

**COMMONWEALTH OF AUSTRALIA**

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## CHAETANGIACEAE

## GLOIOPHLOEA J. Agardh

- GLOIOPHLOEA SCINAIROIDES J. Agardh. De Toni 1897, 107. Setchell 1914a, 112. *Scinaia furcellata*, Harvey 1863, Syn. n. 458; Alg. Aus. Exs. n. 348. — MR. Drift, Jan. 1946. VB. Drift, Jan. 1948. PB. Drift, Dec. 1948.

## GALAXAURA Lamouroux

- GALAXAURA SPATHULATA Kjellman 1900, 74, t. 12, f. 5-12; t. 20, f. 35. De Toni 1924, 132. — PB. Drift, Jan. 1946. These specimens agree well with Kjellman's description and figures of *G. spathulata*. The Australian species which Kjellman described need re-examining with abundant material, as Howe (1918, 191) has shown that tetrasporic and sexual individuals of the same species may differ considerably in their anatomy and have been placed in different groups as distinct species by Kjellman. The Kangaroo Island specimens are sterile. In Pt. II, 161, they were reported as *Brachycladia marginata*.

## GELIDIALES — GELIDIACEAE

## GELIDIUM Lamouroux

- GELIDIUM AUSTRALE J. Agardh 1876, 550. De Toni 1897, 153. Lucas and Perrin 1947, 143. — MR. Drift, Jan. 1946. VB. In shaded parts of the large littoral pool, south side of Ellen Point, Jan. 1946, 1947, 1948, 1949 and drift, Jan. 1948. PB. In the sublittoral fringe and to half a meter over edge of the reef, all seasons.

- GELIDIUM PUSILLUM (Stackhouse) Le Jolis. De Toni 1897, 147. Dawson 1944, 258. *Acrorarpus pusillus*, Kützing 1868, t. 37. — AR. Upper littoral in shaded parts of low cliffs, occasionally in the lower littoral, throughout the inlet, all seasons. EB. Lower littoral, in a dense mat, all seasons. MR. In *Hormosira-Cystophora* pools (sometimes heavily epiphytic on the mollusc *Neothais textiliosa*), Jan. 1946. WB. Littoral on reef near beach, Jan. 1945, 1946. VB. Lower littoral, north side of Ellen Point, Jan. 1948, and in pool 1, south side of Ellen Point, Jan. 1946. PB. Rear littoral, on sloping and vertical rock, all seasons. CW. Mid littoral, south side, Jan. 1946. RP. Lower littoral, all seasons.

Original determination by Miss V. May. This plant shows considerable ecological variation. At AR and RP it forms dense entangled mats, to 1 cm. thick; at PB it forms a thin mat on shaded rock, but when growing in pools may reach a height of 2 cm., with less branched, rather tufted fronds.

## PTEROCLADIA J. Agardh

- PTEROCLADIA CAPILLACEA (Gmelin) Bornet and Thuret. De Toni 1897, 162. Moore 1945, 336, pl. 45, f. 1-4, pl. 46. — BH. Upper sublittoral, Jan. 1948. CC. Lower littoral in sheltered inlet, Jan. 1948. CW. In a rock pool, south side, Oct. 1948. RP. Upper sublittoral, Jan. 1947.

- PTEROCLADIA LUCIDA (R. Brown) J. Agardh. De Toni 1897, 162. Moore 1945, 338, pl. 45, f. 5-10; pl. 47, 48, 49. Lucas and Perrin 1947, 144, f. 19. — VB. Drift, Jan. 1949. PB. Sublittoral fringe, main reef, rare, Jan. 1948. CW. Drift, Jan. 1946. AB. Drift, Aug. 1948.

## CRYPTONEMIALES — DUMONTIACEAE

## DASYPHLOEA Montagne

- DASYPHLOEA TASMANICA Harvey 1859, pl. 115. De Toni 1905, 1,629. Lucas and Perrin 1947, 384, f. 193. *Nizgophloea tasmanica* (Harvey) J. Agardh 1876, 256. — PB. Drift, Jan. 1948.

## RHIZOPHYLLIDACEAE

## RHODOPELTIS Harvey

RHODOPELTIS AUSTRALIS (Sonder) Schmitz. Harvey 1863, pl. 264. De Toni 1905, 1,671. *Amphiroa australis* Sonder 1846, 188. Harvey 1859, pl. 77. — CC. Drift, Jan. 1947.

The position of this algae is uncertain. Sonder first described it as *Amphiroa australis*, and later Harvey (1863, pl. 264) figured the fertile areas as an epiphyte which he called *Rhodopeltis australis*. W. van Bosse (1904, 104) later renamed it *Litharthron australis* on vegetative features. Yamada (1931b, 75) has described a second species of *Rhodopeltis*, with similar fertile areas (nemathecia) on the thallus segments.

## SQUAMARIACEAE

## ETHELIA W. v. Bosse

ETHELIA AUSTRALIS (Sonder) W. v. Bosse. W. v. Bosse 1921, 300. De Toni 1924, 594. *Peyssonnelia australis* Sonder, Harvey 1859, pl. 81. Lucas and Perrin 1947, 388, f. 196. — WB. Drift, Jan. 1946. Reported in Pt. II, p. 161, as *Peyssonnelia australis*.

## PEYSSONNELIA Decaisne

PEYSSONNELIA GUNNIANA J. Agardh 1876, 387. De Toni 1905, 1,698. W. v. Bosse 1921, 272. *P. rubra*, Harvey, Alg. Aus. exs. n. 327. — AR. Upper sublittoral near Muston, Jan. 1946, July 1947, Jan. 1948. BH, Upper sublittoral, Oct. 1947. PB. In a shaded pool, rear littoral, Jan. 1947.

## CORALLINACEAE — CORALLINEAE

## AMPHIROA Lamouroux

AMPHIROA ANCEPS (Lamarck) Decaisne. Harvey 1847, 98, pl. 37. De Toni 1905, 1,815. W. v. Bosse 1904, 93, pl. 16, f. 6-8. — CC. Sublittoral fringe, Jan. 1948. South Coast. Winter 1939, coll. J. Cork.

## CORALLINA Linnaeus

CORALLINA CUVIERI Lamouroux. Harvey 1847, 106. De Toni 1905, 1,848. Manza 1940, 279. Lucas and Perrin 1947, 399. — MR, WR, CC and VB. Lower littoral and drift. PB. *Cystophora*-coralline association, sublittoral fringe and deeper pools. CW and AB. Lower littoral and drift. Present in all seasons, and common, though often stunted in the lower littoral throughout the Rocky Shore Formation.

This is a very variable species, especially in the development of slender lateral ramelli which arise from the main stems. The articulations of the main stem are relatively constant in shape and size and provide a good specific character.

The following forms are included under *C. cuvieri* by De Toni: *Jania granifera* Sonder, *Cor. crispata* Lamx., *Cor. gracilis* Lamx.?, *J. subulata* Sonder. In addition the following are probably only forms of *C. cuvieri*: *Jania rosea* Dene (Harvey 1847, 105, pl. 40), *Cor. calliptera* Kütz. (1858, t. 72 a-b), *Cor. plumifera* Kütz. (1858, t. 71 c-d) and probably *Cor. clavigera* Kütz. (1858, t. 75) and *Cor. trichocarpa* Kütz. (1858, t. 74) (although Levring 1946, 221 considers it distinct). Possibly *Cor. denudata* Sonder in Kütz. 1858, t. 72, is only another denuded form.

Most Kangaroo Island specimens belong to var. *crispata* (Lamx.) Areschoug. This is a short stunted form, due to strong wave action, and grades into other forms in different habitats.

- CORALLINA LENORMANDIANA Grunow. De Toni 1905, 1,851. Lucas and Perrin 1947, 400. *Corallina*? *nana* Lenormand, Harvey 1863, Syn. n. 346; Alg. Aus. exs. n. 452. — VB. On *Cystophora subfarcinata* in the large littoral pool, south side of Ellen Point, Jan. 1946, 1949. PB. On *Cystophora dumosa*, drift, Dec. 1948. These specimens are identical with Harvey's No. 452 in Melbourne National Herbarium.
- CORALLINA OFFICINALIS Linnaeus. De Toni 1905, 1,840. Newton 1931, 313. Taylor 1937, 271, pl. 36, f. 1-5. Manza 1940, 275. — CW. In a shaded rock pool, south side, Aug. 1948.
- CORALLINA PILIFERA Lamouroux. Kützing 1858, t. 74 c-d. De Toni 1905, 1,848. Manza 1940, 280. Lucas and Perrin 1947, 400. — PB. Drift, Jan. 1948. South Coast. Winter 1939, coll. J. Cork.

#### JANIA Lamouroux

- JANIA FASTIGIATA Harvey 1863, pl. 251. De Toni 1905, 1,854. Lucas and Perrin 1947, 397, f. 201. — WR. Lower littoral, Jan. 1946. PB. Epiphytic on *Cystophora subfarcinata*, *C. paniculata*, occasionally on *C. siliquosa* and on rock in the sublittoral fringe and especially in the *Cystophora*-coralline association, all seasons. CW. On *Cystophora subfarcinata* and *Cladostephus verticillatus*, upper sublittoral, Jan. 1946, 1947. AB. Low littoral, on *Cystophora subfarcinata*, Jan. 1947.
- JANIA MICRARTHERODIA Lamouroux. De Toni 1905, 1,855. Lucas and Perrin 1947, 397. *J. tenuissima* Sonder and *J. antennina* Kützing in Sonder 1846, 186. — AR. Upper sublittoral, on *Posidonia*, especially near and just outside mouth of the inlet, Aug. 1948. K. Drift, Jan. 1948.
- JANIA NATALENSIS Harvey 1847, 107. Kützing 1858, t. 79, II. De Toni 1905, 1,856. — RP. Lower littoral, Jan. 1948. AR. Upper sublittoral on Pig Island, occasional, Jan. 1947, Dec. 1948. These specimens agree very well with Kützing's figures and Harvey's description.

#### METAGONIOLITHON W. v. Bosse

- METAGONIOLITHON CHAROIDES (Lamouroux) W. v. Bosse 1904, 102. Manza 1940, 310. *Amphiroa charoides*, Harvey 1847, 96, pl. 39. Lucas and Perrin 1947, 394. — MR. Drift, Jan. 1946, 1948. CC. Drift, Jan. 1947, and lower littoral, Jan. 1948. PB. Sublittoral fringe and deeper pools on reefs, all seasons. CW. Upper sublittoral, Jan. 1947. AB. Upper sublittoral, Jan. 1945, 1947, Aug. 1948.
- METAGONIOLITHON GRACILE (Harvey) Yendo. Manza 1940, 311. *Amphiroa gracilis* Harvey 1862, pl. 231. De Toni 1905, 1809. Lucas and Perrin 1947, 394. — K. Drift, Jan. 1948.
- METAGONIOLITHON STELLIGERA (Lamarck) W. v. Bosse 1904, 103, pl. 15, f. 9, 13. Manza 1940, 311. *Amphiroa stelligera*, Harvey 1862, pl. 230. Lucas and Perrin 1947, 394, f. 199. — MR. Drift, Jan. 1946. VB. Drift, Jan. 1947, 1948, 1949. PB. Drift, Jan. 1944, 1948.

#### MASTOPHOREAE

##### METAMASTOPHORA Setchell

- METAMASTOPHORA FLABELLATA (Sonder) Setchell 1943, 131. *Mastophora flabellata*, Harvey 1847, 108. *Mastophora lamourouxii*, Harvey 1863, Syn. n. 367. Lucas and Perrin 1947, 391. — WB. Drift, Jan. 1946. South Coast. Winter 1939, coll. J. Cork.

## LITHOTHAMNIEAE

A number of species of crustaceous corallines have been collected from Kangaroo Island, but as no authentic material of this group is available in Australian Herbaria for comparison, identification of most has not been possible.

## LITHOTHAMNION Philippi

LITHOTHAMNION PATENA (Hooker and Harvey) Heydrich. De Toni 1924, 622. *Melobesia patena*, Harvey 1847, 111, pl. 40. — *WB.* On *Ballia callitricha*, drift, Jan. 1946. South Coast. On *Ballia callitricha*, winter 1939, coll. J. Cork.

## GRATELOUPIACEAE

## HALYMENIA C. Agardh

HALYMENIA HARVEYANA J. Agardh 1892, 55. De Toni 1905, 1,539. Lucas and Perrin 1947, 375, f. 188. *Halymenia floresia*, Harvey 1862, pl. 214. — *PB.* Drift, Jan. 1948.

## THAMNOCLONIUM Kützing

THAMNOCLONIUM CLAVIFERUM J. Agardh 1876, 168. De Toni 1905, 1,614. Lucas and Perrin 1947, 381, f. 192. *Thamnoclonium hirsutum* Harvey 1863, pl. 293. — *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1946.

## CALLYMENIACEAE

## CALLOPHYLLIS Kützing

CALLOPHYLLIS CERVICORNIS Sonder 1852, 678. De Toni 1897, 276. Lucas and Perrin 1947, 158. — *PB.* Drift, Jan. 1948. These specimens agree well with some of Sonder's in Melbourne National Herbarium.

CALLOPHYLLIS COCCINEA Harvey. Hooker and Harvey 1847, 404. Kützing 1867, t. 92. J. Agardh 1876, 234. De Toni 1897, 282. Lucas and Perrin 1947, 159, f. 31.

var. *CARNEA* J. Agardh. — *CC.* Drift, Jan. 1947, 1948. *VB.* Drift, Jan. 1948, 1949. *PB.* Sublittoral fringe on main reef, Jan. 1947, 1948.

var. *CORYMBOSA* J. Agardh. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, May 1945, Jan. 1948.

These specimens seem to agree well with J. Agardh's descriptions of the above two varieties.

CALLOPHYLLIS HARVEYANA J. Agardh 1876, 230. De Toni 1897, 277. Lucas and Perrin 1947, 158. *Callophyllis obtusifolia*, Harvey 1862, pl. 193 (not J. Agardh). — *AB.* Drift, Jan. 1946. *PB.* Drift, Jan. 1947.

CALLOPHYLLIS LAMBERTII (Turner) Greville. J. Agardh 1876, 233. De Toni 1897, 282. Lucas and Perrin 1947, 159, f. 30. — *CC.* Drift, Jan. 1948. Sou'-West River mouth. Drift, Jan. 1945. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1946, 1948.

## CALLYMENIA J. Agardh

CALLYMENIA CRIBROSA Harvey 1859, pl. 73. J. Agardh 1876, 219. De Toni 1897, 295. Lucas and Perrin 1947, 161, f. 33, 35. — Eastern Cove. On underside of buoys, rare, Jan. 1946, 1948. North Coast (no details). *VB.* Drift, Jan. 1948.

## GELINARIA Sonder

GELINARIA ULVOIDEA Sonder 1846, 172. Harvey 1859, pl. 85. De Toni 1897, 311. Lucas and Perrin 1947, 163, f. 36. — *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1944.

## POLYCOELIA J. Agardh

- POLYCOELIA LACINIATA J. Agardh 1851, 306; 1876, 228. De Toni 1897, 293. Lucas and Perrin 1947, 161, f. 32. — *VB*. Drift, Jan. 1948. These specimens agree well with Agardh's description, but I have seen no authentic specimens. It is closely related to *P. fastigiata* Harvey from Tasmania and may be conspecific.

## GIGARTINALES — NEMASTOMACEAE

## NEMASTOMA J. Agardh

- NEMASTOMA FEREDAYAE Harvey 1860b, 327, pl. 195A. J. Agardh 1876, 126. De Toni 1905, 1,663. Lucas and Perrin 1947, 386, f. 195. — *CC*. Drift, Jan. 1948. *VB*. Drift, Jan. 1948, 1949. *PB*. Sublittoral fringe on reefs Jan. 1946, 1947, 1948, Dec. 1948. The Pennington Bay specimens growing in the sublittoral fringe are 5 to 10 cm. high and greenish-purple in colour; those cast up from deeper water at Vivonne Bay are up to 20 cm. high and dark red in colour.

## GRACILARIACEAE

## CURDIEA Harvey

- CURDIEA LACINIATA Harvey 1858, pl. 39. Kützing 1869, t. 33 c-d. De Toni 1900, 424. Lucas and Perrin 1947, 184, f. 54. — *VB*. Drift, Jan. 1949.  
 CURDIEA OBESA (Harvey) Kylin 1932, 61. *Sarcocladia obesa* Harvey 1862, pl. 217. De Toni 1900, 426. — *VB*. Drift, Jan. 1949.

## GRACILARIA Greville

- GRACILARIA CONFEROIDES (Linn.) Greville. De Toni 1900, 431. Newton 1931, 429, f. 258. Taylor 1937, 293, pl. 38, f. 1. May 1948, 18, f. 1, 2, pl. 1. — *AR*. On the tidal flats throughout the lagoons, scattered but common in some areas between American River jetty and Muston, all seasons.  
 GRACILARIA FURCELLATA Harvey 1863, pl. 286 (excl. syn.). De Toni 1900, 441. May 1948, 53, f. 9. — *BH*. Lower littoral, Oct. 1947. *WB*. Littoral, Jan. 1945. *VB*. Shaded end of pool 1, south side of Ellen Point, Jan. 1948, and drift, Jan. 1949. *DB*. Littoral, Jan. 1947. *PB*. Littoral on well washed rock, Jan. 1948, 1949 and drift, May 1945, Jan. 1946, 1947.

May refers this form to f. *furcellata* (Harvey) May. The thickening towards the base which is characteristic of this form is dependent to some extent on habitat.

## MELANTHALIA Montagne

- MELANTHALIA CONCINNA (R. Brown) J. Agardh 1876, 404. De Toni 1900, 421. Kylin 1932, 58. Lucas and Perrin 1947, 184, f. 52. — *VB*. Drift, Jan. 1949. South Coast. Winter 1939, coll. J. Cork.  
 MELANTHALIA OBTUSATA (Labillardiere) J. Agardh. Harvey 1858, pl. 25. De Toni 1900, 422. Kylin 1932, 58. Lucas and Perrin 1947, 183, f. 51. — *PB*. Upper sublittoral under east edge of main reef, Jan. 1948.

## TYLOTUS J. Agardh

- TYLOTUS OBTUSATUS (Sonder) J. Agardh 1876, 429. De Toni 1900, 463. Lucas and Perrin 1947, 189. *Curdia obtusata* Sonder, Harvey 1962, pl. 210. — *WB*. Drift, Jan. 1945. *VB*. Drift, Jan. 1949.

## PHACELOCARPUS Endlicher and Diesing

PHACELOCARPUS LABILLARDIERI (Mertens) J. Agardh. Harvey 1860 a, pl. 163 De Toni 1900, 391. Kylin 1932, 52, f. 14 D. Lucas and Perrin 1947, 181, f. 49. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947, 1948. Sou'-West River mouth. Drift, Jan. 1945. *VB*. Drift, May 1945, Jan. 1948, 1949. *PB*. Drift, Jan. 1944, 1946, 1948; in a shaded pool, Jan. 1944; about 2-3 feet below east ledge of main reef, Jan. 1947, 1948. *CW*. Drift, Jan. 1946.

Rather variable in stoutness, depending on habitat. *P. apodus* J. Agardh (1876, 400) is probably only a form of *P. labillardieri*. Kylin (1932, 52) states it is very close to *P. labillardieri*, and specimens of J. Agardh's in Melbourne National Herbarium are not distinct.

PHACELOCAUPUS SESSILIS Harvey in J. Agardh 1876, 400. De Toni 1900, 392. Kylin 1932, 52, t. 19, f. 46. Lucas and Perrin 1947, 181. — *CC*. Drift, Jan. 1948. *VB*. Drift, Jan. 1947, 1948, 1949. *PB*. Drift, Jan. 1946, 1948.

## STENOCLADIA J. Agardh

STENOCLADIA CONFERTA (Harvey) J. Agardh. Kylin 1932, 50, f. 13. *Areschougia conferta* Harvey 1860 a, pl. 166. — *VB*. Drift, May 1945, Jan. 1946, 1948, 1949. *PB*. Drift, Jan. 1944. South Coast. Winter 1939, coll. J. Cork.

J. Agardh (1876, 440-441) described four species of *Stenocladia* (*St. corymbosa*, *St. cliftoni*, *St. harveyana*, *St. sonderiana*) on specimens previously placed under *St. conferta*, but dropped *St. conferta* as a species name. Kylin (1932, 50), however, considers these are only forms, and places them all under *St. conferta*. The Kangaroo Island specimens are of the same form as shown in Harvey's plate.

## SARCODIACEAE

## NIZYMENIA Sonder

NIZYMENIA AUSTRALIS Sonder. Harvey 1860 a, pl. 165. De Toni 1900, 408. Kylin 1932, 57. Lucas and Perrin 1947, 182, f. 50 — Sou'-West River mouth. Dec. 1934. Recorded by Cleland and Black (1941, 248).

## SOLIERIACEAE

## SOLIERIA J. Agardh

SOLIERIA ROBUSTA (Greville) Kylin 1932, 18. Lucas and Perrin 1947, 174, f. 44. *Solieria australis* Harvey 1860 a, pl. 149. *Rhabdonia robusta* J. Agardh 1852, 355.

*f. FLAGELLIFORMIS* J. Agardh 1876, 592. Kylin 1932, 18, t. 5, f. 9. — *AR*. Sublittoral, Nov. 1947, Jan. 1948, 1949. *K*. Drift, Jan. 1948. *MR*. Drift, Jan. 1946. *PB*. Drift, Jan. 1947.

## THYSANOCLADIA Endlicher

THYSANOCLADIA LAXA Sonder 1852, 689. Kützing 1869, t. 30. De Toni 1897, 383. (Not Harvey 1862, pl. 211.) — *WB*. Drift, Jan. 1946. *PB*. Upper sublittoral east side of main reef, Jan. 1948 and drift, Jan. 1946.

THYSANOCLADIA OPPOSITIFOLIA (Agardh) J. Agardh 1851, 617. Harvey 1862, pl. 187. De Toni 1897, 383. Lucas and Perrin 1947, 176, f. 46. — *VB*. Drift, Jan. 1949.

## RHABDONIACEAE

## ARESCHOUGIA Harvey

Kylin 1947, 49, has resurrected *Areschougia* Meneghini 1844 for a brown algal species previously well known as *Elachista stellaris* Areschoug. This

genus antedates *Areschougia* Harvey 1855, and if *Areschougia* Menegh. is to be retained, the red algal genus must be renamed. However, the Australian *Areschougia* Harvey is a well-known genus of about five species, and to change this name would cause needless confusion. It would seem far better to retain *Areschougia* Harvey as a nomen conservandum, rejecting *Areschougia* Menegh., and it is proposed this should be done.

ARESCHOUGIA AUSTRALIS Harvey 1854, 554; 1858, pl. 13. Kylin 1932, 37. *Areschougia ligulata* J. Agardh 1876, 282. De Toni 1897, 377. Lucas and Perrin 1947, 174, f. 45. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947. *VB*. Drift, Jan. 1949.

ARESCHOUGIA LAURENCIA (Hooker and Harvey) Harvey 1854, 554; 1860 b, 321. De Toni 1897, 376. Kylin 1932, 37. Lucas and Perrin 1947, 174. — *VB*. Drift, May 1945, Jan. 1948, 1949. *PB*. Drift, Jan. 1944, May 1945, Jan. 1946, 1948.

#### ERYTHROCLONIUM Sonder

ERYTHROCLONIUM ANGUSTATUM Sonder 1852, 692. Kützing 1869, t. 37. De Toni 1897, 354. Kylin 1932, 36. Lucas and Perrin 1947, 169. — *VB*. Drift, Jan. 1948, 1949. *PB*. Drift, Jan. 1948.

ERYTHROCLONIUM MUELLERI Sonder 1852, 692. Harvey 1863, pl. 298. De Toni 1897, 355. Kylin 1932, 36, f. 8 A-B. Lucas and Perrin 1947, 170, f. 41. — *AR*. Upper sublittoral on Pig Island, December 1948 (rare). *MR*. Drift, Jan. 1946. *WR*. Drift, Jan. 1946. *VB*. Drift, Jan. 1948, 1949. *PB*. Drift, occasional, all seasons, and in pool of sublittoral fringe, Nov. 1947. *AB*. Drift, Jan. 1948.

ERYTHROCLONIUM SONDERI Harvey 1859, pl. 86. De Toni 1897, 354. Kylin 1932, 36. Lucas and Perrin 1947, 169. — *VB*. Drift, Jan. 1948.

#### RHABDONIA Harvey

RHABDONIA COCCINEA Harvey 1858, pl. 54. De Toni 1897, 358. Lucas and Perrin 1947, 171, f. 42. — *MR*. Drift, Jan. 1946.

RHABDONIA CLAVIGERA J. Agardh 1876, 594. Kylin 1932, 36, t. 14, f. 45. — *VB*. Drift, Jan. 1948, 1950.

RHABDONIA VERTICILLATA Harvey 1863, pl. 299. De Toni 1897, 359. Lucas and Perrin 1947, 172, f. 43. — *PB*. Drift, Jan. 1944, May 1945.

#### RHODOPHYLLIDACEAE

##### GRUNOWIELLA Schmitz

GRUNOWIELLA BARKERIAE (Harvey) Schmitz, Engler and Prantl 1897, 375. Kylin 1932, 43. *Rhodophyllis barkeriae* Harvey 1863, pl. 276. *Gloiophyllis barkeriae* J. Agardh, 1890, 29. De Toni 1897, 338. Lucas and Perrin 1947, 164. — *VB*. Drift, Jan. 1948. *PB*. Drift, Jan. 1946, 1947, 1948. The habit of these specimens is rather variable, but close to Harvey's figure.

##### RHODOPHYLLIS Kützing

RHODOPHYLLIS MULTIPARTITA Harvey 1860 b, 318. De Toni 1897, 346. Kylin 1932, 42, t. 16, f. 39. — *VB*. Drift, Jan. 1949.

RHODOPHYLLIS TENUIFOLIA (Harvey) J. Agardh 1876, 367. De Toni 1897, 347. Kylin 1932, 43, t. 17, f. 42. Lucas and Perrin 1947, 167. *Callophyllis tenuifolia* Harvey 1863, syn. n. 549. — *PB*. Drift, Jan. 1946, 1948.



## HYPNEACEAE

## HYPNEA Lamouroux

*HYPNEA EPISCOPALIS* Hooker and Harvey. Harvey 1858, pl. 23. De Toni 1900, 473. Lucas and Perrin 1947, 191, f. 58. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1944. *VB*. Drift, Jan. 1949. *PB*. Drift, Jan. 1944, 1946, 1948.

*HYPNEA MUSCIFORMIS* (Wulfen) Lamouroux. Kützing 1868, t. 19. De Toni 1900, 472. Taylor 1937, 291, pl. 37, f. 2. — *AR*. In the upper sublittoral throughout the lagoons, often common, all seasons.

A variety of forms of *Hypnea* occur in American River inlet, most of which are probably referable to *H. musciformis*. The crozier tips to the branches are not developed in these forms.

## RHODODACTYLIS J. Agardh

*RHODODACTYLIS RUBRA* (Harvey) J. Agardh 1876, 568. De Toni 1900, 486. *Chondria rubra* Harvey 1863, pl. 280. — *PB*. Drift, Jan. 1946. A single specimen which agrees well with Harvey's figure. Kylin (1932, 48) suggests *Rhododactylis* is doubtfully distinct from *Hypnea*.

## MYCHODEACEAE

## MYCHODEA Harvey

*MYCHODEA CARNOSA* Harvey 1860 a, pl. 142. De Toni 1897, 263. Kylin 1932, 64. Lucas and Perrin 1947, 156, f. 27. — *VB*. Drift, Jan. 1948, 1949. *PB*. Drift, Jan. 1944, 1946, 1947, 1948.

*MYCHODEA COMPRESSA* Harvey 1862, pl. 201. De Toni 1897, 265. — *MR*. Drift, Jan. 1946. *VB*. Drift, Jan. 1946, 1948, 1949. *PB*. Drift, Jan. 1946, 1947, 1948 and sublittoral fringe, main reef, Jan. 1946, 1948 (these reef specimens are very stunted).

*MYCHODIA FASTIGIATA* (Harvey) J. Agardh 1876, 570. De Toni 1897, 264. Kylin 1932, 64, t. 26, f. 65. *Hypnea fastigiata* Harvey 1863, syn. no. 457. — *VB*. Drift, Jan. 1948, 1949. These are small and rather compact specimens which approach *M. pusilla* (Harvey) J. Agardh. The branches are slenderer and more densely covered with lateral spinous branchlets than in *M. pusilla*.

*MYCHODEA FOLIOSA* (Harvey) J. Agardh 1876, 573. De Toni 1897, 266. *Gymnogongrus foliosus* Harvey 1862, pl. 194. — *VB*. Drift, Jan. 1948. *PB*. Sublittoral fringe on reefs, Jan. 1945, 1946, 1947, 1948 (often epiphytic on the stems of *Cystophora paniculata*).

*MYCHODEA HAMATA* Harvey 1860 b, 323. De Toni 1897, 264. Kylin 1932, 64. *Acanthococcus ewingii* Harvey 1860 a, pl. 141. — *VB*. Drift, Jan. 1949.

*MYCHODEA TERMINALIS* Harvey 1860 b, 323; 1862, pl. 200. De Toni 1897, 262. — *VB*. Drift, Jan. 1948.

## DICRANEMACEAE

## DICRANEMA Sonder

*DICRANEMA GREVILLEI* Sonder 1846, 173. Harvey 1859, pl. 120. De Toni 1897, 269. Lucas and Perrin 1947, 157, f. 29. — *VB*. Drift, Jan. 1946, 1948, 1949

*DICRANEMA REVOLUTUM* (Agardh) J. Agardh 1876, 435. Harvey 1859, pl. 74. De Toni 1897, 269. — *VB*. On *Cymodocea*, upper sublittoral near jetty in bay, Jan. 1947.

## ACROTYLACEAE

## ACROTYLUS J. Agardh

- ACROTYLUS AUSTRALIS J. Agardh. Harvey 1859, pl. 99. De Toni 1897, 170. Kylin 1932, 68, fig. 20 A, B, 21 B. Lucas and Perrin 1947, 147, f. 20. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1944, 1946, 1948.

## GIGARTINACEAE

## GIGARTINA Stackhouse

- GIGARTINA BRACHIATA Harvey 1860 b, 325. J. Agardh 1876, 191. De Toni 1897, 200. — *AR.* Upper sublittoral on Pig Island, Dec. 1948. *BH.* Lower littoral; Oct. 1947. The specimens are sterile, but agree well with Harvey's specimen from Georgetown, Tasmania, and other specimens from there.
- GIGARTINA DISTICHA Sonder 1846, 175. Harvey 1863, pl. 297. De Toni 1897, 208. Lucas and Perrin 1947, 150, f. 22. — *MR.* Drift, Jan. 1948 *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1946.

## RHODOGLOSSUM J. Agardh

- RHODOGLOSSUM PROLIFERUM J. Agardh 1884, 27. *Iridaea prolifera* (J. Agardh) De Toni 1897, 190. Levring 1946, 222, f. 5. — *VB.* Low littoral, north side of Ellen Point, Jan. 1946, 1948. *PB.* Pools in the sublittoral fringe, rare, Jan. 1944, 1948, 1949. (as *Iridaea prolifera* in Pt. II).

## RHODYMENIALES — RHODYMENIACEAE — FAUCHEAE

## BINDERA Harvey

- BINDERA KALIFORMIS J. Agardh 1896, 75. De Toni 1900, 549. Kylin 1931, 7, t. 1, f. 1. Lucas and Perrin 1947, 204. — *WR.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948, 1949.

## GLOIODERMA J. Agardh

- GLOIODERMA AUSTRALIS J. Agardh 1851, 244. De Toni 1900, 496. *Horea polycarpa* Harvey 1860 b, 329, pl. 194 B. — *VB.* Drift, Jan. 1948, 1949.

- GLOIODERMA HALYMENIOIDES (Harvey) De Toni 1900, 497. Lucas and Perrin 1947, 194, f. 61. *Horea halymenioides* Harvey 1854, 555; 1859, pl. 67. — *AR.* On red and outer buoys, Jan. 1946, 1948, and on anchor of red buoy, Jan. 1948.

- GLOIODERMA SPECIOSA (Harvey) nov. comb.

*Horea speciosa* Harvey 1860 b, 328, pl. 194 A. J. Agardh 1876, 292. *Gloioderma tasmanica* Zanardini 1874, 503. De Toni 1900, 497. Kylin 1931, 7. Lucas and Perrin 1947, 194, f. 62. — *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1944, 1946, 1948. This species has usually been called *G. tasmanicum*, and was reported as such in Pt. II, 162, of this series. *G. speciosa*, however, has priority.

- GLOIODERMA WILSONIS (J. Agardh) De Toni 1900, 496. Kylin 1931, 7, t. 1, f. 2. *Horea wilsonis* J. Agardh 1884, 38. — *PB.* Drift, Jan. 1946. A single tetrasporic specimen which agrees well with Kylin's figure of the type, and with Wilson's specimens in Melbourne National Herbarium.

## RHODYMENIEAE

## BOTRYOCLADIA Kylin

- BOTRYOCLADIA OBOVATA (Sonder) Kylin 1931 18. *Chrysymenia obovata* Sonder 1846, 176. Harvey 1858, pl. 10. De Toni 1900, 544. Lucas and Perrin

1947, 203, f. 67. — *AR.* Drift, near American River jetty, Sept. 1946, Aug. 1947. *K.* Drift, Jan. 1948. *MR.* Drift, Jan. 1946. *VB.* Upper Sublittoral on reef in the bay, Jan. 1947, and drift, Jan. 1948, 1949. *AB.* Drift, Aug. 1948. *RP.* Drift, Aug. 1948.

#### COELARTHURUM Borgesen

*COELARTHURUM MUELLERI* (Sonder) Borgesen 1931, 9. Kylin 1931, 15. *Chylocladia muelleri* Harvey 1860 a, pl. 138. *Erythrocolon muelleri*, J. Agardh 1896, 91. De Toni 1900, 585. Lucas and Perrin 1947, 208, f. 73. — *K.* Drift, Jan. 1948. *PB.* Drift, Jan. 1948.

#### ERYTHRYMENIA Schmitz

*ERYTHRYMENIA MINUTA* Kylin 1931, 13, t. 4, f. 10. — *PB.* Sublittoral fringe of main reef, Jan. 1944, 1946, 1947, 1948 and drift, Jan. 1946.

In Pt. II, 159, this species was recorded as the juvenile state of *Hymenocladia conspersa* (Harvey) J. Agardh (c.f., Harvey 1862, pl. 237, juvenile plant). The specimens, however, agree very well with Kylin's description and figure of *Erythrymenia minuta*. In Melbourne National Herbarium are specimens of *Chrysymenia meridithiana* J. Agardh (= *Erythrymenia meridithiana* (J. Ag.) Kylin) which appear identical with the Pennington Bay specimens. They were collected by Wilson at Port Phillip, and on the sheet the name has been changed to *Hymenocladia conspersa* by Wilson. The adult of *H. conspersa* is very different in form (see Harvey 1862, pl. 237) to *E. minuta*. Kylin described *E. minuta* from specimens recorded by J. Agardh as juveniles of *E. meridithiana*. Tetrasporangia are not known, and these species clearly need a thorough investigation.

#### GLOIOSACCION Harvey

*GLOIOSACCION BROWNII* Harvey 1859, pl. 83. Kylin 1931, 19. Lucas and Perrin 1947, 202, f. 66. *Chrysymenia brownii*, De Toni 1900, 545. — *AR.* Sublittoral near Muston, Jan. 1948 and on buoys, Jan. 1946, 1948. *MR.* *WR* and *WB.* All drift, Jan. 1946. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1946, 1947.

The American River specimens are smaller, with thinner and softer membranes than those from rough coasts. The former were referred to var. *a membranaceum* by Harvey, the latter to var. *β firmum*. These are only ecological variations.

#### RHODYMENIA Greville

*RHODYMENIA FOLIIFERA* Harvey 1863, syn. n. 508. J. Agardh 1876, 331. De Toni 1900, 517. Kylin 1931, 21, t. 7, f. 17. — *AR.* Upper sublittoral near Muston, Nov. 1947. *BH.* Dredged in 2-3 fathoms, Jan. 1946. *VB.* Drift, Jan. 1949. *PB.* Sublittoral fringe on reefs, Jan. 1944, 1946, 1947, Dec. 1948. *RP.* Drift, June 1947.

This is a variable species, closely related to *Rhodymenia australis* Sonder. In the type and other authentic specimens of *R. australis* in Melbourne National Herbarium, the segments taper from about the centre to the tips. In *R. foliifera* the terminal parts of the thallus are usually as wide or even wider than the lower parts, and spread at a wide angle. Many variations occur, however, and tips of specimens from the Pennington Bay reefs which I have referred to *R. foliifera* are sometimes narrow and almost lacinate. A range of specimens from different habitats may show that these species are not distinct.

## HYMENOCCLADIA J. Agardh

HYMENOCCLADIA POLYMORPHA (Harvey) J. Agardh 1876, 315. De Toni 1900, 504. Lucas and Perrin 1947, 198, f. 64. *Rhodymenia polymorpha* Harvey 1860 a, pl. 157. — *WB.* On *Codium galeatum*, drift, Jan. 1946. *CC.* Drift, Jan. 1947. *VB.* Drift, Jan. 1946, 1948, 1949, and on the base of *Myriodesma latifolia* var. *duriuscula* in a low littoral pool, south side of Ellen Point, Jan. 1946. *PB.* Drift, Jan. 1944, 1946, 1947 and in sublittoral fringe (stunted), all seasons.

HYMENOCCLADIA USNEA (R. Brown) J. Agardh 1863, 772. Harvey 1859, pl. 118. De Toni 1900, 502. Kylin 1931, 24. Lucas and Perrin 1947, 197, f. 63. — *VB.* Drift, Jan. 1946, 1948, 1949. *PB.* Drift, Jan. 1946.

## CHAMPIACEAE — LOMENTARIEAE

## LOMENTARIA Lyngbye

LOMENTARIA AUSTRALIS (Kützing) Levring 1946, 223. *Chondrothamnion australis* Kützing 1865, 29, pl. 82. — *AR.* On buoys near American River jetty, Jan. 1948, and in upper sublittoral on *Zostera* on the cockle bank and near Muston, Jan. 1948.

These specimens agree very well with Kützing's figures. Levring considers it distinct from *L. clavellosa*, to which De Toni referred it.

## CHAMPIEAE

## CHAMPIA Desveau

CHAMPIA AFFINIS (Hooker and Harvey) J. Agardh 1876, 304. De Toni 1900, 559. Lucas and Perrin 1947, 206, f. 71. *Chylocladia affinis*, Harvey 1847, 79, pl. 29. — *AR.* Upper sublittoral on flats near mouth, Nov. 1947, Aug. 1948. *WR.* Drift, Jan. 1946. *CC.* Drift, Jan. 1948. *PB.* Drift, Jan. 1948. *CW.* Drift, Jan. 1946. *AB.* Drift, Aug. 1948. *RP.* Drift, June 1947, Aug. 1948.

CHAMPIA OBSOLETA Harvey 1860 b, 307. J. Agardh 1876, 304. De Toni 1900, 559. Kylin 1931, 28, t. 15, f. 35. Lucas and Perrin 1947, 206. — *AR.* On the buoys, Jan. 1946, Sept. 1946, Jan. 1948, and upper sublittoral on cockle bank and near Muston, Jan. and Aug. 1948, and drift, May 1945. *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1948. *PB.* Littoral and sublittoral fringe on reefs, all seasons, but variable. *AB.* Drift, Aug. 1948. *RP.* Drift, Aug. 1948.

Kylin doubts whether this species is distinct from *C. affinis*. Most specimens can be separated readily on the much heavier and more extensive thickening of the stem and branches in *C. obsoleta*, thus obscuring the diaphragms. A few specimens, however, show intermediate characters.

CHAMPIA TASMANICA Harvey 1844, 407, pl. 19. De Toni 1900, 563. Lucas and Perrin 1947, 207, f. 72. — *MR.* Drift, Jan. 1946. *PB.* Drift, Jan. 1948.

## CERAMIALES — CERAMIACEAE — GRIFFITHISIAE

## GRIFFITHISIA C. Agardh

GRIFFITHISIA ANTARCTICA Hooker and Harvey. J. Agardh 1851, 87; 1876, 68. Kützing 1862, t. 23 a-b. Laing 1905, 390, pl. 25, f. 2. *Bornetia antarctica*, De Toni 1903, 1,297. — *AR.* Sublittoral near Muston, Nov. 1847, Jan. 1948. *K.* Drift, Jan. 1948. *VB.* Shaded end of pool 1, south side of Ellen Point, May 1945, Jan. 1946, 1947, 1948 (as *Bornetia* sp. in Pt. I). *PB.* Sublittoral fringe on main reef, Jan. 1947, 1948, Dec. 1948 and drift, Jan. 1944, 1948. *RP.* Drift, June 1947, Aug. 1948, Jan. 1949.

- GRIFFITHSIA FLABELLIFORMIS Harvey 1844, 450. J. Agardh 1876, 61. De Toni 1903, 1,278. Lucas and Perrin 1947, 326. — *AR*. Upper sublittoral between Muston and the mouth of the inlet, May 1945, June, Oct., Nov. 1947, Jan. and Aug. 1948. *RP*. Drift, Aug. 1948. This is chiefly a winter form and is rarely found in January.
- GRIFFITHSIA MONILIS Harvey 1854, 559; 1860 b, 332, pl. 195 B. De Toni 1903, 1,283. Lucas and Perrin 1947, 326. — *PB*. In the sublittoral fringe and *Cystophora*-coralline association, May 1945, Jan. 1947, Aug. and Dec. 1948.
- GRIFFITHSIA OVALIS Harvey 1854, 559; 1862, pl. 203. De Toni 1903, 1,277. Lucas and Perrin 1947, 325, f. 156. — *AR*. Sublittoral near Muston, Nov. 1947.

## MONOSPORA

## NEOMONOSPORA Setchell and Gardner

Setchell and Gardner (1937, 86) have pointed out that *Monospora* Solier is antedated by *Monospora* Hochstetter, a genus of Angiosperms, and have renamed the algal genus *Neomonospora*. The following species were reported as *Monospora* in Pt. I and II, and they are now transferred to *Neomonospora*.

- NEOMONOSPORA ELONGATA (Harvey) nov. comb.  
*Callithamnion elongatum* Harvey 1860 b, 336. *Monospora elongata*, De Toni 1903, 1,302. Lucas and Perrin 1947, 331. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947. *VB*. Drift, May 1945. *PB*. Sublittoral fringe and *Cystophora*-coralline associations (often epiphytic on larger algae), May 1945, Jan., Nov. 1947, Dec. 1948, and drift, May 1945, Jan. 1946, 1948. The sublittoral fringe plants are stunted and more compact than those cast up from deeper water.
- NEOMONOSPORA GRIFFITHSIOIDES (Sonder) nov. comb.  
*Callithamnion griffithsioides* Harvey 1860 a, pl. 160. *Monospora griffithsioides*, De Toni 1903, 1,302. Lucas and Perrin 1947, 331. — *VB*. Drift, Jan. 1948, 1949. *CW*. Drift, Jan. 1946.
- NEOMONOSPORA LICMOPHORA (Harvey) nov. comb.  
*Callithamnion licmophora* Harvey 1859, pl. 90. *Monospora licmophora* De Toni 1903, 1,301. Lucas and Perrin 1947, 329, f. 160. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947.

## CALLITHAMNIEAE

## CALLITHAMNION Lyngbye

- CALLITHAMNION LARICINUM Harvey 1854, 562; 1862, pl. 218. De Toni 1903, 1,330. Lucas and Perrin 1947, 332, f. 161. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1948. *VB*. On *Perithalia inermis* and *Laurencia elata*, drift, Jan. 1948, 1949. *PB*. On *Laurencia elata* and other algae in the sublittoral fringe, all seasons. *AB*. Drift, Aug. 1948.

## SPONGOCLONIEAE

## HALOPLEGMA Montagne

- HALOPLEGMA PREISSII Sonder 1846, 171. Harvey 1859, pl. 79. De Toni 1903, 1,366. Lucas and Perrin 1947, 336, f. 163. — *MR*. Drift, Jan. 1946. *WB*. Drift, Jan. 1946. *VB*. Drift, Jan. 1948, 1949 and sublittoral fringe on a reef in the bay, Jan. 1947. *PB*. Sublittoral fringe on reefs, Jan. 1946, 1947, 1948, in a shaded littoral pool, Jan. 1944, and drift, Jan. 1946, 1948. *AB*. Drift, Aug. 1948.

PLOCAMIACEAE  
PLOCAMIUM Lamouroux

**PLOCAMIUM COSTATUM** (J. Agardh) Hooker and Harvey. Kützing 1866, t. 52 d-e. J. Agardh 1876, 344. De Toni 1900, 597. Lucas and Perrin 1947, 212, f. 77. — *WB*. Drift, Jan. 1945. *VB*. Drift, Jan. 1949. *PB*. Sublittoral fringe, on rocks off east edge of main reef, Dec. 1948, and drift, Jan. 1946, 1948. The laciniae are usually strongly serrate, but this is a very variable character.

**PLOCAMIUM GRACILE** J. Agardh 1876, 345. De Toni 1900, 598. Lucas and Perrin 1947, 213, f. 78. *Plocamium augustatum* Kützing 1866, t. 48 c-e. — *BH*. Upper sublittoral, Dec. 1948. *MR*, *WR* and *WB*. All drift, Jan. 1946. *CC*. Drift, Jan. 1948. *VB*. Drift, Jan. 1948, 1949. *PB*. Sublittoral fringe, Jan. 1944, 1946, 1948, Dec. 1948.

These specimens, although all sterile, agree well on vegetative features with a specimen of J. Agardh's of *P. gracile* from Tasmania ("Algae Muellerianae"), in Melbourne National Herbarium. *P. gracile* is closely related to *P. augustum* (J. Ag.) H. and H., the Australian specimens of which are included by Yendo (1915, 111) under *P. telfairiae* Harvey. These may all prove to be the same species when a large range of specimens is examined. The *PB* specimens were recorded in Pt. II as *P. angustum*.

**PLOCAMIUM LEPTOPHYLLUM** Kützing 1866, t. 45 a-c. J. Agardh 1876, 338. De Toni 1900, 589. Yendo 1915, 113. Lucas and Perrin 1947, 210, f. 74. — *BH*. Upper sublittoral, Oct. 1947. *VB*. Drift, Jan. 1949. *PB*. Drift, May 1945. *AB*. Drift, Aug. 1948.

**PLOCAMIUM MERTENSII** (Greville) Harvey 1847, 122; 1863 syn. n. 491 a. J. Agardh 1876, 346. De Toni 1900, 599. Lucas and Perrin 1947, 215, f. 80. — *PB*. Drift, May 1945.

*P. mertensii* differs from *P. procerum* (J. Agardh) Harvey in having serrate laciniae; otherwise the two species are identical. A range of specimens, however, shows considerable variation in degree of serration of the laciniae, even on the one plant, and these two species cannot be separated satisfactorily. *P. costatum* also varies greatly in serrations on the laciniae. Although this has been used as a specific character in these species, it is of little use when large numbers of specimens are examined. *P. nidificum* has been kept separate here, but may well be only a form of *P. mertensii*. It differs in forming clusters of multifid dichotomous ramelli in the branch axils, but these are often developed only to a slight extent at the base of the plant, and would not appear on juvenile specimens. Harvey (1863 syn. n. 491) included *P. nidificum* and *P. mertensii* as forms of *P. procerum*, but *P. mertensii* is the earliest name.

**PLOCAMIUM NIDIFICUM** (Harvey) J. Agardh 1876, 346. De Toni 1900, 599. Lucas and Perrin 1947, 213. *P. procerum* var. *nidificum* Harvey 1863, syn. n. 491 b. *Thamnophora mertensii*, Kützing 1866, t. 55 d-h. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947, 1948. *VB*. Drift, Jan. 1948, 1949 and upper sublittoral at the end of Ellen Point, Jan. 1946. *PB*. Drift, all seasons. See notes under *P. mertensii*.

**PLOCAMIUM PREISSIANUM** Sonder 1846, 192. Harvey 1859, pl. 63. J. Agardh 1876, 342. De Toni 1900, 594. Lucas and Perrin 1947, 211, f. 75. — *MR*. Drift, Jan. 1946. *WB*. Drift, Jan. 1946. Sou'-West River mouth, Dec. 1934 (Cleland and Black). *VB*. Drift, Jan. 1948. *PB*. Drift, all seasons.

ANTITHAMNION HANOWIOIDES (Sonder) De Toni 1903, 1,398. Lucas and Perrin 1947, 352. *Callithamnion hanowioides* Sonder 1852, 674. J. Agardh 1876, 55. — *MR.* Drift, Jan. 1946. *WB.* On *Laurencia elata*, drift, Jan. 1946. *PB.* On *Laurencia heteroclada*, *L. elata*, *Gelidium australe*, *Rhodymenia*, *Caulerpa brownii* and other species in the sublittoral fringe, all seasons.

ANTITHAMNION MUCRONATUM (J. Agardh) Naegeli. De Toni 1903, 1,410. Lucas and Perrin 1947, 355. *Callithamnion mucronatum* J. Agardh 1851, 29; 1876, 19. Harvey 1863, syn. n. 688. — *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1948. *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1944, May 1945, Jan. 1946, 1947, 1948.

ANTITHAMNION NODIFERUM J. Agardh 1892, 20. De Toni 1903, 1,404. Lucas and Perrin 1947, 353. *Callithamnion nodiferum* J. Agardh 1876, 25. *Callithamnion simile* Harvey 1862, pl. 207 (excl. syn.). — *WB.* Drift, Jan. 1946. *PB.* Drift, Jan. 1948.

#### BALLIA Harvey

BALLIA CALLITRICHIA (Agardh) Montagne. J. Agardh 1851, 75. Kützing 1862, t. 37. Harvey 1863, syn. n. 656. De Toni 1903, 1,393. Lucas and Perrin 1947, 350, f. 174. — *WR.* Drift, Jan. 1946. *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1948. Sou'-West River mouth, Dec. 1934 (Cleland and Black) and drift, Jan. 1945. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift Jan. 1944, 1946, 1948.

BALLIA ROBERTIANA Harvey 1858, pl. 36. J. Agardh 1876, 588. De Toni 1903, 1,394. Lucas and Perrin 1947, 349, f. 173. — *CC.* Drift, Jan. 1945.

BALLIA SCOPARIA Harvey 1860 a, pl. 168. De Toni 1903, 1,395. Lucas and Perrin 1947, 351, f. 175. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1949. *PB.* Drift, Jan. 1946, Jan., Aug. 1948 and in the sublittoral fringe on reefs, all seasons (stunted).

#### CROUANIA J. Agardh

CROUANIA AUSTRALIS (Harvey) J. Agardh 1876, 85. De Toni 1903, 1,418. Lucas and Perrin 1947, 355. *Crouania attenuata* var. *australis* Harvey 1863 syn. n. 635. — *AR.* No details. This specimen agrees well with Harvey's 485 B in Melbourne National Herbarium. Specimens from the upper sublittoral near the mouth of the inlet, Aug. 1948, are probably a form of this species.

CROUANIA MUELLERI Harvey 1863, syn. n. 638. J. Agardh 1876, 85. De Toni 1903, 1,419. Lucas and Perrin 1947, 356. — *VB.* Drift, Jan. 1948. *PB.* On *Cystophora intermedia*, *C. siliquosa* and *C. spartioides* in the sublittoral fringe, Jan. and Nov. 1947, Jan. and Dec. 1948.

CROUANIA VESTITA Harvey 1860 a, pl. 140. J. Agardh 1876, 86. De Toni 1903, 1,419. Lucas and Perrin 1947, 356, f. 177. — *CC.* Drift, Jan. 1946. *AB.* Drift, Aug. 1948.

#### LASIOThALIA Harvey

LASIOThALIA FORMOSA (Harvey) De Toni 1903, 1,421. Lucas and Perrin 1947, 357. *Callithamnion formosum* Harvey 1863, pl. 281. — *VB.* Drift, Jan. 1948. *PB.* Drift Jan. 1944, 1946, 1947, 1948.

#### PTILOCLADIA Sonder

PTILOCLADIA PULCHRA Sonder 1846, 170. Harvey 1862, pl. 209. De Toni 1903, 1,424. Lucas and Perrin 1947, 360, f. 180. — *WB.* Drift Jan. 1946. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1946, 1947, 1948.

## SPYRIDIEAE

## SPYRIDIA Harvey

SPYRIDIA BIANNULATA J. Agardh 1876, 267; 1897, 13. De Toni 1903, 1,426. Lucas and Perrin 1947, 363. — *AR*. Upper sublittoral throughout the inlet, all seasons. *K*. Drift, Jan. 1944. *BS*. Upper sublittoral, June 1947. *VB*. Shaded end of pool 1, south side of Ellen Point, Jan. 1946, 1947. *RP*. Low littoral pools, Jan. 1944, 1945, 1948, and drift, Jan. 1944, 1948.

SPYRIDIA OPPOSITA Harvey 1860 a, pl. 158. J. Agardh 1876, 270. De Toni 1903, 1,431. Lucas and Perrin 1947, 363, f. 182. — *WB*. Drift, Jan. 1946. *VB*. Drift, Jan. 1948, 1949. *DB*. Sublittoral fringe on reefs, Jan. 1947. *PB*. in pools of the sublittoral fringe, Jan. 1944, 1946, 1948, Dec. 1948. *CW*. Drift, Jan. 1946.

## CERAMIEAE

## CENTROCERAS Kützting

CENTROCERAS CLAVULATUM (Agardh) Montagne. J. Agardh 1876, 108. Smith 1944, 328, pl. 84, f. 5-6. *Ceramium clavulatum*, De Toni 1903, 1,491. — *AR*. Upper sublittoral throughout the inlet, often epiphytic on larger algae, all seasons; in late winter (July-Nov.) forming dense red-brown tufts to 12 cm. high on pebbles along the shore (mid-littoral) near American River jetty. *CC*. In rock pools, Jan. 1944 and lower littoral, Jan. 1948. *VB*. Mid littoral at the end of Ellen Point, Jan. 1946, and in rock pools, Jan. 1946. *PB*. Rear littoral, May 1945. Also found amongst other algae almost anywhere around the island.

## CERAMIUM Wiggers

CERAMIUM ISOGONUM Harvey 1854, 55; 1862, pl. 206 B. J. Agardh 1876, 96. De Toni 1903, 1,469. Lucas and Perrin 1947, 369, f. 186. — *PB*. Drift, May 1945.

CERAMIUM MINIATUM Suhr. Harvey 1862, pl. 206 A. De Toni 1903, 1,454. Lucas and Perrin 1947, 367, f. 185. — *AR*. On black buoy, Jan., Sept. 1946, Jan. 1947, 1948. *MR*. On *Corallina*, lower littoral, Jan. 1947. *VB*. On *Laurencia heteroclada* in rock pools, south side of Ellen Point, May 1945. *PB*. On *Laurencia heteroclada* in the littoral and drift, May 1945. *AB*. On molluscs in the mid littoral, Jan. 1947. The Australian species which passes under this name needs careful checking with authentic material from Peru, the type locality.

CERAMIUM NOBILE J. Agardh 1894 b, 41. De Toni 1903, 1,480. Lucas and Perrin 1947, 369. — *VB*. Drift, Jan. 1948. *PB*. On *Spyridia opposita*, *Laurencia heteroclada* and other algae in the sublittoral fringe, all seasons.

CERAMIUM PUBERULUM Sonder 1946, 167. J. Agardh 1876, 102. De Toni 1903, 1,452. Lucas and Perrin 1947, 367. — *AR*. On *Posidonia*, upper sublittoral, all seasons. *EB*. Drift, Jan. 1946. *WR*. Drift, Jan. 1946. *PB*. On *Posidonia*, drift, May 1945, Jan. 1946, 1948. *RP*. On *Posidonia*, drift, June 1947, Aug. 1948.

## WRANGELIEAE

## WRANGELIA Agardh

WRANGELIA CLAVIGERA Harvey 1863, pl. 287. J. Agardh 1876, 621. De Toni 1897, 132. Lucas and Perrin 1947, 140, f. 13. — *PB*. Sublittoral fringe (mainly 1-2 ft. down side of main reef), all seasons.



- WRANGELIA CRASSA Hooker and Harvey. Harvey 1860 b, 308. J. Agardh 1876, 620. De Toni 1897, 131. Lucas and Perrin 1947, 138. — *CC.* Drift, Jan. 1947. *VB.* Drift, Jan. 1949. *PB.* Drift, Jan. 1946, 1948, and in a shaded pool, Jan. 1944. Orig. Det., V. May.
- WRANGELIA HALURUS Harvey 1859, pl. 170. J. Agardh, 1876, 619. De Toni 1897, 130. Lucas and Perrin 1947, 138. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948.
- WRANGELIA MYRIOPHYLLOIDES Harvey 1854, 564; 1862, pl. 224. J. Agardh 1876, 617. De Toni 1897, 128. Lucas and Perrin 1947, 136. — *MR.* Drift, Jan. 1946. *PB.* Drift, Jan. 1944; Jan., Aug. 1948.
- WRANGELIA PLUMOSA Harvey 1844, 450. J. Agardh 1876, 624. De Toni 1897, 136. Lucas and Perrin 1947, 143, f. 16. — *AR.* On black buoy, Sept. 1946, and upper sublittoral along channel near buoys, Nov. 1947. — *MR.* Lower littoral, Jan. 1947. *WR.* Lower littoral, Jan. 1946. *HR.* In a low rock pool, Jan. 1948. *PB.* Sublittoral fringe and littoral pools on reefs, all seasons, but variable. *AB.* Lower littoral, Jan. 1947.
- WRANGELIA PRINCEPS Harvey 1862, pl. 234; J. Agardh 1876, 624. De Toni 1897, 136. Lucas and Perrin 1947, 143. — *PB.* Drift, Jan. 1946 (on *Codium galeatum*) and Jan. 1949.
- WRANGELIA PROTENSA Harvey 1860 b, 308. J. Agardh 1876, 619. De Toni 1897, 130. Lucas and Perrin 1947, 137, f. 10. — *AR.* Upper sublittoral along channel from Muston to American River, Nov. 1947, Aug. 1948.
- WRANGELIA VELUTINA Harvey 1854, 546; 1858, pl. 46. J. Agardh 1876, 617. De Toni 1897, 128. Lucas and Perrin 1947, 136, f. 9. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1948 and in a shaded pool, Jan. 1944.
- WRANGELIA VERTICILLATA Harvey 1863, syn. n. 332. J. Agardh 1876, 619. De Toni 1897, 130. Lucas and Perrin 1947, 138, f. 11. — *WB.* Drift, Jan. 1946. *PB.* In a littoral pool, Jan. 1944.
- WRANGELIA WATTSII Harvey 1862, pl. 233. J. Agardh 1876, 620. De Toni 1897, 131. Lucas and Perrin 1947, 138, f. 12. — *WB.* Drift, Jan. 1946.

## DASYACEAE

## DASYA C. Agardh

- DASYA CAPILLARIS Hooker and Harvey. Harvey 1847, 60, pl. 19; 1860 b, 302. Kützing 1865, t. 73. De Toni 1903, 1,200. Lucas and Perrin 1947, 313. — *AR.* Sublittoral near Muston, Nov. 1947.
- DASYA FEREDAYAE Harvey 1860 a, pl. 173, f. 1, 3. De Toni 1903, 1,211. — *WB.* Drift, Jan. 1946.
- DASYA HAFFIAE Harvey 1860 b, 303; 1860 a, pl. 143. De Toni 1903, 1,193. Lucas and Perrin 1947, 311. — *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1946, 1948.
- DASYA NACCARIOIDES Harvey 1844, 432; 1847, 63, pl. 22. J. Agardh 1863, 1,217. De Toni 1903, 1,198. Lucas and Perrin 1947, 313. — *WB.* Drift, Jan. 1946. *PB.* Drift, Jan. 1944, May 1945, Jan. 1946 and in a deep pool on main reef, Nov. 1947.
- DASYA SCOPULIFERA Harvey 1863, pl. 271. De Toni 1903, 1,185. — *PB.* Drift, Jan. 1946. A single specimen which agrees well with Harvey's figure.

- DASYA URCEOLATA* Harvey, Alg. Aus. exs. n. 217. J. Agardh 1863, 1,208. De Toni 1903, 1,209. Lucas and Perrin 1947, 314. — *PB.* On *Cystophora intermedia* and occasionally on *C. subfarcinata* in sublittoral fringe on main reef, May 1945, Nov. 1947, Aug., Dec. 1948. Checked with one of Harvey's specimens from Point Fairy.
- DASYA VILLOSA* Harvey 1847, 61, pl. 20. J. Agardh 1863, 1,215. De Toni 1903, 1,203. Lucas and Perrin 1947, 314. — *AR.* 5-6 feet below low water near Picnic Point, Jan. 1948. *MR.* Drift, Jan. 1946. *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1947, 1948, 1949. *PB.* Drift, Jan. 1944, 1946, 1948.

#### DASYOPSIS Zanardini

- DASYOPSIS CLAVIGERA* Womersley 1946 b, 137, f. 1, 2, pl. 27. — *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1947, 1948. *VB.* Lower littoral, south side of Ellen Point, May 1945, Dec. 1945. *PB.* Sub-littoral fringe on reefs, all seasons.

#### HALODICTYON Zanardini

- HALODICTYON ARACHNOIDEUM* Harvey 1858, pl. 37 A. De Toni 1903, 1,246. Lucas and Perrin 1947, 322. — *AR.* Sublittoral near Muston, Nov. 1947, Jan. 1948. *RP.* Drift, Aug. 1948.
- HALODICTYON ROBUSTUM* Harvey 1858, pl. 37 B. De Toni 1903, 1,245. Lucas and Perrin 1947, 322. — *PB.* Drift, Jan. 1948.

#### HETEROSIPHONIA Montagne

- HETEROSIPHONIA CURDIEANA* (Harvey) Falkenberg 1901, 716. De Toni 1903, 1,236. Lucas and Perrin 1947, 318. *Dasya curdieana* Harvey in J. Agardh 1863, 1,189; 1890, 87. — *VB.* Drift, Jan. 1949. *PB.* Drift, Jan. 1948.
- HETEROSIPHONIA GUNNIANA* (Harvey) Falkenberg 1901, 651. De Toni 1903, 1,231. Lucas and Perrin 1947, 316, f. 153. *Dasya gunniana* Harvey 1847, 59, pl. 17; 1860 b, 301. — *AR.* Upper sublittoral, Jan. 1949. *MR.* Drift, Jan. 1946. *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1947. *PB.* Sublittoral fringe and outer pools on reefs, all seasons.
- HETEROSIPHONIA MICROCLADIOIDES* (J. Agardh) Falkenberg 1901, 637, t. 19, f. 5. De Toni 1903, 1,224. Lucas and Perrin 1947, 316. *Dasya microcladioides* J. Agardh 1890, 83. *Dasya pellucida* Harvey 1854, 543. — *VB.* Shaded end of pool 1, south side of Ellen Point, Jan. 1947. A few specimens which agree well with Harvey's *D. pellucida* from King George's Sound (in Melbourne National Herbarium).
- HETEROSIPHONIA MUELLERI* (Sonder) De Toni 1903, 1,237. Lucas and Perrin 1947, 319, f. 154. *Dasya muelleri* Sonder in Harvey 1858, pl. 31 (partim). J. Agardh 1890, 84, t. III, f. 1. — *VB.* Sublittoral fringe on reefs in the bay, Jan. 1949. *DB.* Sublittoral fringe, Jan. 1947. *PB.* Sublittoral fringe on main reef, Jan. 1947, and drift, Jan. 1946, 1948. *AB.* Drift, Aug. 1948. Eastern Cove. On sinker of buoy (12-15 feet below low water), Jan. 1948. None of these specimens is cystocarpic, so it is possible some may be *H. struthiopenna* (J. Agardh) De Toni, which has terminal cystocarps instead of the lateral, sessile ones of *H. muelleri*.

#### THURETIA Decaisne

- THURETIA QUERCIFOLIA* Decaisne. Harvey 1858, pl. 40. Falkenberg 1901, 668, t. 17, f. 1-9. De Toni 1903, 1,175. Lucas and Perrin 1947, 308, f. 147. — *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1948. *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, Jan. 1944, 1945, 1946, 1947, 1948. *CW.* Drift, Jan. 1946.

THURETIA TERES Harvey 1862, pl. 191. Falkenberg 1901, 674. De Toni 1903, 1,176. Lucas and Perrin 1947, 309. — CC. Drift, Jan. 1948. PB. In *Cystophora*-coralline and sublittoral fringe associations (on *Cystophora subfarinata* and *C. paniculata*), all seasons but rare.

DELESSERIACEAE — DELESSERIEAE

APOGLOSSUM J. Agardh

APOGLOSSUM TASMANICUM (F. v. Mueller) J. Agardh. De Toni 1900, 702. Kylin 1924, 23. Lucas and Perrin 1947, 231, f. 94. *Delesseria tasmanica* F. v. Mueller in Harvey 1860 b, 311, t. 190 B. J. Agardh 1876, 494. — VB. shaded end of pool 1, south side of Ellen Point, Jan. 1948. A few small sterile plants only.

CHAUVINIA

CHAUVINIA CORIIFOLIA Harvey 1863, syn. n. 376. Kylin 1924, 13. Lucas and Perrin 1947, 230, f. 93. *Delesseria coriifolia* Harvey 1860 a, pl. 150. — VB. Drift, Jan. 1948, 1949.

CLAUDEA Lamouroux

CLAUDEA ELEGANS Lamouroux. Harvey 1858, pl. 1. De Toni 1900, 748. Lucas and Perrin 1947, 237, f. 101. — PB. Drift, Jan. 1948 (rare).

HEMINEURA Harvey

HEMINEURA FRONDOSA (Hooker and Harvey) Harvey 1847, 116, pl. 45. Kylin 1924, 6. Lucas and Perrin 1947, 232, f. 95. *Delesseria frondosa*, Harvey 1860 a, pl. 179. — WB. Drift, Jan. 1946. VB. Drift, Jan. 1946, 1948.

HYPOGLOSSUM Kützing

HYPOGLOSSUM REVOLUTUM (Harvey) J. Agardh. De Toni 1900, 692. Lucas and Perrin 1947, 228, f. 91. *Delesseria revoluta* Harvey 1860 a, pl. 170. — AR. Sublittoral near Muston, Nov. 1947, and near mouth of inlet, Aug. 1948, Jan. 1949.

HYPOGLOSSUM SPATHULATUM (Kützing) J. Agardh. De Toni 1900, 689. Lucas and Perrin 1947, 227. *Delesseria spathulata* Kützing 1869, t. 12 c-e. *Delesseria hypoglossoides* Harvey 1859, pl. 87. — AR. Sublittoral near Muston, Nov. 1947, and near mouth of inlet, Aug. 1948.

PHITYMOPHORA J. Agardh

PHITYMOPHORA IMBRICATA (Areschoug) J. Agardh. Kylin 1924, 13. Kuehne 1946, 35, pl. 2. Lucas and Perrin 1947, 230. *Chauvinea imbricata* Harvey 1862, pl. 240. — WB. Drift, Jan. 1946. CC. Drift, Jan. 1948. VB. Drift, Jan. 1948, 1949. PB. Sublittoral fringe, main reef, Jan. 1947, 1948.

SARCOMENIA Sonder

SARCOMENIA DASYOIDES Harvey. J. Agardh 1863, 1,263; 1896, 134. De Toni 1900, 738. Lucas and Perrin 1947, 234, f. 96. — WB. Drift, Jan. 1946. VB. Drift, Jan. 1946, 1948. PB. In pools of the sublittoral fringe, Jan. 1946, 1947, Jan., Dec. 1948, Jan. 1949.

SARCOMENIA DELESSERIOIDES Sonder. Harvey 1860 a, pl. 121. J. Agardh 1896, 137. De Toni 1900, 742. Lucas and Perrin 1947, 236, f. 100. — CC. Drift, Jan. 1948. VB. Drift, Jan. 1949. PB. Drift, May 1945, Jan. 1946.

SARCOMENIA MUTABILIS (Harvey) J. Agardh 1896, 134. De Toni 1900, 736. Lucas and Perrin 1947, 234. — *AR*. Upper sublittoral along channel, July, Nov. 1947, Aug. 1948 (probably a winter form).

SARCOMENIA TENERA (Harvey) J. Agardh 1896, 136. De Toni 1900, 740. *Polysiphonia tenera* Harvey 1863, pl. 257. Lucas and Perrin 1947, 234, pl. 99. — *AR*. Upper sublittoral near the mouth, May 1945, July, Nov. 1947, Aug. 1948 (probably a winter form).

#### NITOPHYLLEAE

##### CRYPTOPLEURA Kützing

CRYPTOPLEURA ENDIVIAEFOLIA (Hooker and Harvey) Kylin 1924, 91. *Delesseria endiviaefolia* Hooker and Harvey 1847, 403. Kützing 1869, t. 11. *Nitophyllum endiviaefolium* J. Agardh 1876, 461. De Toni 1900, 637. — *WB*. Drift, Jan. 1945, 1946. *CC*. Drift, Jan. 1947, 1948.

##### HYMENEMA Greville

HYMENEMA CURDIEANA (Harvey) Kylin 1924, 79. *Nitophyllum curdieanum* Harvey 1860 a, pl. 151. J. Agardh 1876, 458. De Toni 1900, 658. Lucas and Perrin 1947, 223, f. 89, 90. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1944, 1948. *VB*. Drift, Jan. 1946, 1949.

##### MYRIOGRAMME Kylin

MYRIOGRAMME EROSA (Harvey) Kylin 1924, 61. *Nitophyllum erosum* Harvey 1859, pl. 94. J. Agardh 1876, 460. De Toni 1900, 639. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947. *VB*. Drift, Jan. 1949.

MYRIOGRAMME PRISTOIDEA (Harvey) Kylin 1924, 61. *Nitophyllum pristoideum* Harvey 1862, pl. 229. J. Agardh 1876, 460. De Toni 1900, 640. Lucas and Perrin 1947, 222, f. 86. — *WB*. Drift, Jan. 1946. *CC*. Drift, Jan. 1947. *VB*. Drift, Jan. 1949.

#### RHODOMELACEAE — POLYSIPHONIEAE

##### CHIRACANTHIA Falkenberg

CHIRACANTHIA ARBOREA (Harvey) Falkenberg 1901, 179, t. 19, f. 18-23. De Toni 1903, 971. *Acanthophora arborea* Harvey 1860 b, 296; 1860 a, pl. 132. — *AR*. Sublittoral near and outside the mouth of the inlet, all seasons.

##### LOPHURELLA Schmitz

LOPHURELLA PERICLADOS (Sonder) Schmitz. Falkenberg 1901, 154, t. 19, f. 24-26. De Toni 1903, 855. *Rhodomela pericladus*, Harvey 1858, pl. 28. — *PB*. Sublittoral fringe, main reef, Jan. 1947 (rare).

##### POLYSIPHONIA Greville

POLYSIPHONIA ABSCISSA Hooker and Harvey. Hooker 1847, 480, pl. 183, f. 2. De Toni 1903, 879. Lucas and Perrin 1947, 267. — *PB*. In rear littoral pools, all seasons. *CW*. In low rock pools, Jan. 1948.

POLYSIPHONIA CANCELLATA Harvey 1847, 51, pl. 15. De Toni 1903, 928. Lucas and Perrin 1947, 273. — *AR*. Sublittoral along channel, often on *Posidonia*, all seasons. *AB*. (no details).

POLYSIPHONIA DASYOIDES Zanardini 1874, 489. De Toni 1903, 954. Lucas and Perrin 1947, 266. — *CC*. In rock pools, Jan. 1944. *VB*. Upper littoral (splash area), south side of Ellen Point, Jan. 1946. *PB*, In littoral pools,

Jan. 1944, Nov. 1947, and sublittoral fringe, May 1945, Jan. 1946, April 1947. (often epiphytic on larger algae).

No authentic specimens of this species are available in Australia, but agreement with Zanardini's description is very good.

- POLYSIPHONIA DAVYAE** Reinbold 1899, 49. De Toni 1903, 913. Lucas and Perrin 1947, 265. — *AR.* On *Posidonia* in upper sublittoral, all seasons but not common. *PB.* Drift, Jan. 1946. *RP.* Drift, Aug. 1948.
- POLYSIPHONIA FRUTEX** Harvey 1847, 52; 1860 b, 301. Kützing 1863, t. 66 d-e. De Toni 1903, 925. Lucas and Perrin 1947, 273, f. 122. — *VB.* Mid littoral on reef in bay, Jan. 1946. *DB.* Lower littoral on reefs, Jan. 1947. *PB.* Littoral, and in pools, all seasons. *AB.* Lower littoral, Jan. 1947.
- POLYSIPHONIA FUSCESCENS** Harvey 1847, 52; 1860 b, 301. Kützing 1863, t. 67 a-d. De Toni 1903, 925. Lucas and Perrin 1947, 273. — *AR.* Sublittoral and upper sublittoral along channel and throughout lagoons, all seasons. *RP.* Drift, Aug. 1948. This species is very closely related to *P. frutex*, and possibly only an extreme ecological form. *P. fuscescens* is more loosely and distantly branched, and a slenderer plant than *P. frutex*, and grows in much calmer conditions around Kangaroo Island.
- POLYSIPHONIA HOOKERI** Harvey 1847, 40, pl. 12; 1860 b, 299. Kützing 1864, t. 17. De Toni 1903, 905. Lucas and Perrin 1947, 263, f. 119. — *AR.* Sublittoral near Muston, Nov. 1947. *PB.* Drift, Jan. 1947.
- POLYSIPHONIA HYSTRIX** Hooker and Harvey. Harvey 1847, 41, pl. 14; 1860 b, 299. Kützing 1864, t. 18 a-c. De Toni 1903, 906. Lucas and Perrin 1947, 265, f. 120. — *MR.* Drift, Jan. 1946.
- POLYSIPHONIA MALLARDIAE** Harvey 1847, 40, pl. 13; 1860 b, 299. Kützing 1864, t. 22 c-e. De Toni 1903, 908. Lucas and Perrin 1947, 265, f. 121. — *AR.* Sublittoral near Muston, Nov. 1947, Jan. 1948. *MR.* Drift, Jan. 1946. *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1948, and in a shaded pool, Jan. 1944.
- POLYSIPHONIA NIGRITA** Sonder 1846, 181. Harvey 1847, 51. Kützing 1863, t. 67 e-h. Lucas and Perrin 1947, 274. — *WB.* Drift, Jan. 1946. *CC.* Drift, Jan. 1944, 1947, 1948. *PB.* Sublittoral fringe, all seasons (epiphytic on other algae). *CW.* Lower littoral, Jan. 1946.  
*P. nigrita* differs from *P. cancellata* in not having the pericentral cells arranged in distinct rows, as seen in face view.
- POLYSIPHONIA PATERSONIS** Sonder. Kützing 1864, t. 18 d-f. *Polysiphonia spinosissima* Harvey 1860 a, pl. 155. *Brongniartella spinosissima*, Falkenberg 1901, 548, t. 19, f. 11-12. Lucas and Perrin 1947, 283. — *AR.* Lower littoral on the tidal flats, all seasons. The trichoblasts in this species are confined to the ends of the branches as in *Polysiphonia*.
- POLYSIPHONIA SUCCULENTA** Harvey 1860 b, 300. J. Agardh 1863, 969. De Toni 1903, 879. Lucas and Perrin 1947, 267. — *AR.* On *Posidonia* in the upper sublittoral throughout the lagoons, all seasons, common. *RP.* Drift, Aug. 1948.

#### LOPHOTHALIEAE

#### BRONGNIARTELLA Bory

- BRONGNIARTELLA AUSTRALIS** (Agardh) Schmitz. Falkenberg 1901, 546, t. 19, f. 6-7. De Toni 1903, 1,010. Lucas and Perrin 1947, 283, f. 130. *Polysiphonia cladostephus* Harvey 1860 a, pl. 154. — *AR.* Sublittoral along

channel, all seasons but commonest in winter. *VB*. Mid littoral on well-washed rock in bay, Jan. 1946, 1948. *DB*. Drift, Jan. 1947. *PB*. Drift, all seasons. *RP*. Drift, Aug. 1948. The American River form is a larger, looser and softer plant than those from the south coast.

*BRONGNIARTELLA FEREDAYAE* (J. Agardh) Schmitz. De Toni 1903, 1,014. *Dasya feredayae* J. Agardh 1863, 1,235. Harvey 1860 b, 303. — *VB*. Lower littoral, north side of Ellen Point, Jan. 1948, and drift, Jan. 1948, 1949. *PB*. Sublittoral fringe on a western reef, Dec. 1948, and drift, Jan. 1946, 1948.

*BRONGNIARTELLA SARCOCAULON* (Harvey) Schmitz. De Toni 1903, 1,013. Lucas and Perrin 1947, 285. *Dasya sarcoaulon* Harvey 1863, pl. 278. — *PB*. Drift, Jan. 1946. *CW*. In an exposed pool, south side, Aug 1948.

#### DOXODASYA Schmitz

*DOXODASYA BULBOCHAETE* (Harvey) Falkenberg 1901, 538, t. 13, f. 21-22. De Toni 1903, 1,021. Lucas and Perrin 1947, 286, f. 131. *Dasya bulbochaete* Harvey 1847, 65, pl. 25. — *VB*. Drift, Jan. 1948. *PB*. Drift, Jan. 1944, 1946.

#### LOPHOCLADIA Schmitz

*LOPHOCLADIA HARVEYI* (Kützing) Schmitz. Falkenberg 1901, 553. De Toni 1903, 1,016. *Dasya harveyi* Kützing 1864, 26, t. 71 e-f. *Dasya lallemandi*, Harvey 1854, 543. — *AR*. Upper sublittoral on Pig Island, April 1947, and on the cockle bank near the mouth, Jan. 1948, and drift, May 1945.

#### BOSTRYCHIEAE

##### BOSTRYCHIA Montagne

*BOSTRYCHIA MIXTA* Hooker and Harvey. Harvey 1860 a, pl. 176 A. De Toni 1903 1,150. — *AR*. Upper littoral on shaded rock throughout the inlet, mixed in small amount with *B. simpliciuscula*, all seasons. *PB*. On shaded rock in rear littoral, main reef, Aug. 1948, Jan. 1949. *RP*. Upper littoral, all seasons.

*BOSTRYCHIA SIMPLICIUSCULA* Harvey. J. Agardh 1863, 854. Falkenberg 1901, 152. De Toni 1903, 1,155. Lucas and Perrin 1947, 306. *Bostrychia rivularis*, Harvey 1860 a, pl. 176 B. — *AR*. Upper littoral on shaded rock throughout the inlet, all seasons. *PB*. On shaded rock, rear littoral main reef, May 1945 (rare). *AB*. Upper littoral, Jan. 1945. *RP*. Upper littoral, all seasons.

#### CHONDRIEAE

##### CHONDRIA C. Agardh

*CHONDRIA DASYPHYLLA* (Woodward) C. Agardh. De Toni 1903, 842. Newton 1931, 342, f. 211. Taylor 1937, 359. — *AR*. Upper sublittoral on tidal flats, Feb. 1946, April 1947.

J. Agardh (1892, 148-160) described a number of species of *Chondria* from southern Australia, some of which had previously been placed under *Ch. dasyphylla*. At least three species of *Chondria* occur at American River, and one species in the sublittoral fringe at Pennington Bay, but without examining authentic specimens of J. Agardh's it is difficult to place these. The specimens determined as *Ch. dasyphylla* agree well with Newton's figure.

#### CLADURUS Falkenberg

*CLADURUS ELATUS* (Sonder) Falkenberg 1901, 223, pl. 22, f. 1. De Toni 1903, 814. Lucas and Perrin 1947, 251, f. 111. *Ryliiphloea elata*, Harvey 1862, pl. 236. — *MR*. Drift, Jan. 1946. *VB*. Drift, Jan. 1948, 1949. *PB*. Drift, Jan. 1946.

## COELOCLONIUM J. Agardh

COELOCLONIUM OPUNTIODES (Harvey) J. Agardh 1876, 640. Falkenberg 1901, 211, t. 22, f. 32-34. De Toni 1903, 825. Lucas and Perrin 1947, 256. *Chondria opuntiioides* Harvey 1860 b, 297, pl. 189. — AR. Upper sublittoral along channel, especially near the mouth, May to Nov. (a winter form). VB. Drift, Jan. 1946. PB. Drift, May 1945, Jan. 1947. AB. Drift, Aug. 1948. RP. Drift, Aug. 1948.

## LAURENCIEAE

## JANCZEWSKIA Solms

JANCZEWSKIA TASMANICA Falkenberg. Engler and Prantl 1897, 432, t. 243 C. Falkenberg 1901, 257, t. 24, f. 18-19. De Toni 1903, 812. Setchell 1914 b, 16. Lucas and Perrin 1947, 250. — PB. On *Laurencia elata* in the sublittoral fringe, Jan. 1948, Dec. 1948, and on *Laurencia heteroclada* in the rear littoral, Sept. 1946. CW. On *L. heteroclada*, lower littoral, Jan. 1946. Reinhold (1899, 47) lists a *J. australis* Falkenberg from Investigator Strait. De Toni lists this nomen nudum with a query under *J. tasmanica*, and Setchell (p. 18) comments that it may be distinct from *J. tasmanica*. The Kangaroo Island specimens seem to agree well with *J. tasmanica*, and *J. australis* is probably the same species.

## LAURENCIA Lamouroux

LAURENCIA BOTRYODES (Turner) Gaillon. Harvey 1862, pl. 182. De Toni 1903, 802. Yamada 1931 a, 230. — BH. Very low littoral, Oct. 1947. CC. Lower littoral, Jan. 1948. PB. Sublittoral fringe and *Cystophora*-coralline associations on reefs, all seasons. CW. Rock pools, south side, Aug. 1948.

*L. botryoides* is very variable in size and stoutness, but fertile specimens are distinctive in the peculiar wart-like, crowded, tetrasporic receptacles. The PB specimens were reported in Pt. II, 159, under the m.s. name of *L. robusta*; fertile specimens show that they are only a stunted form (2-5 cm. high) of *L. botryoides*. The BS specimens are robust plants, to 20 cm. high, with the tetrasporic receptacles almost completely covering the branches.

LAURENCIA CLAVATA Sonder 1852, 694. Yamada 1931 a, 228. *Chondria clavata* Harvey 1860 a, pl. 189. *Coryneccladia clavata*, De Toni 1903, 810. — AR. Sublittoral near Muston, Jan. 1948. K. Drift, Jan. 1945. RP. Drift, June 1947.

LAURENCIA ELATA (Agardh) Harvey 1847, 81, pl. 33. De Toni 1903, 803. Yamada 1931 a, 241, pl. 26 a, b. Lucas and Perrin 1947, 249, f. 110. — HR. Low pools, Jan. 1949. PB. Sublittoral fringe and to 3 feet down the sides of reefs, all seasons.

LAURENCIA GRACILIS Hooker and Harvey. Harvey 1847, 84. De Toni 1903, 780. Yamada 1931 a, 212, pl. 12 b. — AR. Low littoral on Pig Island, Dec. 1948; upper sublittoral on Wallaby Island, July 1947, and on cockle bank, Jan. 1948. BS. Sublittoral on *Posidonia*, June 1947. EB. Upper sublittoral on *Posidonia*, Jan. 1945.

LAURENCIA HETEROCLADA Harvey 1860 a, pl. 148. De Toni 1903, 782. Yamada 1931 a, 238. Lucas and Perrin 1947, 247. — WR. Lower littoral and pools, Jan. 1946. CC. Rock pools, Jan. 1944. VB. Rock pools, south side of Ellen Point, Jan. 1948. PB. Littoral on reefs, all seasons. CW and AB. Lower littoral, Jan. 1947. *L. heteroclada* probably occurs throughout the

Exposed Rocky Coast Subformation, in the littoral and low rock pools. It is a variable species, and the relations between it and *L. filiformis* and *L. forsteri* need careful examination.

LAURENCIA MAJUSCULA (Harvey) Lucas 1935, 223. *Laurencia obtusa* var. *majuscula* Harvey 1863, syn. n. 309 b. Yamada 1931 a, 223, pl. 16 C. — *AR.* Upper sublittoral on Pig Island, Jan. 1947, Dec. 1948.

LAURENCIA TASMANICA Hooker and Harvey. Harvey 1847, 84. J. Agardh 1876, 654. De Toni 1903, 795. Yamada 1931 a, 234, pl. 21. Lucas and Perrin 1947, 249. — *AR.* Upper sublittoral behind Wallaby Island, Aug. 1948. *BH.* Lowest littoral, Oct. 1947. These specimens agree well with Yamada's plate of an authentic specimen, and with Harvey's from Tasmania.

#### PTEROSIPHONIEAE

##### DICTYMENIA Greville

DICTYMENIA HARVEYANA Sonder 1852, 698. Harvey 1860 b, 296. Kützing 1864, t. 95 a-b. Falkenberg 1901, 283, t. 19, f. 17. De Toni 1903, 983. Lucas and Perrin 1947, 282, f. 129. *Dictymania tridens* Harvey 1847, 28, t. 7. — *AR.* Upper sublittoral between Muston and the mouth, May 1945, Nov. 1947, Jan. and Aug. 1948. *VB.* Drift, Jan. 1949. *RP.* Drift, June 1947, Aug. 1948.

DICTYMENIA TRIDENS (Mertens) Greville. Kützing 1864, t. 94 f-g. Falkenberg 1901, 287. De Toni 1903, 985. Lucas and Perrin 1947, 281, f. 128. — *VB.* Drift, Jan. 1948, 1949.

##### JEANNERETTIA Hooker and Harvey

JEANNERETTIA LOBATA Hooker and Harvey. Harvey 1847, 20, pl. 4; 1858, pl. 33. Papenfuss 1942, 448. *Pollexfenia lobata*, Falkenberg 1901, 295. De Toni 1903, 979. Lucas and Perrin 1947, 278. — *VB.* Drift, Jan. 1948. *PB.* Drift Jan. 1946, 1948, and in the sublittoral fringe, main reef, Jan. 1948.

JEANNERETTIA PEDICELLATA (Harvey) Papenfuss 1942, 448. *Pollexfenia pedicellata* Harvey 1847, 22, pl. 5. Falkenberg 1901, 291, t. 4, f. 14-19. De Toni 1903, 979. Lucas and Perrin 1947, 278. — *AR.* Upper sublittoral throughout the inlet, June to Nov. *AB.* Drift, Aug. 1948. *RP.* Drift, June 1947, Aug. 1948. This seems to be mainly a winter form, and is extremely variable in thallus width (from 4 to 15 mm.).

#### LOPHOSIPHONIEAE

##### LOPHOSIPHONIA Falkenberg

LOPHOSIPHONIA SCOPULORUM (Harvey) comb. nov.

*Polysiphonia scopulorum* Harvey 1854, 540; Alg. Aus. Exs. n. 186. J. Agardh 1863, 940. Kützing 1864, t. 37 a-c. De Toni 1903, 1,065. — *PB.* Forming brownish red patches on rock in the rear littoral on reefs, all seasons.

This material is identical with Harvey's 186 a from Fremantle of *P. scopulorum* (in Melbourne National Herbarium), but the species is clearly a *Lophosiphonia*.

#### POLYZONIEAE

##### CLIFTONAEA Harvey

CLIFTONAEA PECTINATA Harvey 1859, pl. 100. Falkenberg 1901, 375, t. 5, f. 17-25; t. 10, f. 1-4; t. 24, f. 3. De Toni 1903, 1,039. Lucas and Perrin 1947, 289, f. 135. — *WR.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948. *CW.* Drift Jan, 1948.



## EUZONIELLA Falkenberg

EUZONIELLA FLACCIDA (Harvey) Falkenberg 1901, 365, t. 5, f. 10. De Toni 1903, 1,029. Lucas and Perrin 1947, 288, f. 134. *Polyzonia flaccida* Harvey 1858, pl. 42 B. — *PB.* Drift, Dec. 1948. A single cystocarpic specimen which agrees well with Harvey's figure.

EUZONIELLA INCISA (J. Agardh) Falkenberg 1901, 361, t. 5, f. 2-8, 11; t. 14, f. 28-32. De Toni 1903, 1,028. Lucas and Perrin 1947, 287, f. 133. *Polyzonia incisa*, Harvey 1858, pl. 42 A. — *WB.* Drift, Jan. 1946.

## AMANSIEAE

## AMANSIA Lamouroux

AMANSIA KUETZINGIOIDES Harvey 1858, pl. 51. Falkenberg 1901, 420, t. 7, f. 5. De Toni 1903, 1,085. Lucas and Perrin 1947, 296, f. 140. — *PB.* Drift, Jan. 1946, 1948.

AMANSIA PINNATIFIDA Harvey 1862, pl. 222. Falkenberg 1901, 419. De Toni 1903, 1,090. Lucas and Perrin 1947, 296. — *VB.* Drift, Jan. 1949. *PB.* Drift, Jan. 1944, May 1945, Jan. 1946, 1947, 1948. *CW.* Drift, Jan. 1946.

## ANEURIA (J. Agardh) W. v. Bosse

ANEURIA LATIFOLIA (Harvey) J. Agardh 1892, 169. De Toni 1924, 429. *Lenormandia latifolia* Harvey 1847, 19. — *VB.* Drift, Jan. 1948, 1949. *PB.* Drift, all seasons.

Previously (Pt. I, 244) this species was recorded as *Lenormandia spectabilis*. Harvey considered this and *L. latifolia* to be forms of one species, but they appear to be quite distinct.

## LENORMANDIA Sonder

LENORMANDIA MUELLERI Sonder. Harvey 1858, pl. 45. Falkenberg 1901, 467, t. 8, f. 13-16. De Toni 1903, 1,116. Lucas and Perrin 1947, 300, f. 142. — *WB.* Drift, Jan. 1946. *VB.* Drift, Jan. 1948. *PB.* Drift, Jan. 1946, 1948.

LENORMANDIA SMITHIAE (Hooker and Harvey) Falkenberg 1901, 464, t. 8, f. 18-21. De Toni 1903, 1,120. Lucas and Perrin 1947, 303, f. 143. *Polyphacum smithiae*, Harvey 1847, 17, pl. 3. — *VB.* Drift, Jan. 1949. *PB.* Drift, Jan. 1944, May 1945, Jan. 1946, 1948.

LENORMANDIA SPECTABILIS Sonder. Harvey 1862, pl. 181. De Toni 1903, 1,117. — *VB.* Drift, Jan. 1946, 1949. A large range of specimens may show that this species is not distinct from *L. muelleri*.

## OSMUNDARIA Lamouroux

OSMUNDARIA PROLIFERA Lamouroux. Falkenberg 1901, 469, t. 8, f. 24-26. De Toni 1903, 1,109. Lucas and Perrin 1947, 299, f. 141. *Polyphacum proliferum*, Harvey 1862, pl. 188. — *PB.* Drift, Jan. 1946, 1947, 1948.

## PROTOKUETZINGIA Falkenberg

PROTOKUETZINGIA AUSTRALASICA (Montagne) Falkenberg 1901, 475, t. 9, f. 6 and f. 8 B. De Toni 1903, 1,076. Lucas and Perrin 1947, 295. *Rytiphloea australasica*, Harvey 1858, pl. 27. — *VB.* Drift, Jan. 1949. *DB.* Sublittoral fringe of western terraced reef, Dec. 1948, and drift, Jan. 1948. *RP.* Drift June 1947.

## VIDALIA Lamouroux

VIDALIA SPIRALIS Lamouroux. Falkenberg 1901, 428. De Toni 1903, 1,106.  
 Lucas and Perrin 1947, 298. *Epineuron spirale*, Harvey 1847, 25, pl. 9. —  
 VB. Drift, Jan. 1948, 1949.

## HETEROCLADIEAE

## TRIGENIA Sonder

TRIGENIA UMBELLATA J. Agardh 1890, 116; 1899, 122, t. 2, f. 1-6. Falkenberg  
 1901, 583, t. 12, f. 14-15. De Toni 1903, 1,125. Lucas and Perrin 1947,  
 305, f. 145. — CC. Drift, Jan. 1948. PB. Drift, Jan. 1944, 1946.

## INDEX TO GENERA

	Page		Page		Page
Acetabularia	- 144	Corallina	- 166	Halymenia	- 168
Acrochaetium	- 162	Corynophlaea	- 154	Hemineura	- 183
Acrotylus	- 174	Crouania	- 179	Heterosiphonia	- 182
Amansia	- 189	Cryptopleura	- 184	Hormosira	- 158
Amphiroa	- 166	Curdiea	- 169	Hydroclathrus	- 157
Aneuria	- 189	Cutleria	- 150	Hydrocoleum	- 139
Antithamnion	- 178	Cystophora	- 159	Hymenocladia	- 176
Apjohnia	- 144	Cystophyllum	- 161	Hymenema	- 184
Apoglossum	- 183			Hypnea	- 173
Areschougia	- 171	Dasya	- 181	Hypoglossum	- 183
Asparagopsis	- 162	Dasyopsis	- 182		
Asperococcus	- 157	Dasyphila	- 178	Isactis	- 141
		Dasyphloea	- 165		
Ballia	- 179	Delisea	- 163	Janczewskia	- 187
Bangia	- 162	Derbesia	- 144	Jania	- 167
Bellotia	- 156	Dermocarpa	- 139	Jeannerettia	- 188
Bindera	- 174	Dicranema	- 173		
Blidingia	- 142	Dictymenia	- 188	Lasiothalia	- 179
Bonnemaisonia	- 163	Dictyopteris	- 153	Laurencia	- 187
Bostrychia	- 186	Dictyosphaeria	- 143	Lenormandia	- 189
Botryocladia	- 174	Dictyota	- 150	Liagora	- 153
Brachytrichia	- 141	Dilophus	- 152	Lithothamnion	- 168
Brongniartella	- 185	Doxodasya	- 186	Lobospira	- 153
Bryopsis	- 144			Lomentaria	- 176
		Ecklonia	- 157	Lophocladia	- 186
Callithamnion	- 177	Ectocarpus	- 148	Lophurella	- 184
Callophyllis	- 168	Encyothalia	- 156	Lophosiphonia	- 188
Callymenia	- 168	Enteromorpha	- 142	Lyngbya	- 140
Calothrix	- 140	Entophysalis	- 139		
Carpoglossum	- 159	Erythroclonium	- 172	Macrocystis	- 157
Carpomitra	- 156	Erythrymenia	- 175	Melanthalia	- 169
Caulerpa	- 146	Ethelia	- 166	Metagoniolithon	- 167
Centroceras	- 180	Euptilota	- 178	Metamastophora	- 167
Ceramium	- 180	Euzoniella	- 189	Microdictyon	- 144
Chaetomorpha	- 143			Muellerena	- 178
Champia	- 176	Galaxaura	- 165	Mychodea	- 173
Chauvinia	- 183	Gelidium	- 165	Myriodesma	- 158
Chiracanthia	- 184	Gelinaria	- 168	Myriogloia	- 155
Chlanidophora	- 153	Gigartina	- 174	Myriogramme	- 184
Chondria	- 186	Gloioderma	- 174	Myrionema	- 154
Cladophora	- 142	Gloiophloea	- 165		
Cladosiphon	- 155	Gloiosaccion	- 175	Nemalion	- 163
Cladostephus	- 149	Gracilaria	- 169	Nemastoma	- 169
Cladurus	- 186	Griffithsia	- 176	Neomonospora	- 177
Claudea	- 183	Grunowiella	- 172	Nereia	- 156
Cliftonaea	- 188	Gulsonia	- 178	Nizymenia	- 171
Coccochloris	- 139			Notheia	- 158
Codium	- 145	Halodictyon	- 182		
Coelarthrum	- 175	Haloplegma	- 177		
Coeloclonium	- 187	Halopteris	- 149		
Colpomenia	- 157				

	Page		Page		Page
Osmundaria	- 189	Rhipiliopsis	- 146	Symploca	- 140
		Rhododactylis	- 173		
Pachydietyon	- 151	Rhodoglossum	- 174	Taonia	- 153
Perischelia	- 178	Rhodopeltis	- 166	Thamnoclonium	- 168
Perithalia	- 156	Rhodophyllis	- 172	Thuretia	- 182
Peyssonnelia	- 166	Rhodymenia	- 175	Thysanocladia	- 171
Phacelocarpus	- 171	Rivularia	- 141	Tinocladia	- 155
Phitymophora	- 183			Trigenia	- 190
Phloeocaulon	- 149	Sarcomenia	- 183	Tylopus	- 169
Plectonema	- 140	Sargassum	- 161		
Plocamium	- 170	Scaberia	- 162	Ulothrix	- 141
Pocockiella	- 153	Scytosiphon	- 157	Ulva	- 141
Polycerea	- 155	Scytothalia	- 159		
Polycoelia	- 169	Seirococcus	- 159	Vidalia	- 190
Polysiphonia	- 184	Solieria	- 171		
Porphyra	- 162	Sphacelaria	- 149	Wrangelia	- 180
Protokuetszingia	- 189	Splachnidium	- 155		
Pterocladia	- 165	Spongoclonium	- 178	Xiphophora	- 159
Ptilocladia	- 179	Sporochnus	- 156		
Pylaiella	- 148	Spyridia	- 180	Zonaria	- 153
		Stenocladia	- 171		
Rhabdonia	- 172	Stilopsis	- 155		
		Struvea	- 144		

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1845-49	- - 1	1858	- - 8	1865	- - 15
1850-52	- - 2	1859	- - 9	1866	- - 16
1853	- - 3	1860	- - 10	1867	- - 17
1854	- - 4	1861	- - 11	1868	- - 18
1855	- - 5	1862	- - 12	1869	- - 19
1856	- - 6	1863	- - 13	1871	- - Index
1857	- - 7	1864	- - 14		

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