gifford, 1853, *V.C.H.*). var. *tortuosum* (Kutz.) Stock.=*R. implexum* Batt. 5. Minehead (Gifford, 1849, as *Conferva implexa*).

Chaetonella goetzii Schmidle. 5. Staplegrove. This is doubtful as G. S. West states that it is "known from tropical Africa and West Yorkshire".

Order Ulotrichales (Chaetophorales).

Family Chaetophoraceae.

Chaetophora tuberculosa (Roth.) Ag. 5. Staplegrove.

C. incrassata (Huds.) Hazen. *C. endiviaefolia* Ag. 6. Orchardleigh (Parsons, *V.C.H.* as *C.e.*).

C. elegans (Roth.) Ag. 5. Near Ilminster.

Aphanochaeta repens A. Br. *Herposteiron confervicola* Naeg. 5. Staplegrove on Vaucheria. Blagdon Hill at 700 feet.

Draparnaldia glomerata (Vauch.) Ag. Common.³² 5. Orchard-Portman, Taunton, etc. 6. Bruton, etc.

Stigeoclonium tenue Kutz. *Myxonema t.* Rabh.³² 5. Holway, Taunton.

Family Coleochaetaceae.

Colochaete scutata Breb. 5. In Sphagnum pool, Widcombe Moor.

Family Trentepohliaceae.

Trentepohlia aurea (L.) Mart. Common. 5. Taunton, Minehead, etc. 6. Wells (Parsons, *V.C.H.* as *Chroolepus aureus*). Yeovil, etc.

Gongrosira viridis Kutz. On stone in streams in 5. Widcombe Moor, Galmington near Taunton.

Family Microsporaceae.

Microspora floccosa (Vauch.) Thur. Frequent. 5. Taunton. Curland heath, etc.

M. abbreviata (Rab.) Lagerh. 5. Taunton (frequent).

M. amoena (Kutz.) Lagerh. 5. In ditches, Dodhill, Taunton, Staplegrove.

Family Ulothricaceae.

Ulothrix zonata (W. and M.) Kutz. Common.³² 5. Taunton, Withypool, Dunkery, Combe Sydenham (2-3 feet long in stream), Culmhead, Horner, etc. 6. Bruton, etc.

U. subtilis Kutz. Common. 5. Taunton (sometimes on wet walls), etc. 6. Catcott, etc. var. *variabilis* (Kutz.) Kirchn. 5. Taunton, Widcombe Moor, Pool on Dunkery at 1,600 feet.

U. aequalis Kutz. 5. Taunton. 6. Bruton.

var. *cataeniformis* Kutz. 5. Pool, Dunkery.

U. moniliformis Kutz. 5. Staplegrove, Taunton, Selworthy (700 ft.). 6. Shapwick, Longleat at 300 ft., Catcott.

U. tenuis Kutz. 6. Bruton. Probably goes under *U. aequalis*.

Binuclearia tatrana Wittr. 5. Dunkery in pool at 1,600 feet.

Stichococcus bacillaris Naeg. 5. Staplegrove (1921). Taunton, Cheddon Fitzpaine.

S. variabilis W. and G. S. West "Fresh Water".³² 5. Taunton district.

S. flaccidus (Kutz.) Gay. 5. Taunton (common). 6. Mendip (Pullen).

S. dissectus Gay. 5. Staplegrove.

Order Ulvales.

Family Ulvaceae.

Ulva lactuca L. 5. Minehead (Gifford, 1849). Porlock, Watchet. 6. Weston. var. *latissima* D.C. *U. latissima* J. Ag. 5. Minehead (Gifford, 1861). Watchet, Kilve. 6. Weston-super-Mare.

Monostroma bullosum (Roth) Wittr. = *Tetraspora bullosa* (Roth) Ag. 5. In small water-hole, Hodder's Combe, Quantocks.

Enteromorpha intestinalis Link. Common near the sea but often extends inland. 5. Minehead (Gifford 1849), Watchet, Taunton, etc. 6. Laverton,²¹ Bruton, Clevedon, Sedgemoor, etc.

E. compressa Grev. 5. Minehead (Gifford, 1849) and var. *constricta* J. C. Ag.

E. prolifera J. Ag. 5. Minehead (Gifford, 1849).

E. minima Naeg. 6. Clevedon (1945).

Order Schizogoniales (Prasiolales).

Family Prasiolaceae (Schizoniaceae)

Prasiola crispa (Light.) Menegh. Frequent in both 5 and 6.

Order Oedogoniales.

Family Oedogoniaceae. Some species listed by Harris¹⁴ as collected on the borders of Somerset and Devon are included where they are likely to occur on the Somerset side.

Family Oedogoniaceae.

Oedogonium cryptoporum Wittr. 5. Blackdowns. var. *vulgare* Wittr. 5. Dodhill, Staplegrove, Taunton.

O. vernale (Hass.) Wittr. 5. Canal at Taunton (c. fr.).

O. vaucherii (Le Cl.) A. Br. 5. Taunton (c. fr. 1915), Combe Sydenham, Staplegrove.

O. obsoletum Wittr. 5. Ley Hill, Porlock at 900 ft., Blackdowns (H.).

O. varians Wittr., **O. oblongellum** Kirch., **O. lautumnarium** Wittr., **O. capilliforme** Kutz., **O. inversum** Kutz., and form *subclusum* Wittr., **O. bossii** (Le Clere) Wittr. and **O. crenulato-costatum** Wittr. 5. Blackdowns (H.).¹⁴

O. itzigsohnii DB. 5. Exmoor (H.).

O. rufescens Wittr. 5. Selworthy, Trull (pond), Exmoor (H.).

O. cardiacum Hass. 5. Ilminster, Blackdowns (H.).

O. pringsheimii Cram. 5. Pond at Trull, Staplegrove (1915).
6. Catcott Burtle.

Subclass 2. HETEROKONTAE

Order Heterococcales.

Family Chlorosaccaceae.

Mischococcus confervicola Naeg. 5. On Tribonema, Pickney near Taunton.

Family Botryococcaceae.

Botryococcus braunii Kutz. 5. Buncombe and Pyrland near Taunton. 6. Shapwick.

Family Chlorotheciaceae.

Characiopsis minuta (A. Br.) Borzi. 5. Taunton. 6. Bruton.

Family Chlorobotrydaceae.

Chlorobotrys regularis (West) Bohlin. *Chlorococcum r.* West. 6 Catcott Burtle.

Family Ophiocystaceae.

Ophiocytium arbuscula (A. Br.) Rabenh. 5. Taunton, Staplegrove.

Order Heterotrichiales.

Family Tribonemaceae.

Tribonema bombycinum (Ag.) Derb. and Sol. = *Conferva bombycina* T.B. 5. Taunton, Norton, Selworthy (700 ft.), Pickney. 6. Bruton, Wincanton, Burnham, Catcott Burtle. form *minor* (Wille) G. S. West. 5. Widcombe bog pool.

Order Heterosiphonales.

Family Botrydiaceae.

Botrydium granulatum (L.) Grev. 5. Taunton, Staplegrove, Bathpool, Lyngford.

B. wallrothii Kutz. 5. On ground in garden, Taunton School, 1914, *teste* G. S. West.

Class BACILLOPHYCEAE. Subclass CENTRICEAE.

Order Discoidales.

Family Melosiraceae.

Melosira varians A.g 5. Horner Combes, Taunton.

Subclass PENNATAE

Order Fragilariales.

Family Tabellariaceae.

Tabellaria flocculosa (Roth.) Kutz. 5. Taunton district. 6. Catcott, Bruton.

Tetracyclus rupestris (A. Br.) Grun. 5. On the hills near Taunton.

Family Meridionaceae.

Meridion circularis (Grev.) Ag. 5. Staplegrove.

Family Fragilariaceae.

Fragilaria capucina Desmaz. 5. Taunton district. 6. Catcott.

F. mutabilis (W. Sm.) Grun. 5. Taunton district. 6. Catcott.

Synedra ulna (Nitz.) Ehren. Common. 5. Taunton, Creech, Bathpool, Orchard Portman, Horner Combes.

S. pulchella Kutz. 5. Taunton, Creech St. Michael, Staplegrove.

S. acus (Kutz.) Grun. 5. Widcombe Moor.

Family Eunotiaceae.

Eunotia gracilis (Ehren.) Rab. 5. Widcombe Moor.

Order Achnanthes.

Family Achnantheaceae.

Cocconeis placentula Ehren. 5. Taunton.

Order Naviculales.

Family Naviculaceae.

Navicula cryptocephala Kutz., **N. mutica** Kutz., and **N. obtusa** var. *scalpelliforme* Grun., have been recorded from the banks of the Avon near Bristol (Bracher³).

N. viridis Kutz. = *Pinnularia* v. Common. 5. Taunton, Cushuish, etc. 6. Bruton, Wincanton, Catcott Burtle, etc.

N. sphaerophora Kutz. 6. Catcott Burtle.

N. mesolepta Ehren., **N. nobilis** Ehren. (= *Pinnularia* n.) **N. oblonga** Kutz., **N. rhynchocephala** Kutz. and **N. radiosa** Kutz. have been recorded from the Taunton district.

Vanheurckia rhomboides (Ehren.) Breb. *Navicula* r. Ehren. 5. Taunton District. 6. Catcott Burtle.

var. *saxonica* (Rab.) W. and G. S. West also occurs near Taunton.

Amphipleura pellucida Kutz. 5. Taunton. 6. Catcott Burtle.

Gyrosigma attenuatum (Kutz.) Rabh. 6. Avon bank (Bracher³).

G. spencerii (Queck.) O.K. 5. Taunton district. 6. Catcott Burtle, Avon bank (Bracher³).

G. acuminatum Kutz. 5. Taunton district. 6. Catcott Burtle.

Family Gomphonemaceae.

Gomphonema olivaceum (Lyngb.) Kutz. 5. Taunton district.

G. parvulum Kutz. 6. Catcott.

Family Coconemaceae (Cymbellaceae).

Coconema lanceolatum Ehr. 5. Norton Fitzwarren.

Amphora ovalis Kutz. 5. Taunton, Norton Fitzwarren, Creech St. Michael.

Epithemia turgida (Ehr.) Kutz. 5. Norton Fitzwarren, Widcombe Moor.

E. gibba Kutz. (*Rhopalodia* g. O. Mull). 6. Catcott Burtle.

Order Nitzschiales.

Family Nitzschiaceae.

Nitzschia communis Raben. 6. Avon bank near Bristol (Bracher³).

N. sigmoidea (Ehr.) W. Sm. 5. Taunton district. 6. Catcott Burtle.

N. sigma (Kutz.) W. Sm., and **N. gracilis** Hantzsch. 6. Avon bank (Bracher³).

Class MYXOPHYCEAE (CYANOPHYCEAE)

Order Glaucocystidales

Family Glaucocystaceae.

Glaucocystis nostochinearum Itzig. 5. On *Hypnum exannulatum* in pool at 700 ft., Selworthy.

Order Chamaeosiphonales.

Family Chamaeosiphonaceae.

Chamaeosiphon confervicola A. Br. 5. On filaments of other algae, Bathpool, Taunton.

C. incrustans Grun. 5. Selworthy.

Order Coccogonales (Chroococcales).

Family Chroococcaceae.

- Gloeothece confluens** Naeg. 5. Selworthy Beacon at 1,000 ft.
G. granosa Rabh. 5. Luxborough.
Aphanothece microscopica Naeg. 5. Exmoor.
Synechococcus aeruginosus Naeg. *S. major* Schroebl. 5. Taunton, Bathpool, Chard (*teste* Harris).
Coelosphaerium kutzingianum Naeg. 5. Taunton.
Microcystis aeruginosa (Kutz.) W. and G. S. West. 5. Chard reservoir, etc.
Merismopedia glauca (Ehrh.) Naeg. 5. Water-tub at Taunton School, etc.
Gloecapsa ploydermatica Kutz. 5. On rocks, Holway near Taunton.
G. crepidinium Thur. 5. Watchet. 6. Clevedon, Weston-super-mare, Kewstoke, Brean Down.
G. coracina Kutz. 5. Selworthy Beacon, Kingston, Thurlbear, Stogursey. 6. Shipham, Goblin Combe near Yatton, Wincanton.
G. aeruginosa (Carm.) Kutz. 5. Oake near Taunton. 6. Shipham.
G. ralfsii (Harv.) Lemm. *G. ralfsiana* Kutz. 6. Black Down, Mendip (Pullen).
G. livida Carm. Infrequent. 5. Taunton, Staplegrove. 6. Bruton.
Chroococcus turgidus (Kutz.) Naeg. 5. Kents, Exe Valley. 6. Hadspen near Bruton.
C. cohaerens (Breb.) Naeg. 5. Frequent at Taunton. 6. Bruton (common), Wincanton.
C. macrococcus (Kutz.) Rab.= *Urococcus insignis* (Hass.) Kutz. 5. Near Chard (*teste* Harris). Minehead, Merridge near Taunton, Wambrook, Widcombe.
Aphanocapsa grevillei (Hass.) Cooke. 5. Taunton district. 6. Vallis near Frome (1921), Crewkerne, Cheddar.
A. virescens (Hass.) Cooke. 5. Langdon and Kingston near Taunton.
[Porphyridium cruentum. See Rhodophyceae, Bangiales].

Order Hormogonales.

Family Oscillatoriaceae.*

- Oscillatoria angustissima** W. and G. S. West. 5. Taunton, Staplegrove.
O. limosa Ag. 5. Staplegrove, Taunton. 6. Catcott Burtle.
O. irrigua Kutz. Frequent.³⁹ 5. Taunton, Staplegrove, Heathfield and Halse, Brompton Ralph, Kingston.
O. rubiginosa Carm. 5. On stones in Horner Water.

**Oscillatoria* is often given as *Oscillaria*.

- O. tennuis** Ag. Common. 5. Taunton, Galmington, Wilmer-sham near Porlock, etc. 6. Bath (Th. and Br.) *V.C.H.*, Bruton, Catcott, etc.
- O. muscorum** Carm. 6. Laverton.²⁰
- Spirulina major** Kutz. 5. Staplegrove.
- Phormidium autumnale** (Ag.) Gom.—*Lyngbya vulgaris* (Kutz.) Kirchn. 5. Moist base of wall, Taunton, Staplegrove, Brendon Hill. 6. H. F. Parsons' locality.
- P. inundatum** Kutz. 6. Bath (Th. and Br.) *V.C.H.*
- P. corium** (Ag.) Gom. 6. Bath (Th. and Br.) *V.C.H.*
- P. purpurascens** (Kutz.) Gom. "Fresh-water".³²
- P. molle** (Kutz.) Gom. 6. Catcott.
- P. tenue** (Menegh.) Gom. 6. Catcott.
- Lyngbya vulgaris** (Kutz.) Kirchn. See *Phormidium autumnale*.
- Symploca muscorum** (Ag.) Gom. 5. Hawkridge, Cocker Combe, etc. 6. Berrow, etc.
- S. lucifaga** Harv. 6. Orchardleigh (P.) *V.C.H.*
- S. muralis** Kutz. 6. H. F. Parsons.
- Microcoleus chthonoplastes** Thur. *M. anguiformis* Harv. 6. With *Encalypta* on wall, Bruton.
- Schizothrix calcicola** (Ag.) Gom. and **S. lardacea** (Cesati) Gom. from 5.³²

Family Nostocaceae.

- Nostoc commune** Vauch. Common on wet or damp ground throughout the county.
- N. piscinale** Kutz. 5. Taunton district.
- N. linckia** Bornet. 5. Quantocks (*teste* F. E. Fritsch).
- N. muscorum** (Ag.) Kutz. Frequent.³² 5. Taunton district, etc.
- N. humifusum** Carm. Frequent.³² 5. Nailsbourne, Staplegrove, Kents, Exe Valley. 6. Bruton.
- N. ellipso sporum** Desm. 5. Staplegrove.
- N. sphaericum** Vauch. Frequent.³² 5. Horner Combes, etc. 6. Wincanton.
- N. microscopicum** Carm.=*N. rupestre* Kutz. 5. Taunton. 6. Bruton, Wincanton.
- N. coeruleum** Lyngb. Common on mosses and submerged plants in 5 and 6. At West Sedgemoor it was on *Hypnum aduncum*.
- N. verrucosum** Vauch. Frequent.³² 5. Aisholt, Horner, 6. Mells,²⁰ Harptree Combe.
- Anabaena flos-aquae** (Lyngb.) Bréb. 5. Chard reservoir.
- A. laxa** (Rab.) A. Br. 6. Shipham, in Sphagnetum.
- A. variabilis** Kutz. may occur in brackish waters. 5. Taunton, Norton, Holford and Horner Combes. 6. Bruton, Wincanton.
- A. torulosa** Lagerh. In brackish waters. 5. Minehead (Gifford, as *Sphaerozyga carmichaelii* Harr.), Holmes in *V.C.H.*

A. inaequalis (Kutz.) Born. 6. Catcott Burtle.

A. oscillarioides Bory. 6. Catcott Burtle.

Cylindrospermum majus Kutz.=*C. macrospermum* Bab. Common.

C. stagnale (Kutz.) Born and Flah. 5. Near Wambrook, King's Cliff.

Nodularia spumigena Merat. 5. Withypool.

Family Scytonemaceae.

Plectonema tomasinianum (Kutz.) Born. 5. Taunton district.

Scytonema mirabile (Dillw.) Born.=*S. figuratum* Ag. 5. Brendon Hill.

S. hoffmanni (Kutz.)=*Symphosiphon h.* Kutz. 6. On ground and mosses, Bruton. **S. alatum** (Berk.) Borzi (*Petalonema a.* Berk.) and **S. myochrous** Ag.³²

Tolypothrix lanata (Desv.) Wartm. *T. coactilis* Kutz. *T. muscicola* Kutz. *T. aegragopila* Kutz. Common in both 5 and 6. *T. muscicola* Kutz. has been considered as a form and is common.

T. tenuis Kutz.=*T. pygmaea* Kutz.=*T. wartmanniana* Rab.=*T. distorta* (Fl. Dan.) Kutz. 5. In bog Wambrook, in Sphagnum pool, Widcombe. 6. Orchardleigh.²⁰

Family Stigonemaceae.

Stigonema minutum (Ag.) Hass. 5. Brendon Mineral Railway Incline.

S. ocellatum (Dillw.) Thur. 5. Exmoor.

Mastigocoleus testarum Lagerh. 5. Watchet. 6. Clevedon.

Family Rivulariaceae

Calothrix pariatine (Naag.) Thur. 5. Wet rocks, Brendon Hill.

Rivularia botryoides Carm. 6. Weirs in R. Frome.²⁰

R. crustacea Carm. Common in waterfalls.³²

R. haenatites (DC). Ag. Frequent.³²

R. atra Roth. has been noted in 5.

Dichothrix orsiniana (Kutz.) Born. and Flah. Frequent.³²

Class CHRYSOPHYCEAE. Subclass CHRYSOMONIEAE

Order Ochromadales.

Family Ochromonadaceae.

Dinobryon cylindricum Imhof. 5. Holway near Taunton.

Class EUGLENOPHYCEAE (EUGLENINEAE)

Order Euglenales.

Family Euglenaceae.

Euglena viridis Ehren. 5. Taunton, etc.

E. acus Ehren. 5. Taunton.

E. limosa Gard. 6. Avon bank (Bracher 3).

E. deses which was recorded from the Avon bank was later referred to *E. limosa*.

Trachelomonas hispida (Perty) Stein. 5. Taunton (1917).

Class RHODOPHYCEAE

Order Nemalionales.

Family Helminthocladiaceae.

Batrachospermum moniliforme Roth. 5. Winsford Hill. 6. Oldford near Bath,²⁰ Bruton. var. *setigerum* (Rabh.) Cooke. 6. Bruton.

B. vagum (Roth.) Ag. 5. Widcombe (1915).

Family Chaetangiaceae.

Scinaia furcellata Bivona. 5. Minehead.

Family Lemaneaceae.

Lemanea torulosa Kutz. *emend* Sirod. and **L. parvula** Sirod.³² Occasional.

Sacheria fluviatilis (Ag.) Sirod. 5. Horner Water. 6. River Frome at Elm.²⁰

S. mammilosa Sirod. 5. Exehead, Horner Water, Croydon Hill combes to Dunster, Oare Water tributaries.

S. fucina (Bory.) Sirod. 5. "Fresh Water" (occ.³²).

Order Bangiales.

Family Bangiaceae.

Bangia fuscopurpurea Lyngb. In estuaries.

Porphyra umbilicalis Ag. 5. Blue Anchor (Gifford) *V.C.H.* as *P. laciniata* Ag., var. *vulgaris* C. A. Ag. (G. as *P. vulgaris*).

Porphyridium cruentum (Ag.) Naeg. Common. 5. Near Wellington, etc. 6. Frome (Parsons) *V.C.H.*, Cole, etc.

Order Gelidales.

Family Gelidaceae.

Gelidium corneum Lamour. 5. Minehead (G.) *V.C.H.*

G. pusillum Le Jol. 5. Minehead (G.), *V.C.H.* as *G. corneum* var. *clavatum* Grev.

Family Wrangeliaceae.

Naccaria wigghii Endl. 5. Minehead (G.).

Order Cryptonemiales.

Family Grateloupiaceae.

Grateloupia filicina OC. Ag. 5. Minehead (Gifford, as form *intermedia* Holmes and Batt., *V.C.H.*).

G. dichotoma J. Ag. Minehead¹⁹.

Family Dumontiaceae.

Dumontia incrassata Lamour. 5. Minehead (G. as *D. filiformis* Grev.) *V.C.H.* Porlock. var. *crispata* Batters. Minehead (leg. G.).

Dilsea edulis Stackh. *Iridaea e.* Harv. 5. Minehead (G.).

Family Nemastomaceae.

Halarachnion ligulatum Kutz. 5. Minehead.¹⁰

Furcellaria fastigiata Lamour. 5. Minehead (leg.¹⁰) E. M. Holmes.

Family Rhizophyllidaceae.

Polyides rotundus Grev. 5 Minehead.¹⁰

Family Corallinaceae.

Melobesia farinosa Lamour. On thallus of *Rhodymenia*, etc.
5. Minehead (*leg.* Gifford) determ. Holmes.

M. corticiformis Kutz. 5. Minehead (*leg.* G.) detrm. Holmes.
On *Rhodymenia*, *Plocamium*, etc.

M. verrucata Lamour. 5. Minehead,¹⁰ on *Plocamium*, etc.

M. zonalis Foslie. 5. Minehead. ?

Hapalidium roseolum Rabh. 5. Minehead (*leg.* Gifford) determ.
Holmes. Parasitic on *Rhodymenia*; "apparently not having
been previously recorded from Britain". *V.C.H.*

Corallina officinalis L. 5. Minehead, Porlock, Watchet, etc.
6. Rare.

Order Ceramiales.

Family Delesseriaceae.

Delesseria sanguinea Lamour. 5. Minehead (G.).

Membranoptera alata Kylin. 5. Minehead (G.) *V.C.H.* as
Delesseria alata Lamour.

Myriogramme bonnemaisonii Kylin. 5. Minehead (G.), Porlock
(G. 1874 as *Nitophyllum b.* Grev.).

M. versicolor Kylin. 5. Minehead, Rare (G. as *Nitophyllum v.*
Harv.).

Phycodrys rubens Batt. 5. Minehead. (G. as *Delesseria sinuosa*
Lamour).

Nitophyllum punctatum Grev. 5. Minehead (G.).

Polyneuria gmelini Kylin. *Nitophyllum g.* Grev. 5. Minehead
(G.).

Hypoglossum woodwardii Kylin. Minehead (G. as *Delesseria s.*
var. *w.*).

Apoglossum ruscifolium Kylin. Minehead (G. as *Delesseria r.*).

Cryptopleura ramosum Kylin. *Nitophyllum laceratum* Grev.
5. Minehead (G.) *V.C.H.* var. *ciliifera* Kutz. 5. Minehead
(G.). var. *uncinatum* Grev. 5. Minehead (G.).

Family Rhodomelaceae.

Rhodomela subfisca C. Ag. 5. Minehead (G.).

Laurencia pinnatifida Lamour. 5. Minehead (G.).

Polysiphonia urceolata Grev. 5. Minehead (G.) *V.C.H.*

P. fastigiata Grev. 5. Minehead (G.), Kilve. 6. Weston-
super-mare.

P. nigrescens Grev. 5. Minehead (G.) *V.C.H.*

Brongiartella byssoides Bory. 5. Minehead (G. as *Poly-*
siphonia b.) *V.C.H.*

Heterosiphonia plumosa Batt. 5. Minehead (G.) *V.C.H.* as
Dasya coccinea C. Ag.

Dasya coccinea C. Ag. See *Heterosiphonia plumosa* Batt.

Family Ceramiaceae.

- Spondylothamnion multifidum** Naeg.=*Wrangelia m.* J. Ag. 5. Minehead (G.).
- Griffithsia flosculosa** Batt. 5. Minehead.
- Pleonosporium borneri** Naeg. 5. Minehead and Blue Anchor (G. as *Callithamnion b.* Harv.) *V.C.H.* 6. Clevedon (G.) *V.C.H.*
- Rhodochorton rothii** Naeg. 5. Minehead (G.) as *Callithamnion r.* Harv.) *V.C.H.*
- Callithamnion byssoides** Arn. 5. Minehead (G.).
- C. polyspermum** C. Ag. 5. Minehead (G.).
- C. tetragon** C. Ag. 5. Minehead (G.).
- C. tetricum** C. Ag. 5. Minehead (G.).
- Plumaria elegans** Schmitz. *Ptilota sericea* Harv. 5. Minehead (G.) *V.C.H.*
- Ptilota plumosa** C. Ag. of old floras refers to the above.¹⁹
- Antithamnion plumula** Thur. 5. Minehead (G. as *Callithamnion p.* Lyngb.).
- Ceramium diaphanum** Roth. 5. Minehead (G.).
- C. deslongchampsii** Chauv. 5. Minehead (G.). Bossington and Blue Anchor (*V.C.H.*).
- C. circinatum** J. Ag.=*C. decurrens* Harv. 5. Minehead (G.).
- C. rubrum** C. Ag. 5. Minehead, abundant (G.). var. *corymbiferum* J. Ag. 5. Minehead (G.) *V.C.H.* The corymbose variety mentioned by Gifford in 10.
- C. flabelligerum** J. Ag. Blue Anchor and Minehead (G.) *V.C.H.*
- C. echiniotum** J. Ag. 5. Minehead (G.). var. *transcurrens* Batt. 5. Porlock (G.) Kutz. *V.C.H.* as *C. transcurrens*.
- C. ciliatum** Ducluz. 5. Minehead (G.).
- C. acanthotum** Carm. 5. Minehead (G.) *V.C.H.*

Order Gigartinales.

Family Gigartinaceae.

- Chondrus crispus** Lyngb. 5. Minehead (G.) *V.C.H.*, Porlock, etc. var. *virens* Turn. 5. Minehead (G.). var. *aequalis* Turn p.p. 5. Minehead (G.).
- Gigartina stellata** Batt. 5. Minehead district (*V.C.H.* as *G. mamillosa* J. Ag.). Porlock.
- Phyllophora epiphylla** Batt.=*P. rubens* Grev. 5. Minehead (G.).
- P. membranifolia** J. Ag. 5. Minehead (G.).
- Stenogramma interruptum** Mont. 5. Minehead (very rare, G.) *V.C.H.*
- Gymnogongrus norvegicus** J. Ag. 5. Minehead (G.) *V.C.H.*
- Ahnfeltia plicata** Fries.=*Gymnogongrus p.* Kutz. 5. Minehead (G.).
- Callophyllis laciniata** Kutz.=*Rhodymenia l.* Grev. 5. Minehead as *R.l.* (G.1849) *V.C.H.*

Family Rhodophyllidaceae.

Catenella repens Batt. = *C. opuntia* Grev. 5. Near H. W. M. Porlock and Minehead (G.). 6. Clevedon (G.), Weston-super-mare (confirmed Wm. Troll).

Cystoclonium purpureum Batt. = *Hypnea p.* Harv. 5. Minehead (G.).

Order Rhodymeniales.

Family Sphaerococcaceae.

Gracilaria confervoides Grev. 5. Minehead (G.) *V.C.H.*

Calliblepharis ciliata Kutz. 5. Minehead (G. as *Rhodymenia c.* Grev.) *V.C.H.*

C. lanceolata Batt. *Rhodymenia jubata* Grev. 5. Minehead (G. as *R. j.*).

Family Rhodymeniaceae.

Rhodymenia palmata Grev. 5. Minehead (G.) *V.C.H.* var. *elisiae* Chauv. = var. *nicaeensis* C. Ag. *R. nicaeensis* Holmes. 5. Minehead (G.).

Lomentaria articulata Lyngb. *Chylocladia a.* Grev. 5. Minehead (G.) *V.C.H.* 6. Near H. W. M., Clevedon.

L. clavellosa Gaill. *Chrysymenia c.* Harvey. 5. Minehead (G.).

Plocamium coccineum Lyngb. Common. 5. Minehead (G.) *V.C.H.*, etc. 6. Noted but no locality given.

Class PHAEOPHYCEAE

Order Ectocarpales.

Family Ectocarpaceae.

Ectocarpus confervoides Le Jol. *E. siliculosus* Harv. 5. Minehead *V.C.H.* 6. Near Bristol.¹⁹ var. *subulatus* Hauck. *E. amphibius* Harv. 6 Bristol.¹⁹

E. holmesii Batt. *E. crinitus* Carm. of Gifford. 5. Minehead.

E. tomentosus Lyngb. 5. Minehead (G.) *V.C.H.*

E. fasciculatus Harv. 5. Minehead (G.).

Pilayella littoralis Kjellm. 5. Minehead (G.) *V.C.H.*

Family Elachistaceae.

Elachista fucicola Fr. Common on Fucus. 5. Minehead, etc. 6. Weston-super-mare, etc.

Family Corynophloeaceae.

Leathesia difformis Aresch. Common.

Family Myrionemaceae.

Ralfsia verrucosa Aresch. 5. Minehead.

Family Desmarestiaceae.

Desmarestia aculeata Lamour. Common. 5. Minehead (G.).

D. ligulata Lamour. Common. 5. Minehead (G.).

Arthrocladia villosa Duby. 5. Minehead (G.) *V.C.H.*

Family Punctariaceae.

Punctaria latifolia Grev. 5. Minehead (G.).

Order Sphacelariales.

Family Sphacelariaceae.

Sphacelaria cirrhosa C. Ag. Locality unknown.

Family Cladostephaceae.

Cladostephus spongiosus J. Ag. 5. Minehead (G.) *V.C.H.*

Family Stypocaulaceae.

Halopteris filicinas Kutz. 5. Minehead (G.) *V.C.H.*

Order Laminariales.

Family Laminariaceae.

L. digitata Lamour. 5. Minehead, *V.C.H.* 6. Weston.**L. cloustoni** Edmondst.**Saccorhiza bulbosa** De la Pyl. 5. Minehead, *V.C.H.***Alaria esculenta** Grev. 5. Minehead district.

Order Tilopteridales.

Family Tilopteridaceae.

Acinetospora pusilla Born. *Ecytocarpus p.* Harv. var. *crinita*Batt. *E. crinitus* Carm. 5. Minehead *sec.* G. but doubtful.Some, at any rate, of her specimens are *E. holmesii*.

Order Dictyotales.

Family Dictyotaceae.

Dictyota dichotoma Lamour. 5. Minehead (G.) *V.C.H.***Taonia atomaria** J. Ag. 5. Minehead (G.).**Dictyopteris membranacea** Batt. *Haliseris polypodioides* C. Ag.
5. Minehead (G.) *V.C.H.*

Order Fucales.

Family Fucaceae.

Fucus vesiculosus L. Common. 5. Watchet, Minehead, Blue
Anchor, etc. 6. Clevedon, Weston, Berrow, etc.**F. serratus** L. Common. 5. Minehead, Watchet, etc. 6.
Clevedon, Burnham, Weston, etc.**F. spiralis** L. 5. Porlock.**F. ceranoides** L. 5. Minehead.**Ascophyllum nodosum** Le. Jol. Common between tide-marks
in both 5 and 6.**Pelvetia canaliculata** Dene and Thur. Usually slightly above
H. W. M. Frequent. 5. Minehead (*V.C.H.*), Watchet,
Porlock, etc. 6. Clevedon, Weston-super-mare, etc.**Halidrys siliquosa** Lyngb. 5. Minehead (G.1849).**Cystoseira fibrosa** C. A. Agardh. 5. Minehead (G.).

Class CHAROPHYTA

The members of this class are given in 17, 18 and 2.

The Classes Cryptophyceae, Dinophyceae and Chloromonophyceae
have no species recorded for Somerset though, no doubt, some of
them occur in the county.

REFERENCES

- ¹ Batters, E. A. L., *Marine Algae Catalogue, Journ. of Bot. Suppl.* 1922.
- ² Botanical Section, *Proc. Som. Arch. Soc.*, from LVI (1910) in progress.
- ³ Bracher, Rose. *The Ecology of the Avon Bank. Annals Bot.* 1919. *Journ. of Ecol.*, 1929.
- ⁴ *Proc. Bristol Naturalists' Soc. Bristol Botany.*
- ⁵ *British Mycological Soc. Transactions* for 1912, 1921, 1924 and 1929.
- ⁶ Broome, C. E. Notes in the *V.C.H.* and collection of Algae from the neighbourhood of Bath.
- ⁷ Carter, Dr. Nellie. *Help in the Determination of Specimens.*
- ⁸ Cooke, M. C. *Fresh-water Algae.* London, 1890.
- ⁹ Gatty, Mrs. A. *British Sea-weeds.* London, 1872. Annotations.
- ¹⁰ Gifford Isabella. Notes and specimens in Taunton Museum. *Observations on the Marine Flora of Minehead. Proc. Som. Arch. Soc.*
- ¹¹ Fritsch, Prof. F. E. *British Freshwater Algae* (with G. S. West), 1932.
- ¹² Hadden, N. G. *The Mycetozoa of West Somerset. Proc. Som. Arch. Soc.*, LXXXVIII, 1942.
- ¹³ Harris, G. T. Notes and papers in *Trans. Devonshire Association.* List of Desmids collected on the Blackdown hills.
- ¹⁴ Harris, G. T. *Oedogoniales of Devonshire.* Ms. lists of species.
- ¹⁵ Harvey, W. H. *Phycologica Britannica*, 1846-1851.
- ¹⁶ Holmes, E. M. Notes in *V.C.H.*
- ¹⁷ Marshall, E. S. *A Supplement to the Flora of Somerset.* 1918.
- ¹⁸ Murray, R. P. *The Flora of Somerset.* Taunton, 1896.
- ¹⁹ Newton, Prof. Lily. *British Seaweeds.* Brit. Museum, 1931.
- ²⁰ Parsons, H. F. Specimens and notes about the Frome district.
- ²¹ *P.B.N.S. Proc. of the Bristol Naturalists' Soc. Bristol Botany.*
- ²² *P.S.A.&N.H.S. Proc. Som. Arch. Soc.*
- ²³ Pullen, O. G. Specimens and notes from East Somerset.
- ²⁴ Smith, William. *British Diatomaceae.* London, 1853-6.
- ²⁵ Thwaites, G. K. Collection of Algae from the Bath district.
- ²⁶ *V.C.H. Victoria County History*, 1906.
- ²⁷ Watson, W. *The Mosses of Somerset. Proc. Som. Arch. Soc.*, LVIII.
- ²⁸ Watson, W. *The Bog Mosses of Somerset. Ibid*, 1915. *The Liverworts of Somerset*, 1920.
- ²⁹ Watson, W. *The Lichens of Somerset. Ibid.*, 1930.
- ³⁰ Watson, W. *Cryptogamic Vegetation of Sand-dunes. Journ. of Ecol.*, VI, 1918.
- ³¹ Watson, W. *Bryophytes and Lichens of Calcareous Soil. Journ. of Ecol.*, VII, 1918.
- ³² Watson, W. *Bryophytes and Lichens of Fresh Water. Journ. of Ecol.*, VIII, 1919.
- ³³ Watson, W. Introduction and further notes on distribution in Hadden's *Mycetozoa of West Somerset.*
- ³⁴ West, G. S. *British F. Algae* Cambridge, 1904. Help in determination.
- ³⁵ West, W. *British Desmidiaceae* (with G. S. West), *Ray Soc.*, 1904-11.