

PRELIMINARY LISTS OF NEW ENGLAND PLANTS, — V.  
MARINE ALGAE.<sup>1</sup>

FRANK S. COLLINS.

[The sign + indicates that an herbarium specimen has been seen; the sign — that a printed record has been found.]

The State of Vermont, having no coast line, is omitted in this list. Massachusetts, however, is divided into two parts, northern and southern, as the most strongly marked division line for algae on the whole Atlantic coast occurs here. As regards the marine flora, Nahant and Nantucket differ more from each other than the former does from Newfoundland, or the latter from Fortress Monroe. The division line is usually given as Cape Cod, but as the flora of the inside of the lower cape is the same as that of Vineyard Sound, the latitude of Provincetown has been taken as the boundary.

Among the Schizophyceae will be found some species usually classed as fresh water algae; but as they were found growing among undoubted marine species, it seemed best to include them.

SCHIZOPHYCEAE.

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|---|-----|-------|----------|----------|-------|-------|
| <i>Amphithrix janthina</i> (Mont.) Born. & Flah. . . . .    |     |       | +        |          |       |       |
| “ “ var. <i>torulosa</i> (Grunow)<br>Born. & Flah. . . . .  |     |       | +        |          |       |       |
| “ <i>violacea</i> (Kuetz.) Born. & Flah. . . . .            | +   |       |          |          | +     | +     |
| <i>Anabaena torulosa</i> (Carm.) Lagerh. . . . .            | +   | +     | +        | +        | +     | +     |
| “ <i>variabilis</i> Kuetz. . . . .                          |     |       |          |          | +     | +     |
| <i>Brachytrichia Quoyii</i> (Ag.) Born. & Flah. . . . .     |     |       |          | +        |       |       |
| <i>Calothrix aeruginea</i> (Kuetz.) Thuret. . . . .         | +   |       | +        |          |       | +     |
| “ <i>confervicola</i> (Dillw.) Ag. . . . .                  | +   | +     | +        | +        | +     | +     |
| “ <i>crustacea</i> Thuret. . . . .                          | +   | +     | +        | +        | +     | +     |
| “ <i>fasciculata</i> Ag. . . . .                            | +   |       | +        |          | +     |       |
| “ “ <i>forma incrustans</i> Collins . . . . .               |     |       | +        |          |       |       |
| “ <i>fusco-violacea</i> Crouan. . . . .                     |     |       |          | +        |       |       |
| “ <i>parasitica</i> (Chauv.) Thuret. . . . .                | +   | +     | +        | +        | +     | +     |
| “ <i>pulvinata</i> (Mert.) Ag. . . . .                      | +   |       | +        | +        | —     | +     |
| “ <i>scopulorum</i> (Web. & Mohr) Ag. . . . .               | +   | +     | +        | +        | +     | +     |
| “ <i>vivipara</i> Harv. . . . .                             |     |       | +        |          | +     |       |
| <i>Chroococcus turgidus</i> Naeg. . . . .                   | +   |       | +        | +        | +     | +     |
| <i>Cryptoglaena Americana</i> Davis. . . . .                |     |       | +        |          |       |       |
| <i>Dermocarpa prasina</i> (Reinsch) Born. & Thuret. . . . . | +   |       | +        |          | +     | +     |
| “ <i>violacea</i> Crouan. . . . .                           |     |       |          |          | +     |       |
| <i>Entophysalis granulosa</i> Kuetz. . . . .                | +   |       |          | +        |       | +     |
| “ <i>Magnoliae</i> Farlow. . . . .                          | +   |       | +        |          |       |       |
| <i>Gloeocapsa crepidinum</i> Thuret. . . . .                | +   |       | +        | +        | +     | +     |

<sup>1</sup> Printed in RHODORA as supplementary material.

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| Hydrocoleum glutinosum (Ag.) Gomont. . . . .                       |     |       | +        | +        |       | +     |
| “ lyngbyaceum Kuetz. . . . .                                       |     |       | +        | +        |       |       |
| “ “ var. rupestre Kuetz. . . . .                                   | +   |       |          |          |       |       |
| “ majus Holden. . . . .  |     |       |          |          |       | +     |
| Hyella caespitosa Born. & Flah. . . . .                            | +   |       | +        | +        | +     | +     |
| Isactis plana (Harv.) Thuret. . . . .                              |     |       |          | +        |       | +     |
| Lyngbya aestuarii (Mert.) Liebm. . . . .                           | +   | +     | +        | +        | +     | +     |
| “ confervoides Ag. . . . .   |     |       |          | +        | -     | +     |
| “ gracilis (Menegh.) Rab. . . . .                                  | +   |       |          |          |       |       |
| “ Lagerheimii (Moebius) Gomont. . . . .                            |     |       |          |          |       | +     |
| “ lutea (Ag.) Gomont. . . . .                                      | +   |       | +        | +        | +     | +     |
| “ majuscula (Dillw.) Harv. . . . .                                 |     | +     | +        | +        | +     | +     |
| “ semiplena (Ag.) J. Ag. . . . .                                   | +   | +     |          |          | +     |       |
| “ subtilis Holden mss. . . . .                                     | +   |       |          |          |       | +     |
| Mastigocoleus testarum Lagerh. . . . .                             | +   |       | +        | +        | +     | +     |
| Microchaete grisea Thuret. . . . .                                 | +   |       |          | +        |       |       |
| Microcoleus chthonoplastes (Fl. Dan.) Thuret. . . . .              | +   | +     | +        | +        | +     | +     |
| Nodularia Harveyana (Thwaites) Thuret. . . . .                     | +   | +     | +        |          |       | +     |
| “ spumigena Mert. var. litorea (Kuetz.)<br>Born. & Thuret. . . . . | +   | +     | +        |          |       |       |
| “ “ var. major (Kuetz.) Born.<br>& Flah. . . . .                   |     |       |          |          |       | +     |
| Oscillatoria amphibia Ag. . . . .                                  |     |       | +        |          |       |       |
| “ Corallinae (Kuetz.) Gomont. . . . .                              |     |       |          |          |       | +     |
| “ laetevirens Crouan. . . . .                                      | +   |       |          |          | +     | +     |
| “ limosa Ag. . . . .   | +   |       |          |          | +     | +     |
| “ margaritifera Kuetz. . . . .                                     |     |       | +        |          |       |       |
| “ nigro-viridis Thwaites. . . . .                                  | +   |       | +        |          |       |       |
| “ princeps Vauch. . . . .  |     |       | +        |          | +     | +     |
| “ tenuis Ag. . . . .   |     |       |          |          | +     |       |
| Ostreobium Quekettii Born. & Flah. . . . .                         |     |       |          |          |       | +     |
| Phormidium ambiguum Gomont. . . . .                                |     |       | +        |          |       |       |
| “ autumnale (Ag.) Gomont. . . . .                                  |     |       | +        |          | +     |       |
| “ Corium (Ag.) Gomont. . . . .                                     |     |       | +        |          |       |       |
| “ favosum (Bory) Gomont. . . . .                                   |     |       |          |          | +     |       |
| “ fragile (Menegh.) Gomont. . . . .                                | +   |       | +        |          |       |       |
| “ persicinum (Reinke) Gomont. . . . .                              |     |       | +        |          |       |       |
| “ Valderianum (Delponte) Gomont. . . . .                           |     |       |          |          | +     | +     |
| Plectonema calothrichoides Gomont. . . . .                         |     |       | +        |          |       |       |
| “ Golenkinianum Gomont. . . . .                                    | +   |       |          |          |       |       |
| “ terebrans Born. & Flah. . . . .                                  |     |       |          |          | +     | +     |
| Pleurocapsa fuliginosa Hauck. . . . .                              |     |       | +        |          | +     | +     |
| Polycystis elabens Kuetz. . . . .                                  | +   | +     | +        | +        |       | +     |

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| <i>Polycystis pallida</i> (Kuetz.) Farlow. . . . .                       | +   |       | +        | +        | +     |       |
| <i>Rivularia atra</i> Roth. . . . .                                      | +   | +     | +        | +        | +     | +     |
| “ <i>Biasolettiana</i> Menegh. . . . .                                   |     | +     | +        | +        | +     |       |
| “ <i>Bornetiana</i> Setchell. . . . .                                    |     |       |          |          | +     | +     |
| “ <i>nitida</i> Ag. . . . .  | +   |       | +        | +        |       | +     |
| <i>Spirulina Meneghiniana</i> Zan. . . . .                               |     |       | +        |          |       |       |
| “ <i>Nordstedtii</i> Gomont. . . . .                                     | +   |       |          |          |       |       |
| “ <i>subsalsa</i> Oersted. . . . .                                       | +   | +     | +        | +        |       | +     |
| “ <i>versicolor</i> Cohn. . . . .  | +   |       |          |          |       |       |
| <i>Symploca hydroides</i> Kuetz. . . . .                                 |     |       |          | +        | +     |       |
| <i>Xenococcus Schousboei</i> Thuret. . . . .                             | +   |       | +        |          |       | +     |
| CHLOROPHYCEAE.   |     |       |          |          |       |       |
| <i>Acroblaste Reinschii</i> Wille. . . . .                               | +   |       | +        | —        |       |       |
| <i>Bolbocoleon piliferum</i> Prings. . . . .                             | +   |       | +        | +        | +     |       |
| <i>Bryopsis plumosa</i> (Huds.) Ag. . . . .                              | +   | +     | +        | +        | +     | +     |
| <i>Chaetomorpha aerea</i> (Dillw.) Kuetz. . . . .                        |     |       | +        | +        | +     | +     |
| “ <i>Linum</i> (Fl. Dan.) Kuetz. . . . .                                 | +   | +     | +        | +        | +     | +     |
| “ <i>Melagonium</i> (Web. & Mohr)<br>Kuetz. forma typica Kjellm. . . . . | +   |       | +        |          |       | +     |
| “ <i>Melagonium</i> forma rupicola<br>Aresch. . . . .                    | +   | +     | +        |          |       | +     |
| <i>Chlorochytrium Schmitzii</i> Rosenvinge. . . . .                      | +   |       |          |          |       |       |
| <i>Cladophora albida</i> (Huds.) Kuetz. . . . .                          |     |       |          | +        | +     |       |
| “ “ var. <i>refracta</i> Thuret. . . . .                                 | +   |       | +        | +        | +     | +     |
| “ <i>arcta</i> (Dillw.) Kuetz. . . . .                                   | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>centralis</i> Farlow. . . . .                                | +   |       |          |          |       |       |
| “ <i>expansa</i> (Mert.) Kuetz. . . . .                                  | +   | +     | +        | +        |       | +     |
| “ <i>flexuosa</i> (Griff.) Harv. . . . .                                 | +   | +     | +        | +        | +     | +     |
| “ <i>fracta</i> (Fl. Dan.) Kuetz. . . . .                                |     |       | +        | +        | —     |       |
| “ <i>glaucescens</i> (Griff.) Harv. . . . .                              | +   | +     | +        | +        | +     |       |
| “ <i>gracilis</i> (Griff.) Kuetz. . . . .                                | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>expansa</i> Farlow. . . . .                                  |     |       | +        |          |       |       |
| “ “ “ <i>tenuis</i> Farlow. . . . .                                      |     |       | +        |          |       |       |
| “ <i>hirta</i> Kuetz. . . . .  |     |       | +        | +        | +     |       |
| “ <i>Hutchinsiae</i> Kuetz. . . . .                                      |     |       | +        |          |       |       |
| “ “ var. <i>diffusa</i> (Harv.)<br>Farlow. . . . .                       |     |       | +        |          | +     |       |
| “ <i>laetevirens</i> Kuetz. . . . .                                      | +   | +     | +        |          |       |       |
| “ <i>lanosa</i> (Roth) Kuetz. . . . .                                    | +   |       | +        | +        | +     | +     |
| “ “ var. <i>uncialis</i> (Harv.) Thuret. . . . .                         |     | +     | +        |          | +     | +     |
| “ <i>Magdalenae</i> Harv. . . . .  |     |       |          |          | +     | +     |
| “ <i>refracta</i> Aresch. . . . .  | +   | +     | +        | +        | +     | +     |

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| <i>Cladophora Rudolphiana</i> (Ag.) Harv. . . . .                             | +   |       |          | +        | +     | +     |
| “ <i>rupestris</i> (L.) Kuetz. . . . .  | +   | +     | +        |          | +     | +     |
| <i>Codiolum gregarium</i> A. Br. . . . .                                      | +   |       | +        | +        |       |       |
| “ <i>longipes</i> Foslie. . . . .   | +   |       |          |          |       |       |
| “ <i>Petrocelidis</i> Kuckuck. . . . .  | +   |       |          |          |       |       |
| <i>Derbesia vaucheriaeformis</i> (Harv.) J. Ag. . . . .                       |     |       |          | +        |       |       |
| <i>Enteromorpha clathrata</i> (Roth) J. Ag. . . . .                           | +   | +     | +        | +        |       | +     |
| “ “ <i>var. Rothiana</i> (Le Jolis)<br>Farlow. . . . .                        |     |       | +        |          |       |       |
| “ <i>compressa</i> (L.) Grev. . . . .   | +   |       | +        | +        | —     |       |
| “ <i>crinita</i> (Roth) J. Ag. . . . .  | +   |       | +        |          | +     | +     |
| “ <i>cruciata</i> Collins. . . . .  | +   |       |          |          |       |       |
| “ <i>erecta</i> (Lyng.) J. Ag. . . . .  | +   | +     | +        | +        | +     | +     |
| “ <i>Hopkirkii</i> McCalla. . . . .   | +   | +     | +        | +        |       | +     |
| “ <i>intestinalis</i> (L.) Link. . . . .                                      | +   | +     | +        | +        | +     | +     |
| “ “ <i>forma cylindracea</i> J.<br>Ag. . . . .                                |     |       | +        | +        | +     | +     |
| “ “ <i>forma maxima</i> J. Ag.<br>Linza (L.) J. Ag. . . . .                   | +   | +     | +        | +        | +     | +     |
| “ <i>marginata</i> J. Ag. . . . .   |     |       | +        |          | +     | +     |
| “ <i>micrococca</i> Kuetz. . . . .  | +   |       | +        |          |       |       |
| “ “ <i>var. subsalsa</i> Kjellm.<br><i>minima</i> Naeg. . . . .               | +   |       | +        |          |       | +     |
| “ <i>percursa</i> (Ag.) J. Ag. . . . .  | +   | +     | +        | +        |       | +     |
| “ <i>prolifera</i> J. Ag. . . . .   | +   |       | +        | +        | +     | +     |
| “ <i>ramulosa</i> (Eng. Bot.) Hook.<br><i>torta</i> (Mert.) Reinbold. . . . . | +   |       | +        |          |       |       |
| <i>Entoderma Wittrockii</i> (Wille) Lagerh. . . . .                           |     |       | +        |          |       | +     |
| <i>Epicladia Flustrae</i> Reinke. . . . .                                     | +   | +     | +        |          |       | +     |
| <i>Gloeocystis zostericola</i> Farlow. . . . .                                |     |       |          | +        |       |       |
| <i>Gomontia polyrhiza</i> (Lagerh.) Born. & Flah. . . . .                     | +   |       | +        | +        | +     | +     |
| <i>Ilea fulvescens</i> (Ag.) J. Ag. . . . .                                   | +   | +     | +        | +        |       | +     |
| <i>Monostroma crepidinum</i> Farlow. . . . .                                  |     |       | +        | +        | +     | +     |
| “ <i>fuscum</i> (Post. & Rupr.) Wittr. . . . .                                | +   | +     | +        |          |       |       |
| “ <i>Grevillei</i> (Thuret) Wittr. . . . .                                    | +   |       | +        | +        | +     | +     |
| “ <i>Groenlandicum</i> J. Ag. . . . .   |     |       | +        |          |       |       |
| “ <i>latissimum</i> (Kuetz.) Wittr. . . . .                                   |     |       | +        | +        |       | +     |
| “ <i>leptodermum</i> Kjellm. . . . .  |     |       | +        |          |       |       |
| “ <i>pulchrum</i> Farlow. . . . .   |     |       | +        |          | +     | +     |
| “ <i>undulatum</i> Wittr. <i>var. Farlowii</i><br>Foslie. . . . .             |     |       | +        |          |       |       |
| “ <i>Vahlia</i> J. Ag. . . . .  |     |       | +        |          |       |       |
| <i>Pilinia maritima</i> (Kjellm.) Rosenvinge. . . . .                         | +   |       |          |          |       |       |

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| <i>Prasinocladus subsalsus</i> Davis. . . . .                           |     |        | +        |          |      |       |
| <i>Pringsheimia scutata</i> Reinke. . . . .                             | +   |        |          | +        |      | +     |
| <i>Protoderma marinum</i> Reinke. . . . .                               |     |        |          |          |      | +     |
| <i>Rhizoclonium Kernerii</i> Stockmayer. . . . .                        | +   | +      | +        |          |      |       |
| “ <i>riparium</i> (Roth) Harv. var. <i>implexum</i> Rosenvinge. . . . . | +   | +      | +        | +        | +    | +     |
| “ <i>riparium</i> var. <i>polyrhizum</i> Rosenvinge. . . . .            | +   |        |          |          | +    | +     |
| “ <i>tortuosum</i> Kuetz. . . . .                                       | +   | +      | +        | +        |      | +     |
| “ “ var. <i>polyrhizum</i> Holden. . . . .                              |     |        |          |          |      | +     |
| <i>Schizogonium laetevirens</i> Kuetz. . . . .                          | +   |        |          |          |      |       |
| <i>Ulothrix collabens</i> (Ag.) Thuret. . . . .                         |     |        | +        |          |      |       |
| “ <i>flacca</i> (Dillw.) Thuret. . . . .                                | +   | +      | +        | +        | +    | +     |
| “ <i>implexa</i> Kuetz. . . . .   |     |        | +        | +        | +    | +     |
| “ <i>variabilis</i> Kuetz. var. <i>marina</i> Wille. . . . .            |     |        |          |          |      | +     |
| <i>Ulva Lactuca</i> (L.) Le Jolis. . . . .                              | +   | +      | +        | +        | +    | +     |
| “ “ var. <i>mesenteriformis</i> (Roth) Collins. . . . .                 |     |        |          |          |      | +     |
| “ “ var. <i>rigida</i> (Ag.) Le Jolis. . . . .                          | +   | +      | +        | +        | +    | +     |
| <i>Urospora penicilliformis</i> (Roth) Aresch. . . . .                  | +   | +      | +        | +        | +    | +     |
| <i>Vaucheria litorea</i> Nordst. . . . .                                | +   |        | +        | +        |      | +     |
| “ <i>piloboloides</i> Thuret. . . . .                                   |     |        |          |          |      | +     |
| “ “ var. <i>compacta</i> Collins. . . . .                               |     |        | +        |          |      |       |
| “ <i>Thuretii</i> Woronin. . . . .                                      | +   |        | +        | +        |      | +     |
| PHAEOPHYCEAE.   |     |        |          |          |      |       |
| <i>Agarum Turnerii</i> Post. & Rupr. . . . .                            | +   | +      | +        |          |      |       |
| <i>Alaria esculenta</i> (L.) Grev. . . . .                              | +   | +      | +        |          | +    |       |
| “ <i>Pylaii</i> Grev. . . . .   | +   |        | +        |          |      |       |
| <i>Arthrocladia villosa</i> (Huds.) Duby. . . . .                       |     |        |          | +        | +    |       |
| <i>Ascocyclus orbicularis</i> (J. Ag.) Magnus. . . . .                  | +   | +      | +        | +        | +    | +     |
| <i>Ascophyllum Mackaii</i> (Turn.) Holmes & Batters. . . . .            |     |        |          | +        |      | +     |
| “ <i>nodosum</i> (L.) Le Jolis. . . . .                                 | +   | +      | +        | +        | +    | +     |
| <i>Asperococcus echinatus</i> (Mert.) Grev. . . . .                     | +   | +      | +        | +        | +    | +     |
| <i>Castagnea virescens</i> (Carm.) Thuret. . . . .                      | +   | +      | +        | +        | +    | +     |
| “ <i>Zosteræ</i> (Mohr) Thuret. . . . .                                 | +   |        | +        |          |      |       |
| <i>Chorda Filum</i> (L.) Stack. . . . .                                 | +   | +      | +        | +        | +    | +     |
| “ <i>tomentosa</i> Lyng. . . . .  |     |        | +        | +        | +    |       |
| <i>Chordaria flagelliformis</i> (Fl. Dan.) Ag. . . . .                  | +   | +      | +        | +        | +    | +     |
| “ “ var. <i>densa</i> Farlow. . . . .                                   |     |        | +        |          | +    |       |
| <i>Cladostephus spongiosus</i> (Lightf.) Ag. . . . .                    |     |        |          | +        | +    |       |
| “ <i>verticillatus</i> (Lightf.) Ag. . . . .                            |     |        |          | +        | +    | +     |
| <i>Desmarestia aculeata</i> (L.) Lamour. . . . .                        | +   | +      | +        | +        | +    | +     |

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| <i>Desmarestia viridis</i> (Fl. Dan.) Lamour. . . . .                 | +   | +     | +        | +        | +     | +     |
| <i>Desmotrichum Balticum</i> Kuetz. . . . .                           | +   |       |          |          |       | +     |
| “ <i>undulatum</i> (J. Ag.) Reinke. . . . .                           | +   | +     | +        | +        | +     | +     |
| <i>Dictyosiphon Ekmani</i> Aresch. . . . .                            | +   |       | +        |          |       |       |
| “ <i>foeniculaceus</i> (Huds.) Grev. . . . .                          | +   | +     | +        | +        | +     | +     |
| “ “ <i>var. Americanus</i><br>Collins. . . . .                        |     |       |          | +        | +     | +     |
| “ <i>hippuroides</i> (Lyng.) Aresch. . . . .                          | +   | +     | +        |          | +     |       |
| “ “ <i>var. fragilis</i> (Harv.)<br>Kjellm. . . . .                   | +   |       | +        |          |       |       |
| “ <i>hispidus</i> Kjellm. . . . .                                     | +   |       | +        |          |       |       |
| “ <i>Macounii</i> Farlow. . . . .                                     | +   |       |          |          |       |       |
| <i>Ectocarpus aecidioides</i> Rosenvinge. . . . .                     | +   |       | +        |          | +     |       |
| “ <i>confervoides</i> (Roth) Le Jolis. . . . .                        | +   | +     | +        | +        | +     | +     |
| “ “ <i>var. hiemalis</i> (Crouan)<br>Kuckuck. . . . .                 |     |       | +        | +        |       |       |
| “ “ <i>var. subulatus</i> Hauck. . . . .                              |     |       |          |          |       | +     |
| “ “ <i>var. brumalis</i> Holden. . . . .                              |     |       |          |          |       | +     |
| “ <i>dasycarpus</i> Kuckuck. . . . .                                  |     |       |          | +        | +     |       |
| “ <i>elegans</i> Thuret. . . . .                                      |     |       |          | +        |       |       |
| “ <i>fasciculatus</i> Harv. . . . .                                   | +   | +     | +        | +        | +     |       |
| “ <i>granulosus</i> (Eng. Bot.) Ag. . . . .                           |     |       | +        | +        | -     |       |
| “ “ <i>var. tenuis</i> Farlow. . . . .                                |     | -     |          | +        | +     |       |
| “ <i>lutosus</i> Harv. . . . .  |     |       |          | +        |       |       |
| “ <i>Mitchellae</i> Harv. . . . .                                     |     |       |          | +        | +     |       |
| “ <i>ovatus</i> Kjellm. . . . .                                       |     |       |          | +        |       |       |
| “ <i>penicillatus</i> J. Ag. . . . .                                  |     |       |          | +        | +     | +     |
| “ <i>siliculosus</i> (Dillw.) Ag. . . . .                             | +   |       | +        | +        | +     | +     |
| “ <i>subcorymbosus</i> Farlow. . . . .                                |     |       | +        |          |       | +     |
| “ <i>terminalis</i> Kuetz. . . . .                                    |     | +     | +        |          | +     | +     |
| “ <i>tomentosoides</i> Farlow. . . . .                                |     |       | +        |          |       |       |
| “ <i>tomentosus</i> (Huds.) Lyng. . . . .                             | +   | +     | +        | +        | +     | +     |
| <i>Elachista fasciculata</i> <i>var. major</i> (Reinke) Gran. . . . . | +   |       |          |          |       |       |
| “ <i>fucicola</i> (Volley) Fries. . . . .                             | +   | +     | +        | +        | +     | +     |
| “ <i>lubrica</i> Rupr. . . . .  | +   |       |          |          |       |       |
| “ <i>stellaris</i> <i>var. Chordae</i> Aresch. . . . .                |     |       |          | +        |       |       |
| <i>Fucus Areschougii</i> Kjellm. . . . .                              | +   |       | +        |          |       |       |
| “ <i>ceranoides</i> L. . . . .  |     |       |          | +        |       | +     |
| “ <i>edentatus</i> De la Pyl. . . . .                                 | +   | +     | +        | +        | +     | +     |
| “ <i>evanescens</i> Ag. . . . .                                       | +   | +     | +        | +        | +     | +     |
| “ <i>filiformis</i> Gmelin. . . . .                                   | +   | +     | +        |          |       |       |
| “ <i>platycarpus</i> Thuret. . . . .                                  | +   |       | +        | +        | +     | +     |
| “ <i>vesiculosus</i> L. . . . .                                       | +   | +     | +        | +        | +     | +     |

|  | Me. | N. H. | N. Mass. | S. Mass. | R. I. | Conn. |
|--|-----|-------|----------|----------|-------|-------|
| <i>Fucus vesiculosus</i> var. <i>sphaerocarpus</i> Farlow. . . . .   | +   |       | +        |          |       | +     |
| “ “ var. <i>spiralis</i> Farlow. . . . .                             |     |       | +        | +        |       | +     |
| “ “ var. <i>gracillimus</i> Collins. . . . .                         |     |       |          | +        |       |       |
| <i>Halothrix lumbricalis</i> (Kuetz.) Reinke. . . . .                | +   |       | +        |          | +     | +     |
| <i>Haplospora globosa</i> Kjellm. . . . .                            |     |       |          | +        |       |       |
| <i>Hecatonema maculans</i> (Collins) Sauvageau. . . . .              | +   |       | +        |          |       |       |
| <i>Isthmoplea sphaerophora</i> (Harv.) Kjellm. . . . .               |     |       | +        |          |       |       |
| <i>Laminaria caperata</i> De la Pyl. . . . .                         | +   | +     | +        |          |       |       |
| “ <i>digitata</i> (L.) Lamour. var. <i>typica</i><br>Foslie. . . . . | +   |       | +        | +        | +     | +     |
| “ “ var. <i>complanata</i> Foslie. . . . .                           | +   |       | +        |          |       |       |
| “ “ var. <i>ensifolia</i> (Kuetz.)<br>Foslie. . . . .                | +   |       | +        |          |       |       |
| “ <i>intermedia</i> var. <i>cucullata</i> Foslie. . . . .            |     |       |          |          |       | +     |
| “ “ var. <i>longipes</i> Foslie. . . . .                             |     |       |          |          |       | +     |
| “ “ var. <i>ovata</i> Foslie. . . . .                                |     |       |          |          | +     | +     |
| “ <i>longicuris</i> De la Pyl. . . . .                               | +   | +     | +        |          | +     | +     |
| “ <i>Phyllitis</i> (Stack.) Lamour. . . . .                          |     | +     | +        | +        | +     | +     |
| “ <i>Platymeris</i> De la Pyl. . . . .                               | +   | +     | +        |          |       |       |
| “ <i>saccharina</i> (L.) Lamour. . . . .                             | +   | +     | +        | +        | +     | +     |
| “ <i>stenophylla</i> (Harv.) J. Ag. . . . .                          | +   |       | +        |          |       |       |
| <i>Leathesia difformis</i> (L.) Aresch. . . . .                      | +   | +     | +        | +        | +     | +     |
| <i>Mesogloia divaricata</i> (Ag.) Kuetz. . . . .                     | +   |       | +        | +        | +     | +     |
| <i>Microspongium gelatinosum</i> Reinke. . . . .                     | +   |       |          |          |       |       |
| <i>Myriactis pulvinata</i> Kuetz. var. <i>minor</i> Farlow.          |     |       |          | +        |       |       |
| <i>Myrionema Balticum</i> (Reinke) Foslie. . . . .                   |     |       | +        |          |       |       |
| “ <i>foecundum</i> (Stromf.) Foslie. . . . .                         |     |       |          |          | +     | +     |
| “ <i>globosum</i> (Reinke) Foslie. . . . .                           |     |       | +        |          |       |       |
| “ <i>vulgare</i> Thuret. . . . .                                     | +   | +     | +        | +        | +     |       |
| <i>Myriotrichia clavaeformis</i> Harv. . . . .                       |     |       | +        | +        | +     |       |
| “ <i>filiformis</i> Harv. . . . .                                    | —   |       | +        | +        | +     |       |
| <i>Phaeosaccion Collinsii</i> Farlow. . . . .                        |     |       | +        |          |       |       |
| <i>Phyllitis fascia</i> (Fl. Dan.) Kuetz. . . . .                    | +   | +     | +        | +        | +     | +     |
| “ <i>zosteraefolia</i> Reinke. . . . .                               |     |       | +        |          |       |       |
| <i>Punctaria latifolia</i> Grev. . . . .                             | +   |       | +        | +        | +     | +     |
| “ <i>plantaginea</i> (Roth) Grev. . . . .                            | +   | +     | +        | +        | +     | +     |
| <i>Pylaiella littoralis</i> (L.) Kjellm. . . . .                     | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>fluviatilis</i> Hauck. . . . .                           |     |       | +        |          |       |       |
| “ “ var. <i>robusta</i> Farlow. . . . .                              | +   |       | +        | +        | +     |       |
| “ “ var. <i>varia</i> Kjellm. . . . .                                | +   |       |          |          |       |       |
| <i>Ralfsia Borneti</i> Kuckuck. . . . .                              | +   |       |          |          |       | +     |
| “ <i>clavata</i> (Carm.) Farlow . . . . .                            | +   | +     | +        | +        | +     |       |
| “ <i>deusta</i> J. Ag. . . . .                                       | +   | +     | +        |          |       |       |

|   | Me. | N. H. | N. Mass. | S. Mass. | R. I. | Conn. |
|---|-----|-------|----------|----------|-------|-------|
| <i>Ralfsia pusilla</i> (Stromf.) Holmes & Batters. . . . .                  | +   |       | +        |          | +     |       |
| “ <i>verrucosa</i> Aresch. . . . .  | +   | +     | +        | +        | +     | +     |
| <i>Saccorhiza dermatodea</i> (De la Pyl.) J. Ag. . . . .                    | +   | +     | +        |          |       |       |
| <i>Sargassum bacciferum</i> (Turn.) J. Ag. . . . .                          |     |       |          | +        |       |       |
| “ <i>Filipendula</i> Ag. . . . .  |     |       |          | +        | +     | +     |
| “ “ <i>forma subdentatum</i> J. Ag. . . . .                                 |     |       |          | +        | +     | +     |
| <i>Scaphospora Kingii</i> Farlow. . . . .                                   |     |       |          | +        |       |       |
| <i>Scytosiphon lomentarius</i> (Lyng.) J. Ag. . . . .                       | +   | +     | +        | +        | +     | +     |
| “ “ <i>var. complanatus</i> Rosen-<br>vinge. . . . .                        |     |       |          |          |       | +     |
| <i>Sorocarpus uvaeformis</i> Prings. . . . .                                |     |       |          | +        |       |       |
| <i>Sphacelaria cirrhosa</i> (Roth) Ag. . . . .                              |     |       | +        | +        | +     | +     |
| “ <i>racemosa</i> Grev. <i>var. arctica</i> (Harv.)<br>Reinke. . . . .      | +   |       |          |          |       |       |
| “ <i>radicans</i> (Dillw.) Ag. . . . .                                      | +   | +     | +        | +        | +     | +     |
| <i>Stictyosiphon Griffithsianus</i> (Le Jolis) Holmes<br>& Batters. . . . . | +   |       | +        |          |       |       |
| “ <i>subsimplex</i> Holden. . . . .   |     |       |          |          |       | +     |
| <i>Stilophora rhizodes</i> (Ehrh.) J. Ag. . . . .                           |     |       |          | +        | +     | +     |
| <i>Streblonema Chordariae</i> (Farlow) De Toni . . . . .                    | +   |       |          | +        | +     |       |
| “ <i>fasciculatum</i> Thuret. . . . .                                       | +   |       |          |          |       |       |
| “ <i>reptans</i> . (Crouan) Farlow. . . . .                                 |     |       | +        |          | +     | +     |
| <i>Striaria attenuata</i> Grev. . . . .                                     |     |       |          | +        | +     |       |
| RHODOPHYCEAE.   |     |       |          |          |       |       |
| <i>Actinococcus subcutaneus</i> (Lyng.) Schmitz. . . . .                    | +   | +     | +        | +        | +     | +     |
| “ <i>aggregatus</i> Schmitz. . . . .  |     |       |          | +        |       |       |
| <i>Agardhiella tenera</i> (J. Ag.) Schmitz. . . . .                         |     |       | +        | +        | +     | +     |
| <i>Ahnfeltia plicata</i> (Turn.) Fries. . . . .                             | +   | +     | +        | +        | +     | +     |
| <i>Antithamnion Americanum</i> (Harv.) Farlow. . . . .                      |     |       | +        | +        | +     | +     |
| “ <i>boreale</i> (Gobi) Kjellm. . . . .                                     | +   |       | +        |          |       |       |
| “ <i>cruciatum</i> (Ag.) Naeg. . . . .                                      |     |       |          | +        | +     | +     |
| “ “ <i>var. radicans</i> J. Ag. . . . .                                     |     |       |          | +        |       |       |
| “ <i>floccosum</i> (Muell.) Kleen. . . . .                                  | +   |       | +        |          |       |       |
| “ <i>plumula</i> (Ellis) Thuret. . . . .                                    |     |       |          | +        | +     |       |
| “ <i>Pylaisei</i> (Mont.) Kjellm. . . . .                                   | +   |       | +        |          | +     |       |
| <i>Bangia ciliaris</i> Carm. . . . .  |     |       | +        |          | +     | +     |
| “ <i>fusco-purpurea</i> (Dillw.) Lyng. . . . .                              | +   |       | +        | +        | +     | +     |
| <i>Bostrychia rivularis</i> Harv. . . . .                                   |     |       |          |          |       | +     |
| <i>Callithamnion Baileyi</i> Harv. . . . .                                  | -   |       | +        | +        | +     | +     |
| “ “ <i>var. boreale</i> Harv. . . . .                                       |     |       | +        |          |       |       |
| “ “ <i>var. laxum</i> Farlow. . . . .                                       |     |       |          | +        | +     |       |
| “ “ <i>var. Rochei</i> Harv. . . . .  |     |       |          | -        |       |       |



|  | Me. | N. H. | N. Mass. | S. Mass. | R. I. | Conn. |
|--|-----|-------|----------|----------|-------|-------|
| <i>Callithamnion byssoideum</i> Arn. . . . .               |     |       | +        | +        | +     | +     |
| “ “ var. <i>unilaterale</i> Harv. . . . .                  |     |       | +        | +        |       |       |
| “ <i>corymbosum</i> (Eng. Bot.) Ag. . . . .                |     |       | +        | +        | +     | +     |
| “ “ var. <i>secundatum</i> Harv. . . . .                   |     |       | —        |          |       |       |
| “ <i>roseum</i> (Roth.) Harv. . . . .                      |     |       |          | +        | +     | +     |
| “ <i>tetragonum</i> (With.) Ag. . . . .                    |     |       |          | +        | +     | +     |
| <i>Callymenia reniformis</i> (Turn.) J. Ag. . . . .        |     |       | +        |          |       |       |
| <i>Caloglossa Leprieurii</i> (Mont.) J. Ag. . . . .        |     |       |          |          |       | +     |
| <i>Ceramium arborescens</i> J. Ag. . . . .                 | +   |       | +        | +        | +     |       |
| “ <i>Capri-Cornu</i> (Reinsch) Farlow. . . . .             |     |       |          |          |       | +     |
| “ <i>circinatum</i> (Kuetz.) J. Ag. . . . .                |     |       |          |          |       | +     |
| “ <i>fastigiatum</i> Harv. . . . .                         |     |       | +        | +        | +     | +     |
| “ <i>Hooperi</i> Harv. . . . .                             | +   |       | +        |          |       |       |
| “ <i>pedicellatum</i> J. Ag. . . . .                       |     |       |          |          | +     |       |
| “ <i>rubrum</i> (Huds.) Ag. . . . .                        | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>corymbosum</i> J. Ag. . . . .                  |     |       | +        |          |       | +     |
| “ “ var. <i>decurrens</i> (Kuetz.) Harv. . . . .           |     |       |          | —        |       | +     |
| “ “ var. <i>proliferum</i> Harv. . . . .                   |     |       |          |          | —     | +     |
| “ “ var. <i>secundatum</i> (Lyng.) Harv. . . . .           | +   |       | +        |          |       | +     |
| “ <i>squarrosum</i> (Harv.) J. Ag. . . . .                 |     |       | +        |          |       |       |
| “ <i>strictum</i> (Kuetz.) Harv. . . . .                   | +   | +     | +        | +        | +     | +     |
| “ <i>tenuissimum</i> (Lyng.) J. Ag. . . . .                |     |       |          | +        | +     | +     |
| “ “ var. <i>arachnoideum</i> (J. Ag.) Farlow. . . . .      |     |       | —        |          | +     | +     |
| “ “ var. <i>patentissimum</i> Harv. . . . .                |     |       | —        | +        | +     |       |
| <i>Champia parvula</i> (Ag.) Harv. . . . .                 |     |       | +        | +        | +     | +     |
| <i>Chantransia Daviesii</i> (Dillw.) Thuret. . . . .       | +   |       | +        | +        | +     |       |
| “ <i>secundata</i> (Lyng.) Thuret. . . . .                 | +   | +     |          |          |       | +     |
| “ <i>Thuretii</i> Bornet mss. . . . .                      |     |       | +        | +        |       |       |
| “ <i>virgatula</i> (Harv.) Thuret. . . . .                 | +   | +     | +        | +        | +     | +     |
| <i>Chondria dasyphylla</i> (Woodw.) Ag. . . . .            |     |       |          | +        | +     | +     |
| “ <i>sedifolia</i> Harv. . . . .                           |     |       |          | +        | +     |       |
| “ <i>tenuissima</i> (Good. & Woodw.) Ag. . . . .           |     |       | +        | +        | +     | +     |
| “ “ var. <i>Baileyana</i> (Harv.) J. Ag. . . . .           |     |       | +        | +        | +     | +     |
| <i>Chondrus crispus</i> (L.) Stack. . . . .                | +   | +     | +        | +        | +     | +     |
| <i>Choreocolax Polysiphoniae</i> Reinsch. . . . .          | +   |       | +        |          | +     | +     |
| <i>Corallina officinalis</i> L. . . . .                    | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>profunda</i> Farlow. . . . .                   |     |       | +        |          |       |       |
| “ “ var. <i>spathulaeformis</i> (Kuetz.) Ardisson. . . . . | +   |       |          |          | +     |       |
| <i>Cystoclonium purpurascens</i> (Huds.) Kuetz. . . . .    | +   | +     | +        | +        | +     | +     |
| “ “ var. <i>cirrhosum</i> Harv. . . . .                    | +   | —     | +        | +        | +     | +     |
| <i>Dasya elegans</i> (Mart.) Ag. . . . .                   |     |       | +        | +        | +     | +     |

|  | Me. | N. H. | N. Mass. | S. Mass. | R. I. | Conn. |
|--|-----|-------|----------|----------|-------|-------|
| <i>Delesseria alata</i> (Huds.) Lamour. . . . .            | +   | +     | +        |          |       |       |
| “ <i>angustissima</i> Griff. . . . .                       |     |       | +        |          |       |       |
| “ <i>sinuosa</i> (Good. & Woodw.) Lamour. . . . .          | +   | +     | +        | +        | +     | +     |
| <i>Erythrotrichia ceramicola</i> (Lyng.) Aresch. . . . .   | +   |       | +        | +        | +     | +     |
| <i>Euthora cristata</i> (L.) J. Ag. . . . .                | +   | +     | +        |          | +     |       |
| <i>Gelidium crinale</i> (Turn.) J. Ag. . . . .             | -   |       | +        | +        | +     | +     |
| <i>Gigartina mamillosa</i> (Good. & Woodw.) J. Ag. . . . . | +   | +     | +        | +        | +     |       |
| <i>Gloiosiphonia capillaris</i> (Huds.) Carm. . . . .      | +   | +     | +        | +        | +     | +     |
| <i>Goniotrichum elegans</i> (Chauv.) Le Jolis. . . . .     |     |       |          | +        | +     | +     |
| “ <i>ramosum</i> (Thwaites) Hauck. . . . .                 |     |       | +        |          |       | +     |
| <i>Gracilaria multipartita</i> (Clem.) Ag. . . . .         |     |       |          | +        | -     | +     |
| “ “ <i>var. angustissima</i> Harv. . . . .                 |     |       | +        | +        | +     | +     |
| <i>Griffithsia Bornetiana</i> Farlow. . . . .              |     |       | +        | +        | +     | +     |
| “ <i>tenuis</i> Ag. . . . .                                |     |       |          | +        |       |       |
| <i>Grinnellia Americana</i> (Ag.) Harv. . . . .            |     |       | +        | +        | +     | +     |
| <i>Gymnogongrus Griffithsiae</i> (Turn.) Mart. . . . .     |     |       |          | +        | +     |       |
| “ <i>Norvegicus</i> (Turn.) J. Ag. . . . .                 | +   |       | +        |          |       |       |
| <i>Halosaccion ramentaceum</i> (L.) J. Ag. . . . .         | +   | -     | +        |          |       |       |
| “ “ <i>var. gladiatum</i> Eaton . . . . .                  | +   |       |          |          |       |       |
| “ <i>Scopula</i> Stromf. . . . .                           | +   |       |          |          |       |       |
| <i>Harveyella mirabilis</i> (Reinsch) Schmitz. . . . .     | +   |       | +        | +        | +     |       |
| <i>Hildenbrandia Prototypus</i> Nardo. . . . .             | +   | +     | +        | +        | +     | +     |
| <i>Hypnea musciformis</i> (Wulf.) Lamour. . . . .          |     |       |          | +        | +     |       |
| <i>Lithothamnion circumscriptum</i> Stromf. . . . .        | +   |       |          |          |       |       |
| “ <i>colliculosum</i> Foslie. . . . .                      | +   |       | +        |          |       |       |
| “ <i>compactum</i> Kjellm. . . . .                         | +   | +     | +        |          |       |       |
| “ <i>evanescens</i> Foslie. . . . .                        | +   |       |          |          |       |       |
| “ <i>flabellatum</i> Rosenvinge. . . . .                   | +   |       |          |          |       |       |
| “ <i>foecundum</i> Foslie. . . . .                         | +   |       |          |          |       |       |
| “ <i>laeve</i> (Stromf.) Foslie. . . . .                   | +   |       | +        |          |       |       |
| “ <i>laevigatum</i> Foslie. . . . .                        | +   |       |          |          |       |       |
| “ <i>Lenormandi</i> (Aresch.) Foslie. . . . .              | +   |       | +        |          |       | +     |
| “ <i>Norvegicum</i> (Aresch.) Kjellm. . . . .              | +   |       |          |          |       |       |
| “ <i>polymorphum</i> (L.) Aresch. . . . .                  |     |       |          |          | +     |       |
| “ <i>Ungeri</i> Kjellm. . . . .                            | +   |       |          |          |       |       |
| “ “ <i>var. fastigiatum</i> Foslie. . . . .                | +   | +     |          |          |       |       |
| <i>Lomentaria rosea</i> (Harv.) Thuret. . . . .            |     | -     | +        | +        | +     |       |
| “ <i>uncinata</i> Menegh. . . . .                          |     |       | +        | +        | +     | +     |
| “ “ <i>var. filiformis</i> Harv. . . . .                   |     |       |          | +        | -     |       |
| <i>Melobesia Corallinae</i> Crouan. . . . .                |     |       |          | +        |       |       |
| “ <i>farinosa</i> Lamour. . . . .                          |     |       | +        | +        | +     |       |
| “ <i>Lejolisii</i> Rosanoff. . . . .                       | +   | +     | +        | +        | +     | +     |
| “ <i>macrocarpa</i> Rosanoff. . . . .                      |     |       | +        | +        |       |       |

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| Melobesia membranacea (Esper) Lamour. . . . .      |     |       | +        | +        | +     |       |
| “ pustulata Lamour. . . . .                        |     | +     | +        | +        | +     |       |
| Nemalion multifidum (Web. & Mohr) J. Ag. . . . .   | +   | +     | +        | +        | +     | +     |
| Nemastoma Bairdii Farlow. . . . .                  |     |       |          | +        |       |       |
| Petrocelis cruenta J. Ag. . . . .                  | +   | +     | +        | +        |       |       |
| Peysonnellia Rosenvingii Schmitz. . . . .          | +   |       | +        |          |       |       |
| Phyllophora Brodiaei (Turn.) J. Ag. . . . .        | +   | +     | +        | +        | +     | +     |
| “ membranifolia (Good. & Woodw.)<br>J. Ag. . . . . | +   | +     | +        | +        | +     | +     |
| “ Traillii Holmes. . . . .                         | +   | +     | +        | +        | +     | +     |
| Pleonosporium Borreri (Eng. Bot.) Naeg. . . . .    |     |       |          | +        | +     | +     |
| Plumaria elegans (Bonnem.) Schmitz. . . . .        | +   | +     | +        | +        | +     | +     |
| Polyides rotundus (Gmel.) Grev. . . . .            | +   | +     | +        | +        | +     | +     |
| Polysiphonia atrorubescens (Dillw.) Grev. . . . .  |     |       | +        | +        | +     | +     |
| “ elongata (Huds.) Harv. . . . .                   |     |       | +        | +        | +     | +     |
| “ fastigiata (Roth) Grev. . . . .                  | +   | +     | +        | +        | +     | +     |
| “ fibrillosa (Dillw.) Grev. . . . .                |     |       | —        | +        | +     | +     |
| “ Harveyi Bailey. . . . .                          | +   | +     | +        | +        | +     | +     |
| “ nigrescens (Dillw.) Grev. . . . .                | +   | +     | +        | +        | +     | +     |
| “ “ var. affinis Harv. . . . .                     |     |       | +        | +        | +     | +     |
| “ “ var. Durkeei Harv. . . . .                     |     |       |          | +        | +     | +     |
| “ “ var. fucoides Harv. . . . .                    |     |       | +        | +        | +     | +     |
| “ Olneyi Harv. . . . .                             | +   | +     | +        | +        | +     | +     |
| “ subtilissima Mont. . . . .                       | +   |       | +        |          | +     | +     |
| “ urceolata (Lightf.) Grev. . . . .                | +   | +     | +        | +        | +     | +     |
| “ “ var. formosa (Suhr) Ag. . . . .                |     |       |          | +        | +     | +     |
| “ “ var. patens (Dillw.) Grev. . . . .             | +   | +     | +        | +        | +     | +     |
| “ variegata (Ag.) Zan. . . . .                     |     |       | +        | +        | +     | +     |
| “ vestita J. Ag. . . . .                           |     |       |          | +        |       |       |
| “ violacea (Roth) Grev. . . . .                    | +   | +     | +        | +        | +     | +     |
| “ “ var. flexicaulis Harv. . . . .                 |     |       | +        | +        |       |       |
| Porphyra coccinea J. Ag. . . . .                   |     | +     |          |          |       |       |
| “ laciniata (Lightf.) Ag. . . . .                  | +   | +     | +        | +        | +     | +     |
| “ leucosticta Thuret. . . . .                      |     |       | +        | +        | +     | +     |
| “ miniata Ag. . . . .                              | +   | +     | +        |          |       |       |
| Ptilota pectinata (Gunner) Kjellm. . . . .         | +   | +     | +        | +        | —     | +     |
| Rhodochorton membranaceum Magnus. . . . .          | +   | +     | +        |          |       | +     |
| “ parasiticum Holmes. . . . .                      |     | +     | +        |          |       |       |
| “ Rothii (Eng. Bot.) Naeg. . . . .                 | +   | +     | +        |          | +     | +     |
| Rhodomela Rochei Harv. . . . .                     |     |       |          | +        | +     | +     |
| “ subfusca (Woodw.) Ag. . . . .                    | +   | +     | +        | +        | +     |       |
| “ “ var. gracilis (Harv.) J. Ag. . . . .           |     |       | +        | +        | +     |       |
| “ virgata Kjellm. . . . .                          |     |       |          | +        | +     |       |

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| Rhodophyllis dichotoma (Lepechin) Gobi. . . . . |     |       | +        |          |       |       |
| Rhodymenia palmata (L.) Grev. . . . .           | +   | +     | +        | +        | +     | +     |
| “ “ var. latifolia Rosenvinge.                  |     |       | +        |          | +     |       |
| “ “ var. Sarniensis (Mert.)<br>Grev. . . . .    | +   |       |          |          |       |       |
| Scinaia furcellata (Turn.) Bivona. . . . .      |     |       |          | +        | +     | +     |
| Seirospora Griffithsiana Harv. . . . .          |     |       |          | +        | +     | +     |
| Spermothamnion Turneri (Mert.) Aresch. . . . .  |     |       |          | +        | +     | +     |
| Spyridia filamentosa (Wulf.) Harv. . . . .      |     |       |          | +        | +     | +     |
| Sterrocolax decipiens Schmitz. . . . .          | +   |       |          |          | +     | +     |

THE TEACHING BOTANIST<sup>1</sup> by W. F. Ganong, Ph.D., of Smith College, is really two books in one. Part I consists of a series of eight essays on botanical pedagogics. These are all good but those on the following topics are pre-eminently valuable: What Botany is of most worth? Things essential to good Botanical Teaching; Botanical Collections and other Illustrations; Some common Errors. It would be hard to find a secondary school teacher of botany anywhere who would not profit greatly by reading and digesting these brief essays. They abound in breezy, scientific common sense and suggest much that is new to most teachers.

Part II contains a scheme for a year's work in the laboratory. It deals largely with the physiological and somewhat with the ecological side of botany; the aspects most interesting to the average student. Many of the experiments and manipulations are wholly new, at least as regards their form, and the whole series is a practicable one. — J. Y. B.

<sup>1</sup> Duodecimo, viii and 270 pp. Macmillan & Co., New York, 1899.