
ALGAE.

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SUMMARY.

Identifications are given of some 172 species of marine algae collected during the Port Phillip Survey, together with their distribution within the Bay. The great majority occur only in the rough water conditions of Port Phillip Heads and just within, but certain species are largely confined to the very calm Corio Bay and south-western part of the Bay, while others are not found within this area.

INTRODUCTION.

The marine algae of the Port Phillip region are known mainly from early collections by W. H. Harvey, F. von Mueller and others, and particularly from the extensive collections of J. B. Wilson (1892) made (largely by dredging) over several years, near Port Phillip Heads.

The algae collected by the Port Phillip Survey 1957–63 resulted from both diving and dredging, and cover essentially the areas distinctly below low-tide level. Intertidal and just subtidal algae are included only incidentally in this list. Minute epiphytic algae are also omitted. The vast area of the Bay precludes a detailed account of the distribution of many species, particularly the less common ones. Hence the apparent absence of a species from most of the Bay must be viewed with caution if the species is known from well within the Bay. Nevertheless certain species are characteristic of regions within the Bay and these will be discussed briefly below.

For convenience in recording or discussing the species distribution, the Bay has been divided into the following regions (see Charts 1 and 2 back of volume).

- Northern bay .. areas 1-14.
- Corio Bay .. areas 15-18, 25-30, 37-40.
- South-western bay .. areas 42, 49, 50.
- Central bay .. areas 19-22, 31-34, 43-46, 51-54.
- Eastern bay .. areas 23-24, 35-36, 47-48, 55.
- Southern bay .. areas 60-64, 67-70.
- Port Phillip Heads .. areas 58, 59.
- Outside bay .. areas 56-57, 65-66.

The distribution for each species is given according to the above regions of the bay, followed by the area number with the station number in brackets. The data for these collection localities is given in the Table A (back of volume). Only records resulting from the Survey are given below, and no drift specimens are included.
References to each species indicate where either a description of the species can be found or to further literature giving this.

Collections were usually made in duplicate. The first set is now deposited in the Algal Herbarium of the Department of Botany, University of Melbourne, and the second set in the Melbourne National Herbarium.

NOTES ON THE DISTRIBUTION OF MARINE ALGAE WITHIN PORT PHILLIP.

The vast majority of the species collected are confined to the Port Phillip Heads region, where they are subject to strong wave action and currents, with clean water. Within the Bay conditions are not nearly so suitable for marine algae, due to the loose bottom and lack of firm substrata. The relatively shallow water, more variable and often higher temperatures than outside the Bay, more suspended matter, and considerable pollution from shipping and from the city of Melbourne are all factors reducing the number of algae which grow within the Bay.

The only exception amongst the marine algae to their need for a solid substratum is the green alga Caulerpa, several species of which grow well on a muddy-sandy area due to their basal surculi or rhizome-like parts. C. remotifolia is found in most parts of the Bay, and C. geminata and C. longifolia f. crispata occur mainly in the very calm Corio Bay and along the western coast of the Bay. These species may cover areas many square meters in extent as a virtually closed community. Often however they occur mixed with the marine angiosperm Zostera.

The following lists give some idea of the better defined algal distributions within the Bay, based on the Survey records.

Fairly general within the Bay.

Ulva lactuca, Caulerpa remotifolia, probably Cadium harveyi and Cutleria multifida, Solieria robusta, Grifithia leges, Wrangelia protensa, Polysiphonia cancellata, Dictyomenia harveyana and Laurencia filiformis.

Largely restricted to Corio Bay, the calm western coast, and in some cases the Northern bay.

Caulerpa geminata, C. longifolia f. crispata, Acetabularia peniculus, Dictyota dichotoma, Caulocystis uvijera, Rhabdonia coccinea, Rhodoglossum jolifertum, Botryocladia obovata, Lophothalla verticillata, Jeanmarretti pedicellata.

Around the Bay, excluding the Central bay and very calm western areas.

Caulerpa brownii, Dictyopteris muelleri, Ecklonia radiata, Cystophora retroflexa, Sargassum paradoxum, S. verruculosum.

Comparisons between now and past times of the algal distribution within Port Phillip Bay are not possible owing to lack of previous records of the algae collected in situ. Nearly all previous collections were of drift material, or of species growing near low-tide level, with the exception of the dredge collections of J. B. Wilson near Port Phillip Heads (Wilson, 1892). Comparison of the present Survey list with that of Wilson show that a very large number of his species were not recollected during the survey. Many of these are probably rare, but drift material from Port Phillip Heads (not included in this list) shows that the algal flora of this region is still very much richer than is indicated by the Survey list. A thorough survey of intertidal and just subtidal algae would also increase this list considerably.
Phylum CHLOROPHYTA.

Order Ulvales.

Family Ulvaceae.

Ulva L.

Ulva lactuca L.

Womersley 1956: 353.
Northern bay—area 6 (118). Corio Bay—areas 40 (101), 17 (171–2). Southern bay—area 60 (85).

Ulva lactuca is more widely distributed throughout Port Phillip Bay than the above collections examined by the author. During the Survey it was also observed in all peripheral areas of the bay, but not in the central bay. On rock platforms around the Heads an Ulva with a more dissected, ribbon-like and undulating thallus occurs, as shown by a collection from Portsea—area 59 (23). This may prove to be specifically distinct.

ENTEROMORPHA Link.

No specimens of Enteromorpha were collected during the Survey, though the genus is common on jetties, rocks and shells in the lower intertidal and upper sublittoral around the shores of the Bay.

Order Cladophorales.

Family Cladophoraceae.

Chaetomorpha Kuetzing.

Chaetomorpha darwinii (Hooker) Kuetzing.


Chaetomorpha indica (Kuetz.) Kuetz.

Womersley 1956: 357.
South-western bay—entrance to Swan Bay, area 50 (228).

Cladophora Kuetzing.

Many species of Cladophora are notoriously difficult to determine, and in several cases the Port Phillip material was inadequate.

Cladophora bainesii Harvey.

Womersley 1956: 358.
Eastern bay—area 47 (29, 30).

Cladophora fascicularis (Mert.) Kuetzing.

Womersley 1956: 358.
Northern bay—area 7 (St. Kilda Pier).

A fairly robust form of this species, with only slightly fasciculate branch ends.
Cladophora sp.
Northern bay—area 5 (166). Eastern bay—area 55 (147).

Cladophora sp.
Northern bay—area 10 (103).

Cladophora sp.
Corio Bay—area 27 (47).

Order Siphonales.
Family Bryopsidaceae.
Bryopsis Lamouroux.
Bryopsis plumosa (Huds.) C. Agardh.
Womersley 1950: 364.
Northern bay—area 10 (103). Probably widespread.

Family Caulerpaceae.
Caulerpa Lamouroux.

Ten species of Caulerpa occur within the Port Phillip survey area. C. brownii, C. geminata, C. longifolia f. crispata, and C. remotifolia are prominent ecologically, especially in the Northern bay and Corio Bay. Other species are largely confined to the Heads or just inside, though in some cases recognized forms occur more within the Bay. The distribution of the common species is shown in Chart III (back of volume).

Caulerpa brownii (C. Agardh) Endlicher.

A common species in the northern, eastern and southern parts of Port Phillip, but not extending into the very calm areas of Corio Bay. Common also on rock platforms outside Port Phillip, in pools at or below low-tide level. The slenderer forms occur in calmer water.

Caulerpa cactoides (Turner) C. Agardh.
South-western bay—area 50 (230-1). Port Phillip Heads—area 58 (150-4).

Caulerpa flexilis Lamouroux.
Womersley 1956: 366.

var. muelleri (Sonder) Womersley.
Womersley 1956: 367.
Outside bay—areas 56 (295), 58 (293).
Caulerpa geminata Harvey 1854.

[C. sedoides (R. Br. ex Turner) C. Agardh.]

Womersley 1956: 369.

Unfortunately Fucus sedoides R. Br. ex Turner 1811 (=Caulerpa) is preyed by both Fucus sedoides Goodenough and Woodward 1797 (=Gastroclonium ovatum (Huds.) Pap.) and by Fucus sedoides Desfontaines 1798 (=Cystoseira sedoides (Desf.) C. Ag.). The earliest specific name available for the Australian Caulerpa is C. geminata Harvey 1854.


C. geminata is a common alga, often in extensive beds, in the Northern bay and Corio Bay, generally in \( \frac{1}{4} \) to 2 fathoms, occasionally up to 5 fathoms. C. geminata shows several forms from outside Port Phillip Bay to calm localities within the bay. The rough coast form, found outside the Heads, has spherical to shortly ovoid vesicles arranged radially. On both fairly rough and on somewhat calmer coasts the form with distichous, slightly more elongate vesicles appears, while in the calm areas of the Northern bay and Corio Bay the vesicles are distichous, sometimes irregularly separated on the axes, and often 2–2\( \frac{1}{2} \) times as long as broad. In many specimens of the latter form the vesicles are somewhat constricted \( \frac{1}{2}–\frac{3}{4} \) of the way from the base to apex; this may be due to later more active growth of the apical portion of developing vesicles.

Caulerpa longifolia C. Agardh.

Womersley 1956: 367.

Outside bay—area 56 (295).

f. crispat a (Harv.) Womersley.

Womersley 1956: 368.


While the typical form of the species occurs outside Port Phillip, within the Bay and its calmer conditions only f. crispat a occurs. It is largely restricted to the Northern bay and Corio Bay, where it is one of the commonest algae.

Caulerpa obscura Sonder.

Womersley 1956: 358.

Port Phillip Heads—area 59 (23, 36, 79).

This is a rough water species which only just extends inside the Bay.

Caulerpa remotifolia Sonder.

Womersley 1956: 369.


C. remotifolia only occurs in calm, sheltered waters and is particularly plentiful in the Northern bay and Corio Bay. Most of the specimens are fairly densely pinnate for this species.
Caulerpa scalpelliformis (R. Br. ex Turner) C. Agardh.
Womersley 1956: 369.
Port Phillip Heads—area 59 (36, 79).
This species is confined to the Heads and outer rough coasts.

Caulerpa simpliciuscula (Turner) C. Agardh.
Womersley 1956: 370.
Northern bay—areas 9 (178), 11 (190, 192). Port Phillip Heads—areas 58 (150-4), 59 (23).
Specimens from near and outside the Heads are typical of the species, those from the Northern bay tend to var. laxa.

Caulerpa trifaria Harvey.
Port Phillip Heads—areas 58 (150-4), 59 (36, 225, 226). Southern bay—area 60 (85).

Family Codiaeae.
Codium Stackhouse.
Codium duthiae Silva.
Port Phillip Heads—area 59 (36, 79).

Codium fragile (Sur.) Hariot. s. sp. novae-zelandiae (J. Ag.) Silva.
Northern bay—area 6 (118). Eastern bay—area 48 (32).
This is more usually a rough water species and is probably of odd occurrence only in Port Phillip Bay.

Codium galeatum J. Agardh.
Port Phillip Heads—area 59 (36, 79).

Another rough water species, confined to the Heads region.

Codium harveyi Silva.
Corio Bay—areas 16 (143), 27 (41, 138). Eastern bay—areas 14 (95), 55 (22).
Southern bay—area 61 (37).
This is typically a calm water species.

Codium perinae Lucas.
Eastern bay—area 55 (148).

Order Dasycladales.
Family Dasycladaceae.
Acetabularia Lamouroux.

Acetabularia peniculus (R. Br. ex Turner) Solms-Lauback.
South-western bay—area 49 (238).
This record is from the very sheltered Swan Bay.
Phylum PHAEOPHYTA.
Order Ectocarpales.
Family ECTOCARPACEAE.
Ectocarpus Lyngbye.

Ectocarpus confervoides (Roth) Le Jolis. May 1939.
Southern bay—area 60 (268).

Probably widespread within the bay, on rock and on other algae.

Feldmannaia Hamel.
Feldmannaia globifer (Kuetzing) Hamel.
Southern bay—area 60 (268).
Epiphytic and probably more widespread.

Order Sphacelariales.
Family Sphacelariaceae.
Sphacelaria C. Agardh.
Sphacelaria furcigera Kuetzing.
Sauvageau 1914: 145.
Southern bay—area 60 (268).

Probably widespread.

Halopteris Kuetzing.
Halopteris junicularis (Mont.) Sauvageau.
Sauvageau 1914: 393.
Port Phillip Heads—area 59 (36, 234). Outside bay—area 56 (295).

Halopteris junicularis (Mont.) Sauvageau.
Sauvageau 1914: 416.
Port Phillip Heads—area 59 (36).

Both species of Halopteris are rough water alga confined to the Heads or outside.

Cladostephus C. Agardh.
Cladostephus verticillatus (Lightfoot) C. Agardh.
Sauvageau 1914: 488.

Order Cutleriiales.
Family Cutleriaceae.
Cutleria Greville.
Cutleria multifida (Smith) Greville.
Womersley 1950: 150.

These few collections probably indicate that Cutleria occurs as scattered plants throughout the bay except in very calm areas or near the Heads.
Order **Dictyotales**.

Family **Dictytotaceae**.

**Dictyota** Lamouroux.

The species of *Dictyota* are notoriously difficult to separate. Except for *D. dichotoma* the following species are represented by a single collection, but the specimens agree well with the type material.

**Dictyota alternifida** J. Agardh.


Northern bay—area 5 (52).

**Dictyota apiculata** J. Agardh.

J. Agardh 1894: 67; Womersley 1950: 150.

Corio Bay—area 17 (170-1).

**Dictyota dichotoma** (Huds.) Lamx.

Lucas 1936: 91; Womersley 1950: 150.

Northern bay—areas 6 (118, 137), 7 (205). Corio Bay—areas 17 (172), 27 (49).

**Dictyota furcellata** (C. Ag.) J. Ag.

Womersley 1950: 150.

South western bay—area 50 (229).

**Dictyota sp.**

Port Phillip Heads—area 59 (226).

**Pachydictyon** J. Agardh.

**Pachydictyon furcellatum** (Harv.) J. Ag.

Lucas 1936: 92.

Port Phillip Heads—area 59 (87).

**Pachydictyon paniculatum** J. Ag.

Lucas 1936: 92; Womersley 1950: 152.

Port Phillip Heads—area 59 (79, 214).

**Dilophus** J. Agardh.

**Dilophus fastigiatus** (Sonder) J. Agardh.


Outside bay—area 56 (295).

**Dilophus sp.**

Port Phillip Heads—area 59 (214).

The form of this single collection is similar to *D. foliosus* J. Ag. but broader and more robust. The thallus shows two medullary cells in young parts, four in older parts, and is uniform across the thallus with narrower edges. *D. foliosus* shows thicker edges, with more medullary cells than in the central region.
Lobospira Areschoug.
Lobospira bicuspidata Areschoug.

Zonarieae.
Dictyopteris Lamouroux.
Dictyopteris muelleri (Sonder) Reinbold.

Probably fairly common except in very calm areas.

Distromium Levring.
Distromium ?
Eastern bay—area 55 (149).
Sterile material.

Padina Adanson.
Padina fraseri (Grev.) J. Ag.
Port Phillip Heads—area 59 (79).
This is a fairly rough water species.

Taonia J. Agardh.
Taonia australasica J. Agardh.
J. Agardh 1894: 30.
Corio Bay—areas 26 (126, 301), 39 (313).
This little know species appears to be confined to very calm areas. Unfortunately all specimens are sterile, so this determination is provisional.

Zonaria C. Agardh.
Zonaria turneriana J. Agardh.
Lucas 1936: 86.

This is a common species under rough conditions at and outside the Heads and on the Eastern side of the bay.

Zonaria Sinclairii H. and H.?
Port Phillip Heads—areas 58 (293), 59 (36).
Juvenile, sterile specimens only.

Order Sporochnales.
Family Sporochnaceae.
Bellotia Harvey.
Bellotia eriophorum Harvey.
Lucas 1936: 97.
Port Phillip Heads—area 59 (36, 226).
Carpomitra Kuetzing.

*Carpomitra costata* (Stackh.) Batters.

*Carpomitra costata* (Stackh.) Batters.

Port Phillip Heads—area 59 (36).

Order **Dictyosiphonales**.

Family **Punctariaceae**.

*Colpomenia* Derbes and Solier.

*Colpomenia sinuosa* (Roth) Derb. and Sol.

Port Phillip Heads—area 59 (36).

Probably more widespread within Port Phillip Bay.

Order **Laminariales**.

Family **Alariaceae**.

*Ecklonia* Hornemann.

*Ecklonia radiata* (C.Ag.) J. Ag.
Lucas 1936: 95.


Common on any solid substratum within the bay, except in the calmest areas.

Family **Lessoniaceae**.

*Macrocystis* C. Agardh.

*Macrocystis angustijolia* Bory.
Northern bay—area 10 (103).

Otherwise common in the sublittoral around and outside Port Phillip Heads.

Order **Fucales**.

Family **Durvilleaceae**.

*Durvillea* Bory.

*Durvillea potatorum* (Lab.) Areschoug.

*[Sarcophycus potatorum* (Lab.) Kuetz.]
Lucas 1936: 82.

A dominant alga in the upper sublittoral outside and at the Heads.

Family **Fucaceae**.

*Xiphophora* Montagne.

*Xiphophora chondrophylla* (R.Br.) Mont.

Port Phillip Heads—area 58 (150-4).
Family Seiroccoccaceae.

Seirococcus Greville.

Seirococcus axillaris (R.Br.) Grev.

Lucas 1936: 68.
South-western bay—area 42 (265). Port Phillip Heads—area 58 (150-4).
This is a rough coast species restricted to outside or near the Heads.

Family Cystoseiraceae.

Acrocarpia Areschoug.

Acrocarpia paniculata (Turner) Areschoug.

Womersley 1964: 98.
Port Phillip Heads—areas 58 (293), 59 (36). Outside bay—area 56 (295).
A rough coast species confined to the Heads.

Caulocystis Areschoug.

Caulocystis cephalornithos (Labill.) Areschoug.

Womersley 1964: 102.
Eastern bay—area 23 (2).

Caulocystis uvifera (C.Ag.) Areschoug.

This species is found only on the western side of Port Phillip Bay and outside the bay. In the Corio bay area it is found in its typical form but tends to be more robust with slightly ovoid vesicles from the rougher Port Phillip Heads area. Only one specimen definitely referable to C. cephalornithos was collected, on the eastern side of Port Phillip Bay.

Cystophora J. Ag.

Most species of Cystophora occur at the Heads or just within the bay (e.g., in the south-western bay area). However C. retroflexa occurs around most of the bay except in the very calm Corio Bay and the Central Bay.

Cystophora congesta Womersley and Nizamuddin.

Womersley 1964: 86.
South-western bay—area 50 (228). Port Phillip Heads—area 58 (150-4).

Cystophora expansa (Areschoug) Womersley.

Womersley 1964: 77.
Port Phillip Heads—area 59 (79).

Cystophora grevillei (C. Ag. ex. Sonder) J. Ag.

Womersley 1964: 83.
Port Phillip Heads—area 59 (226).

Cystophora monilifera J. Agardh.

Womersley 1964: 75.
Southern bay—area 60 (85). Port Phillip Heads—area 59 (36).
Cystophora moniliformis (Esper) Womersley and Nizamuddin.
Womersley 1964: 71.
Eastern bay—area 55 (35). Southern bay—area 63 (164). Port Phillip Heads—
areas 58 (150-4), 59 (23).

Cystophora retorta (Mertens) J. Ag.
Womersley 1964: 92.
Southern bay—area 63 (20).

Cystophora retroflexa (Labill.) J. Ag.
Womersley 1964: 89.
area 42 (281). Southern bay—area 61 (37).
Occurring as scattered plants throughout rougher parts of the bay on
suitable firm substrata.

Cystophora siliquosa J. Ag.
Womersley 1964: 93.
South-western bay—area 50 (230-1). Port Phillip Heads—areas 58 (150-4),
59 (23, 79).
Confined to rough conditions outside and just inside the Heads.

Cystophora subfarcinata (Mertens) J. Ag.
Womersley 1964: 95.
South-western bay—area 42 (38). Port Phillip Heads—area 59 (23).

Cystophora torulosa (R.Br. ex Turn.) J. Ag.
Womersley 1964: 85.
South-western bay—area 50 (230-1).

Myriodesma Decaisne.
Myriodesma integrifolia Harvey.
Lucas 1936: 79.
Central bay—area 31 (10). Eastern bay—area 47 (30). Port Phillip Heads—
area 59 (87).

Family SARGASSACEAE.

Sargassum C. Agardh.

Many collections of Sargassum comprise only the basal leaves or
sterile plants, which are quite inadequate for determination. The following
species are represented by adequate specimens, but others probably occur
in the bay, including species of Eusargassum. These sterile Sargassum
specimens were collected from almost all parts of the Bay.

Sargassum decipiens (R. Br. ex Turner) J. Agardh.
South-western bay—area 42 (108-9). Port Phillip Heads—areas 58 (150-4),
59 (79).

Sargassum heteromorphum J. Agardh.
Womersley 1954: 345.
South-western bay—area 42 (108-9).
Sargassum paradoxum (R. Br.) Hooker and Harvey.
J. Agardh 1889: 69, pl. 20 (11).

Sargassum sonderi (J. Ag.) J. Agardh.
Port Phillip Heads—area 59 (79).

Sargassum verruculosum (Mertens) C. Agardh.

Phylum RHODOPHYTA.

Order Nemalionales.

Family Helminthocladiaceae.

Liagora Lamouroux.
Liagora harveyiana Zeh.

South-western bay—area 50 (229).

Family Bonnemaisoniaceae.

Delisea Lamouroux.

Delisea elegans (Ag.) Montagne.

Southern bay—area 59 (214).

Order Gelidiales.

Family Gelidiaceae.

Gelidium Lamouroux.

Gelidium australe J. Agardh.

Lucas and Perrin 1947: 143.
Port Phillip Heads—area 58 (150-4).

Gelidium glandulaefolium H. & H.

Lucas and Perrin 1947: 143.
Outside bay—area 66 (291).

Pterocladia J. Agardh.

Pterocladia capillacea (Gmel.) Bornet and Thuret.

Womersley 1950: 165.
Port Phillip Heads—area 59 (36).

Pterocladia lucida (R. Br.) J. Ag.

Lucas and Perrin 1947: 144.
Port Phillip Heads—areas 58 (293), 59 (36). Outside bay—area 66 (291).
Order Cryptonemiales.
Family Dumontiaceae.
Dasyphloea Montagne.
Dasyphloea insignis Montagne.
[D. tasmanica Harvey].

South-western bay—area 50 (229). Port Phillip Heads—area 59 (226).

Family Corallinaceae.
Cheilosporum Areschoug.
Cheilosporum elegans (H. & H.) Aresch.
C. sagittatum (Lamx.) Aresch.


Corallina L.
Corallina cuvieri Lamx.


Corallina officinalis L.

Northern bay—areas 5 (54), 6 (118). Outside bay—area 56 (295).

Jania Lamouroux.
Jania fastigiata Harvey.

Lucas and Perrin 1947: 397.
Port Phillip Heads—area 58 (150-4).

Metagoniolithon W. v. Bosse.
Metagoniolithon stelligerum (Lamk.) W. v. Bosse.

Port Phillip Heads—area 59 (79, 234).

Family Grateloupiaceae.
Grateloupi'a C. Agardh.
Grateloupia filicina var. luxurians A. & E. S. Gepp.

Northern bay—area 6 (118).

Polyopes J. Agardh.
Polyopes constrictus (Turn.) J. Ag.

Port Phillip Heads—area 59 (36).

Family Kallymeniaceae.
Callophyllis Kuetzing.
Callophyllis ceratoclada (J. Ag.) Womersley.

Eastern bay—area 23 (3, 9).
*Callophyllis harveyana* J. Agardh.
Lucas and Perrin 1947: 158.  
Port Phillip Heads—area 59 (226).

**Order Gigartinales.**  
**Family Gracilariaceae.**  
*Gracilaria* Greville.

*Gracilaria confervoides* (L.) Grev.
Lucas and Perrin 1947: 188.  
May 1948: 18.  
Central bay—area 51 (270).  
Eastern bay—area 55 (35).

*Gracilaria furcellata* Harvey.  
May 1948: 53.  
South-western bay—area 42 (38, 281).  
Southern bay—area 60 (85, 235).

*Gracilaria secundata* Harvey.  
May 1948: 46.  
South-western bay—area 49 (238).

*Melanthalia* Montagne.  
*Melanthalia obtusata* (Lab.) J. Ag.
Port Phillip Heads—areas 58 (293), 59 (36).

**Family Plocamiaceae.**  
*Plocamium* Lamouroux.

*Plocamium angustum* (J. Ag.) H. & H.
Lucas and Perrin 1947: 211.  
Southern bay—area 60 (85).  
Port Phillip Heads—areas 58 (150–4), 59 (36, 79, 224, 226).  
Outside Heads—area 66 (291).

*Plocamium coccineum* (Huds.) Lyngbye.  
Newton 1931: 443.  
Port Phillip Heads—area 59 (36).

*Plocamium costatum* (J. Ag.) H. & H.
Lucas and Perrin 1947: 212.  
Port Phillip Heads—area 59 (36, 79).  
Outside bay—area 56 (225).

*Plocamium mertensii* (Grev.) Harvey.  
South-western bay—area 50 (229).

*Plocamium preissianum* Sondr.  
Lucas and Perrin 1947: 211.  
Outside bay—area 66 (291).

**Family Sphaerococcaceae.**  
*Phacelocarpus* Endl. and Diesing.  
*Phacelocarpus labillardieri* (Mert.) J. Agardh.  
Port Phillip Heads—area 59 (87).  
Outside bay—area 56 (295).
Family Sarcodiaceae.

Nizymenia Sonder.

Nizymenia australis Sonder.


Outside bay—areas 57 (294), 66 (291).

Family Solieriaceae.

Solieria J. Agardh.

Solieria mollis Harvey.

Harvey 1863, synop: 41.

Port Phillip Heads—area 59 (36).

Solieria robusta (Grev.) Kylin.


Family Rhabdoniaceae.

Areschougia Harvey.

Areschougia laurencia (H. & H.) Harvey.


Corio Bay—area 30 (280). South-western bay—area 42 (38, 265).

Erythroclonium Sonder.

Erythroclonium muelleri Sonder.


Port Phillip Heads—area 58 (150-4).

Rhabdonia Harvey.

Rhabdonia coccinea Harvey.


Northern bay—areas 6 (118), 10 (103-4), 14 (117). Corio Bay—areas 16 (142-3), 17 (170-1), 27 (138-9), 28 (140-1).

Rhabdonia nigrescens Harvey.


Port Phillip Heads—area 59 (36).

Rhabdonia verticillata Harvey.


South-western bay—areas 42 (281), 50 (230-1). Port Phillip Heads—area 59 (79).

Family Rhodophyllidaceae.

Rhodophyllis Kuetzing.

Rhodophyllis goodwiniae J. Agardh.


Southern bay—area 59 (87, 214). Outside bay—area 66 (291).
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Family HYPNEACEAE.
Hypnea Lamouroux.
Hypnea episcopalis H. & H.

Eastern bay—areas 14 (4, 9), 23 (3).

Hypnea sp.
Corio Bay—area 27 (41). South-western bay—area 42 (38).

Family MYCHODEACEAE.
Ectoclinium J. Agardh.
Ectoclinium dentatum J. Agardh.

Outside bay—area 57 (295).

Mychodea Harvey.
Mychodea compressa Harvey.

Lucas and Perrin 1947: 156.
Port Phillip Heads—area 59 (79).

Mychodea foliosa (Harv.) J. Agardh.

Lucas and Perrin 1947: 156.
Port Phillip Heads—area 58 (150-4).

Mychodea hamata Harvey.

Lucas and Perrin 1947: 156.
Port Phillip Heads—area 58 (150-4).

Mychodea membranacea Harvey?

Lucas and Perrin 1947: 156.
Eastern bay—area 47 (29).

Family DICRANEMACEAE.
Dicranema Sonder.
Dicranema grevillei Sonder.

Southern bay—area 59 (214).

Family PHYLLOPHORACEAE.
Stenogramme Harvey.
Stenogramme leptophylla J. Agardh.

Port Phillip Heads—area 59 (87).

Family GIGARTINACEAE.
Gigartina Stackhouse.
Gigartina brachiata Harvey.

Northern bay—area 6 (118). Corio Bay—area 16 (284).
**Gigartina muelleriana** Setchell and Gardner.
Lucas and Perrin 1947: 149.
Port Phillip Heads—area 58 (150–4).

**Rhodoglossum** J. Agardh.

**Rhodoglossum foliiferum** (Harvey) J. Agardh.

[Iridaea foliifera Harvey.]

Harvey 1860: 326.
Northern bay—areas 5 (56), 6 (118), 9 (178). Corio Bay—areas 15 (284), 17 (170–1). Southern bay—area 60 (235).

**Rhodoglossum proliferum** J. Agardh.
Northern bay—area 5 (56, 167).

**Order Rhodymeniales.**

**Family Rhodymeniaceae.**

**Botryocladia** Kylin.

**Botryocladia obovata** (Sonder) Kylin.

[Chrysymenia obovata Sonder.]


**Erythrymenia** Schmitz.

**Erythrymenia minuta** Kylin.

Kylin 1931: 13.
Outside bay—area 66 (291).

**Gloiosaccion** Harvey.

**Gloiosaccion brownii** Harvey.

Corio Bay—area 30 (280). South-western bay—area 42 (265).

**Rhodymenia** Greville.

**Rhodymenia australis** Sonder.


**Family Champiaceae.**

**Champia.**

**Champia affinis** var. arcuata H. & H.

Port Phillip Heads—area 59 (234).

**Champia obsoleta** Harvey.

Port Phillip Heads—area 59 (36).
Champia tasmanica Harvey.
Lucas and Perrin 1947: 207.
Port Phillip Heads—area 59 (36, 87). Outside bay—area 66 (291).

Order Ceramiales.
Family Ceramiaceae.
Antithamnion Naegeli.
Antithamnion mucronatum (J. Ag.) Naegeli.
Southern bay—area 60 (85).

Ballia Harvey.
Ballia callitricha (Ag.) Montagne.
Port Phillip Heads—area 58 (293). Outside bay—area 66 (291).

Ballia scoparia (H. & H.) Harvey.
Outside bay—area 56 (295).

Ceramium Roth.
As well as the three unidentified species listed below, fragments of Ceramium are common on larger algae.

Ceramium sp.

Ceramium sp.
Corio Bay—area 27 (41).

Ceramium sp.
Northern bay—areas 3 (202), 7 (205).

Griffithsia C. Agardh.
Griffithsia teges Harvey.
Harvey 1854: 559.

Neomonospora Setchell and Gardner.
Neomonospora griffithsioides (Sonder) Womersley.
Womersley 1950: 177.

Spongoclonium Sonder.
Spongoclonium conspicuum Sonder.
Harvey 1860: 355.
Port Phillip Heads—area 59 (226).

Spyridia Harvey.
Spyridia opposita Harvey.
Port Phillip Heads—area 59 (36).
Wrangelia C. Agardh.

Wrangelia protensa Harvey.

Lucas and Perrin 1947: 137.


Family DASYACEAE.

Dasya C. Agardh.

Dasya maccarioides Harvey.


Southern bay—area 60 (269). Port Phillip Heads—area 59 (23, 79).

Dasya villosa Harvey.


Heterosiphonia Montagne.

Heterosiphonia gunniana (Harv.) Falk.


Corio Bay—area 17 (170-1).

Heterosiphonia muelleri (Sond.) De Toni.


South western bay—area 50 (230-1). Port Phillip Heads—area 59 (226).

Family DELESSERIACEAE.

Acrosorium Zanardini.

Acrosorium uncinatum (J. Ag.) Kylin.


Northern bay—area 6 (137). Corio Bay—area 17 (170-1).

Hymenena Greville.

Hymenena affinis (Harv.) Kylin.


Port Phillip Heads—area 59 (234).

Myriogramme Kylin.

Myriogramme gunniana (Harv.) Kylin.


Southern bay—area 60 (85). Port Phillip Heads—area 59 (234).

Myriogramme sp.

Outside heads—area 66 (291).

Nitophyllum Greville.

Nitophyllum parvifolium J. Agardh?

J. Agardh 1876: 457.

Port Phillip Heads—area 58 (150-4).

Nitophyllum sp.

Northern bay—area 6 (118). Corio Bay—area 17 (170-2).
Phitymophora J. Agardh.

Phitymophora imbricata (Areschoug) J. Agardh.

Port Phillip Heads—area 59 (79).

Family Rhodomelaceae.

Sarcomenieae.

Malaconema Womersley and Shepley.

Malaconema roeana (Harvey) Womersley and Shepley.


Sarcotrichia Womersley and Shepley.

Sarcotrichia dolichocystidea (J. Ag.) Womersley and Shepley.

Corio Bay—areas 18 (60–1), 26 (301), 29 (107).

Polysiphonieae.

Lophurella Schmitz.

Lophurella periclados (Sond.) Schmitz.

Northern bay—areas 6 (118), 10 (103), 13 (93). Corio Bay—area 29 (107).
South-western bay—area 42 (109).

Polysiphonia Greville.

As well as the following two species, others occur within the bay but collections made were not adequate for determination.

Polysiphonia blandi Harvey.

South-western bay—area 50 (228).

Polysiphonia cancellata Harvey.


Lophothalieae.

Brongniartella Bory.

Brongniartella australis (Ag.) Schmitz.

Lucas and Perrin 1947: 283.
South-western bay—area 42 (108). Eastern bay—area 55 (35). Southern bay—areas 60 (85), 63 (17–19, 21).

Lophothalia Kuetzing.

Lophothalia verticillata (Harvey) Kuetz.

Lophothalia sp.
Northern bay—areas 10 (15), 14 (4). Corio Bay—area 17 (170-1). Eastern bay—areas 23 (3, 9), 55 (22).

Pterosiphoniaceae.
Dictymenia Greville.
Dictymenia harveyana Sonder.
Port Phillip Heads—area 59 (214, 224, 226).

Placophoriceae.
Jeannerettia H. & H.
Jeannerettia lobata H. & H.
Lucas and Perrin 1947: 278.
Port Phillip Heads—area 59 (79, 214, 224).

Jeannerettia pedicellata (Harv.) Pap.
Lucas and Perrin 1947: 278.

Polyzonieae.
Dasyclonium J. Agardh.
Dasyclonium incisum (J. Ag.) Kylin.
[Euzoniella incisa (J. Ag.) Falk.]
Port Phillip Heads—area 58 (150-4).—On Gelidium australis.

Amanseieae.
Lenormandia Sonder.
Lenormandia prolifera (Ag.) J. Ag.
Southern bay—area 60 (85). Port Phillip Heads—area 59 (87, 224).

Lenormandia smithiae (H. & H.) Falk.
Southern bay—area 60 (85).

Chondrieae.
Cladurus Falkenberg.
Cladurus elatus (Sond.) Falk.
Port Phillip Heads—area 58 (150-4).

Coeloclonium J. Agardh.
Coeloclonium opuntioides (Harv.) J. Ag.
Lucas and Perrin 1947: 256.
South-western bay—areas 42 (109, 265), 50 (266). Central bay—area 51 (250).
Laurencieae.
Laurencia Lamouroux.
Laurencia clavata Sonder.

Outside bay—area 66 (291).

Laurencia elata (Ag.) Harvey.
Lucas and Perrin 1947: 249.
Port Phillip Heads—area 58 (293).

Laurencia filiformis (Ag.) Mont.
Northern bay—areas 6 (137), 10 (103), 14 (4, 9, 95). Corio Bay—area 27 (41).
Eastern bay—areas 23 (3), 47 (30).

Laurencia heteroclada Harvey.
Port Phillip Heads—area 59 (36). Outside bay—areas 56 (295), 59 (23).

Laurencia tasmanica H. & H.
Lucas and Perrin 1947: 249.
Southern bay—area 61 (37). Port Phillip Heads—area 59 (23). Possible juvenile forms in Central Bay—areas 43 (303), 51 (250), and Port Phillip Heads—area 59 (79).

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REFERENCES.

Harvey, W. H. (1854).—Some account of the marine botany of the colony of Western Australia. Trans. R. Irish Acad. 22: 525-66.


Sauvageau, C. (1914).—Remarques sur les Sphacelariacées. (Bordeaux.)


