

Marine Macroalgae of Fiordland, New Zealand

W.A. Nelson,¹ E. Villouta,² K.F. Neill,¹ G.C. Williams,¹
N.M. Adams,³ and R. Slivsgaard⁴

1 National Institute of Water and Atmosphere Research Ltd, P.O. Box 14-901, Wellington, New Zealand.

2 Department of Conservation, P.O. Box 10-420, Wellington, New Zealand.

3 39 Standen St, Karori, Wellington, New Zealand.

4 Botanical Institute, Department of Phycology, University of Copenhagen,
Øster Farimagsgade 2D, DK-1353 Copenhagen K, Denmark.

Abstract: The Fiordland region covers an important part of New Zealand's South Island. The fourteen fiords included within the region are separated by sections of exposed coastline. High rainfalls are characteristic of the region, and the high freshwater input into the fiords creates a salinity gradient both with depth and from the outer to inner fiords. The high tannin content of the run-off water changes the colour of the seawater, contributing to a unique marine environment. Observations carried out during collection and survey trips suggest a decline in biomass and species diversity from the outer coast to the inner sections of the fiords. Early European explorers in Fiordland collected some of the first marine algae described from New Zealand. Subsequently, there have been very few macroalgal collections made until the last 20 years. The species list reported here presents records of macroalgae from Milford Sound to Puysegur Point, and is compiled primarily from specimens housed in the herbarium of the Museum of New Zealand Te Papa Tongarewa (WELT). Collections held by the Department of Conservation in Wellington and the University of Copenhagen in Denmark are also cited. Relationships of the algae of Fiordland to the floras of the West Coast of the South Island north of Fiordland and to Stewart Island are discussed, and future areas of endeavour are suggested. Three adventive algae have been recorded from the area, species that were probably introduced through whaling and sealing operations in the late 18th and early 19th centuries.

Keywords: Marine macroalgae, seaweeds, Fiordland, New Zealand, species list.

Introduction

Some of the first marine algae described from New Zealand were collected in Fiordland by early European explorers (Adams 1994). Until the last 20 years, however, there have been very few macroalgal collections made in the region. Recent field studies mean that there are now sufficient seaweed collections available to compile a list of species obtained from this extensive stretch of coastline, although much of the Fiordland region remains incompletely studied.

The area covered by this account extends from Milford Sound in the north to Puysegur Point on the south side of Preservation Inlet (Fig 1), a distance of more than 210 kilometres. The whole of this coastline lies within the boundaries of the Fiordland National Park and comprises the most remote and unexplored part of the New Zealand mainland. Fiordland National Park became a World Heritage Area in December 1986, which was expanded in

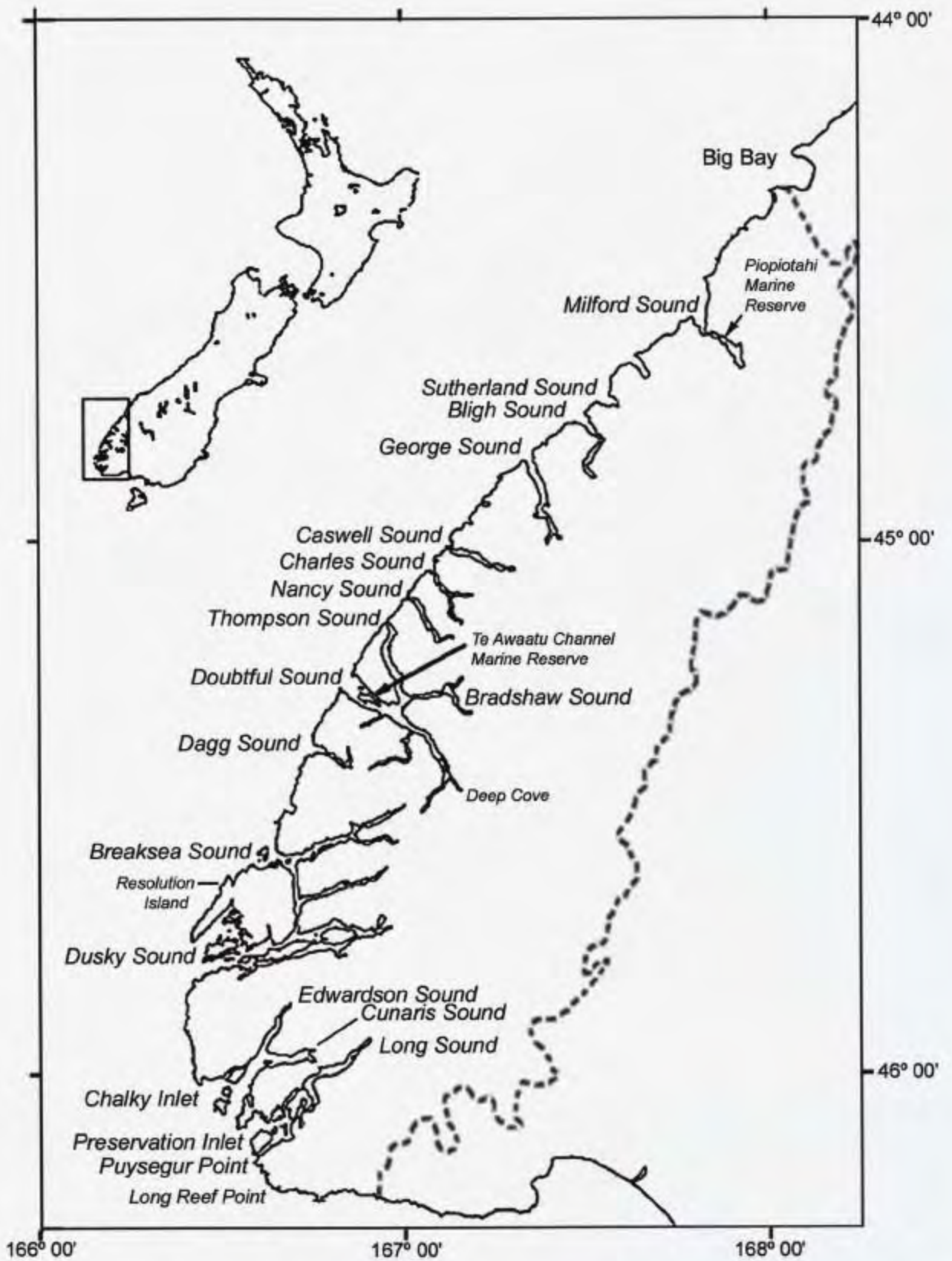


Fig 1. The study area: Fiordland, from Big Bay in the north to Long Reef Point in the south. The dashed line represents the border of Fiordland National Park.

1990 to embrace the bulk of the southwest of the South Island, and is known as Te Wāhi Pounamu Southwest New Zealand World Heritage Area. Two no-take marine reserves have been established in Fiordland: Piopiotahi Marine Reserve in Milford Sound, and Te Awātu Channel (The Gut) Marine Reserve in Doubtful Sound. A much larger marine park has been proposed, which would include all Fiordland's coast.

This report is one of a series of similar lists that have been prepared for other parts of the New Zealand region. Other lists include the Kermadec Islands (Nelson & Adams 1984), Three Kings Islands (Adams & Nelson 1985), Bay of Islands (Nelson & Adams 1987), Wellington (Adams 1972), northern South Island (Nelson *et al.* 1992), the West Coast of the South Island (Neale & Nelson 1998), Chatham Islands (Nelson *et al.* 1991), Kaikoura (South & Adams 1976), Stewart Island (Adams *et al.* 1974), and the New Zealand subantarctic islands (Hay *et al.* 1985).

Coastal physiography

Fiordland consists of 14 inlets with an additional eight inlet arms, ranging from 10 to 44 kilometres in length (average c.16 kilometres). All fiords are the drowned lower reaches of valleys carved by the action of glaciers. Most of these fiords are narrow and steep sided, rising to heights of 2000 m. Beneath the water these mountain cliffs continue as 'near vertical rock walls which show little surface relief in the upper 50 m' (Grange *et al.* 1981). Generally, the only flat land lies at the heads of the fiords on thin lateral valleys, mostly in the form of deltas formed by rivers and streams from the hinterland, or spilling from hanging valleys above.

The land in Fiordland rises from the south to the north, reaching its greatest heights in the Darran Mountains to the north of Milford Sound. Sydney Parkinson, describing the landscape of Fiordland, wrote 'mountains piled upon mountains to an amazing height' (Beaglehole 1974). The three southernmost fiords are different in character from the fiords to the north, with lower surrounding land that is much less steep. Preservation, Chalky, and Dusky Sounds all broaden at their entrances and have a number of embayments and islands. This is in sharp contrast to the northern fiords such as Milford and Doubtful Sounds, where rock walls rise steeply (at angles of 60–80 degrees) and where waterfalls are a feature.

Marine environment of Fiordland

Fiords are characterised by deep glaciated basins separated by one or more sills, which can inhibit the water exchange between basins. Consequently, fiord circulation can be broadly divided into a surface layer, an intermediate layer, and a deep layer below the sill depth. Most of New Zealand fiords have sills at 30–145 m separating relatively deep basins (up to 420 m deep) from the open ocean (Heath 1985). The relatively high freshwater inflow in New Zealand fiords gives rise to an estuarine circulation with a surface brackish layer flowing seaward and a replacement flow below (Stanton & Pickard 1981, Stanton 1986). Although coastal processes may dominate at the entrances to the fiords, the role of local wind stress is also considered to be important (Gibbs 2001).

The mountainous nature of the land in this region combines with exposure to the prevailing westerly weather systems and results in very high rainfall and large freshwater runoff into the fiords. Mean annual rainfall for Milford is c. 6300 mm, with approximately 180 days of rain a year. At Deep Cove, Doubtful Sound, the mean rainfall is c. 5300 mm per year and in the south at Puysegur Point c. 2000 mm (Peat & Patrick 1996). Maximum freshwater input from combined rainfall and snowmelt occurs in November–February (Stanton & Pickard 1981).

The large volumes of freshwater input into the fiords affects the salinity in shallow depths. The salinity and thickness of the seaward-flowing low salinity layer (LSL) varies according to the freshwater inflow. There are sharp thermal-haline gradients from the head to the entrance of each fiord and with depth in the upper water column. The LSL is usually 3–4 m thick, although it occasionally reaches depths of 10 m. It has a yellow brown colour owing to high levels of humic acids and tannin picked up as the water drains through the leaf litter from the surrounding forests. The situation in Doubtful Sound is influenced by the outflow of the Manapouri hydroelectric power station. The LSL in Doubtful has been subjected to detailed research with respect to structure and variability (Gibbs 2001). The dominating role of the LSL in controlling subtidal community structure in Doubtful Sound has been recognised by a number of studies (Witman & Grange 1998, Smith & Witman 1999). Stratification and mixing are strongly influenced by winds, although the relationship between freshwater inflow and wind stress is complex and affects salinity both laterally and vertically (Gibbs *et al.* 2000, Gibbs 2001). The LSL is

also found to have a significant influence on the light conditions in the upper subtidal region of the fiord (Gibbs *et al.* 2000, Gibbs 2001).

Environmental factors

Physical and biological factors combine to determine the distribution and abundance of algae. In Fiordland, a combination of abiotic and biotic factors are likely to be the most important in determining the distribution and abundance of algae. Abiotic factors include light quality and quantity (modified by the LSL, depth, aspect, and shadowing in steep narrow fiords), salinity (influenced by the high run-off), water movement (influenced by oceanic swell and chop generated by local winds), and tidal currents (influenced by narrow topographic coastal features). Biotic factors include herbivory (particularly by sea urchins) and competitive interactions (influenced by the strong colonisation abilities of some members of the Fucales, Laminariales, Durvilleales and Caulerpaceles). Villouta *et al.* (2001) determined that grazing by the sea urchin *Evechinus chloroticus* has a strong effect on algal assemblage distribution in Dusky Sound. However, Villouta (2000) found no significant changes in the diversity of the species monitored during the same 2-year experiment.

History of Algal Collections

1773: *Resolution* (Captain James Cook) and *Adventure* (Captain Tobias Furneaux) visited Dusky Sound, with naturalists Georg Forster and Johan Reinhold Forster.

1791: *Discovery* (Captain George Vancouver) with the naturalist Archibald Menzies visited Doubtful Sound, Fiordland; specimens went to London to Dawson Turner and are deposited in the herbarium of the Natural History Museum (BM), London.

1793: *Atrevida* and *Descubierta* (Captain Alessandro Malaspina) visited Doubtful Sound, Fiordland; no known collections.

1848–50: HMS *Acheron*, J. L. Stokes, Admiralty Hydrographic Survey, with naturalist David Lyall (1817–1895), made collections around the New Zealand coast including Stewart I., Fiordland, Cook Strait, and North Island ports. Collections went to both J. D. Hooker and W. H. Harvey and are now housed at the Natural History Museum (BM), London, and Trinity College Dublin (TCD).

1863: *Matilda Hayes* (Master D. Faulkner) was commissioned by Dr James Hector in order to undertake a geological survey of the West Coast Sounds for the Otago Provincial Government in October–December. On the return part of the voyage, the Survey's botanical collector, John Buchanan, was instructed to make plant collections. There is some suggestion that seaweeds may have been included, but so far no specimens have been found.

1900: In the herbarium of R.M. Laing (now housed at the H. H. Allan Herbarium, Landcare Research – CHR), there is a small collection made at Dusky Sound in March by "R. H." or Richard Henry, who lived for a number years on Pigeon Island close to Resolution Island.

1908: In Laing's herbarium there are several specimens with no collector named, made at Deas Cove in December 1908. These were probably made by Laing himself as it is recorded that he collected at Deas Cove, Doubtful Sound, and at Dusky Sound (Laing & Gourlay 1929).

1937: L.R. Briggs, collected a few specimens, now in the Laing herbarium, from Doubtful Sound in January.

1939: In December L.B. Moore collected specimens from Deep Cove, Doubtful Sound, now housed in CHR.

1945–46: New Golden Hind Expedition, H.H. Allan's small collection is in CHR.

1949: NZ–American Expedition led by Dr Olaus Murie to Caswell and George Sounds included seaweeds collected by R. Mason and V.D. Zotov now housed in CHR.

1957: E.J. Batham made observations of the shores of Doubtful Sound in February (Batham 1965). Intertidal animals and seaweeds were recorded, but there is no mention of voucher specimens.

Previous macroalgal surveys/studies

Oceanographic and marine zoological studies of the fiords were undertaken in the 1960s and 1970s, but very little attention was focused on the macroalgae. The use of SCUBA has greatly improved access to the study of marine communities. To date, however, very little attention has focused on the diversity and role of macroalgae despite interest in the ecology of rock wall communities where non-geniculate coralline algae dominate. The flora of Dusky Sound was studied by Slivsgaard (1996) as part of studies conducted by the Department of Conservation. Miller (2002) has examined the ecophysiology of *Ecklonia radiata* in Doubtful Sound. As a component of studies on sea

urchins (*Evechinus chloroticus*), quantitative sampling of macroalgae has also been carried out in Dusky Sound and Chalky Inlet (McShane & Naylor 1991; McShane *et al.* 1993, 1994; Villouta 2000; Villouta *et al.* 2001).

Characteristics of the algal flora

There are marked gradients within the fiords at a range of scales. The fiords vary latitudinally from 44°20' S to 46°10' S. Exposure increases from the sheltered upper reaches of the fiords through to the oceanic conditions at the entrances of the fiords. There is also a vertical gradient through the freshwater layer, and a gradient of light to the limits of the euphotic zone. The effect of these gradients on the distribution of algae varies within and among taxa.

Relationships of the algae of Fiordland with the algae of the West Coast of the South Island north of Fiordland and with those of Stewart Island are interesting. Most noticeable is the change in composition and the increasing diversity as one moves from the north to the south. In northern Fiordland, the flora is most closely related to the flora of the West Coast of the South Island. In the southern fiords, the diversity is similar to that of the southern South Island and shows strong relationships to the flora of Stewart Island. Northern elements such as *Pterocladia capillacea* are present on the West Coast to the north of Fiordland and extend as far south as Dusky Sound, but do not occur on Stewart Island. *Carpophyllum maschalocarpum* is also present on the West Coast of the South Island, and in Fiordland has been found at Milford Sound and Bauza Island in Doubtful Sound. In the intertidal zone the orange red wiry tufts of *Apophlaea lyallii* growing in a band form one of the most distinctive features of the outer areas of the fiords. This species was described in the Flora Novae-Zelandiae (Harvey 1855) from material collected at Preservation Inlet. It first appears on the West Coast of the South Island at Jackson Bay, just to the north of Fiordland. Similarly, *Wittrockiella lyallii* is a distinctive species of the far south of New Zealand, found in Fiordland from Milford Sound southwards. It forms spongy cushions in the uppermost part of the intertidal zone, often in the shade of overhanging vegetation and where there is freshwater seepage.

In the more southern fiords, the relationships of the flora with that of Stewart Island become stronger. The flora of the West Coast north of Fiordland has three species of *Cystophora* (*C. distenta*, *C. retroflexa*, and *C. scalaris*) (Neale

& Nelson 1998), and there are six species recorded from Stewart Island (*C. congesta*, *C. distenta*, *C. platylobium*, *C. retroflexa*, *C. scalaris*, and *C. torulosa*) (Adams *et al.* 1974). Five species are recorded for Fiordland, with only two recorded in the northern area and all five species present in Dusky Sound and Chalky/Preservation Inlet. The northern species of *Scytothamnus*, *S. australis*, is present on the West Coast and in Fiordland from Milford Sound to Preservation Inlet. Only in the far south of Fiordland does *S. fasciculatus* appear, and both species are present on Stewart Island (Adams *et al.* 1974, Neale & Nelson 1998). Individual thalli of *Macrocystis pyrifera* have been found in Caswell Sound, as well as in Doubtful Sound, but it is not until one reaches the southern fiords (eg. Dusky Sound, Chalky Inlet, and Preservation Inlet) that this species forms its characteristic beds.

It has been thought in the past that the LSL was very species poor as far as macroalgae is concerned. However, recent studies suggest that many species may have been overlooked in the past. A stratified sampling programme along the length of Doubtful Sound from open water through to the inner fiord was carried out in October 2000 by graduate students of Otago University. This study revealed very diverse species complexes in the depths influenced by the LSL, pointing to an area that warrants further study (Miller *et al.* in prep.).

Species of *Enteromorpha* and *Ulva* occur in abundance in the freshwater-influenced areas and in the quiet upper reaches of the fiords. The systematics of these genera are poorly understood in New Zealand and require attention, and consequently the species identifications listed here should be viewed with caution. In the intertidal areas of the innermost fiords, skeins of the Ectocarpacean brown alga *Pilayella littoralis* grow luxuriantly. They are often entangled with *Gracilaria chilensis* and *Hormosira banksii* in areas of brackish water. The kelp *Ecklonia brevipes* has been found at depths (of up to 40 m) from Bligh Sound south to Preservation Inlet, in areas of low light and little water movement. Some authors have suggested that this may be an ecotype associated with unusual growth conditions (Adams 1994). The predominant subtidal brown algae of Fiordland are *Ecklonia radiata*, *Carpophyllum flexuosum*, and *Marginariella urvilliana*, all of which can occupy a considerable depth range from the upper subtidal through to 30–40 m deep.

A number of macroalgal groups are distributed throughout the fiords. Non-geniculate coralline algae cover much of the rock surfaces in Fiordland from the upper sub-

tidal to considerable depths – up to 100% cover for extensive stretches of the subtidal rock walls. Non-geniculate corallines also grow epizoically on brachiopods and mollusc shells, and as epiphytes on a number of macroalgae. A species of *Plocamium* (*P. corallorhiza*, now known as *P. cirrhosum*) was one of the first macroalgae collected in Fiordland by early explorers in Dusky Sound. There are five species of *Plocamium* reported in this list, and they are abundant in understorey and on rock walls. There are five species of *Codium* recorded from Fiordland, two prostrate and three erect species, the most common of which is *C. gracile*. *Caulerpa brownii* occurs throughout Fiordland, in some areas forming dense subtidal meadows.

Introduced algae

Although Fiordland is generally regarded to be one of the most pristine marine areas in New Zealand, three adventive algae have been recorded from the area – *Champia affinis*, *Polysiphonia brodiaei*, and *Sargassum verruculosum* (Adams 1983, Nelson 1999). These species are all probable introductions through early whaling and sealing operations in the late eighteenth and early nineteenth centuries:

Champia affinis – found in Port Pegasus (Stewart Island), Otago Harbour, and Preservation Inlet, lives in sheltered harbours and is not able to survive on the open coast. This species is native to Tasmania and southern Australia and was first recorded from Stewart Island in 1855. It appears to pose no threat to native flora and fauna.

Polysiphonia brodiaei – is now found in New Zealand in Lyttelton, Wellington, Timaru, Tarakohe, Stewart Island, and Fiordland at Dusky Sound. This species is native to Ireland and northern Europe and has been known to have been spread by shipping to eastern and western North America, Japan, and Australia.

Sargassum verruculosum – in Fiordland this species is known from Bligh, Thompson, Doubtful, Breaksea, and Dusky Sounds as well as Chalky/Preservation Inlet. It is also found in Akaroa Harbour, Kaikoura, and Stewart Island. This species has been recorded for a long time but occurs in relatively small quantities and is not behaving as an invasive species. Its native range is western and southern Australia, New South Wales, and Tasmania.

None of these species qualifies as a serious threat to native biodiversity, unlike the brown kelp *Undaria pinnatifida*, which could have a devastating impact on the composition of both flora and fauna if translocated from other areas into Fiordland.

Collections examined

This list is based primarily on c. 1450 specimens collected from Fiordland and housed in the herbarium of the Museum of New Zealand Te Papa Tongarewa (WELT). Voucher specimens are listed for each species. In addition to collections made by staff of the Museum, specimens have been deposited in WELT from expeditions of the New Zealand Oceanographic Institute (now National Institute for Water and Atmospheric Research (NIWA)), the Department of Conservation, and the Botany and Marine Science Departments of the University of Otago. In addition, some specimens are cited from Fiordland collections held by Department of Conservation in Wellington (cited as DOC in the list) as well as from the herbarium of the University of Copenhagen (cited as C). Records of Fiordland seaweeds reported in the *Flora Novae-Zelandiae* (Harvey 1855) are recorded under each species entry. Collections from CHR and AKU have not been included. Reliable sightings of species where no specimen has been retained are recorded in the list with “?”.

The taxonomic arrangement of this list was prepared for the New Zealand Species 2000 (Nelson in press a-c), and substantially follows that of Hoek *et al.* (1995), although it incorporates some new information published since that time. Illustrations of most taxa, as well as morphological descriptions and distribution information, are provided in Adams (1994). The systematics of the Gigartinaceae, particularly *Gigartina* sens. lat. has been the subject of a number of studies, and this list reflects the treatment of Hommersand *et al.* (1993,1994,1999).

Further work required

This report by no means completes the study of macroalgae of Fiordland. New species records for the region are made on almost every trip into the field. As an example, in October 2000 a team of Otago University Botany and Marine Science postgraduate students extended the lodged specimen records of macroalgae of the Doubtful Sound area from 8 species to more than 135 species, a number of which remain unidentified. There are a number of taxa that require detailed systematic study (including several large, bladed red algae, which have been placed tentatively under several genera within the list) and a number of new species known to require description (including a new species of *Gelidium* known from only a few collections for which we have rbcL

sequence data but insufficient fertile material on which to base a description).

There is a serious taxonomic impediment for certain algae groups. The non-geniculate coralline algae are poorly represented in collections of algae in New Zealand. Taxonomic knowledge of this group remains almost non-existent. This is a critical gap in this region as, in many parts of the subtidal of Fiordland, crustose coralline species cover a very large percentage of the rock walls to considerable depths. Not only the taxonomy of these crustose species but also the ecological role that they serve in terms of invertebrate recruitment is unknown. In other parts of the world, it has been demonstrated that non-geniculate corallines play a crucial role in the metamorphosis and settlement of a number of invertebrates, for example species of abalone (Daume *et al.* 1999a, b). The contribution of these algae to the biodiversity of the region has not been evaluated. This may be of particular significance when considering the impact of increased freshwater outflows in Doubtful Sound resulting from modifications to the tailrace of the Manapouri hydroelectric power station. This list does not deal adequately with this group of algae. Further collections and expert systematic attention are required to address this problem.

In terms of algal studies and collections, the coverage of Fiordland is not even. The macroalgal flora of the open coastline of Fiordland has been rarely explored, and very few collections have been made along the whole outer coast. Some fiords are extremely difficult to reach, whereas other areas have been the focus of a number of studies and diving trips (eg, Doubtful Sound and Dusky Sound). For some fiords little can be said about the flora, as there are very few collections (eg, 12 species from three collections in Caswell Sound, 8 species from two collections in Nancy Sound). Very little is known about seasonal variation in the seaweed flora throughout the region. Specimens from the LSL of other fiords are potentially under-represented in collections.

Acknowledgments

We would like to acknowledge the many collectors and field assistants who have worked in Fiordland. In particular, we would like to acknowledge Cameron Hay, who provided us with collections and field information from his diving work throughout Fiordland, and Drs Catriona Hurd and Steve Wing and the participants of the Otago University post-graduate field workshop in October 2000. Ministry of

Fisheries Biodiversity Research funding (contract ZBD 2001/02) is acknowledged with thanks.

References

- Adams, N.M. 1972. The marine algae of the Wellington area. *Records of the Dominion Museum* 8(4): 43–98.
- Adams, N.M. 1983. Checklist of marine algae possibly naturalised in New Zealand. *New Zealand Journal of Botany* 21: 1–2.
- Adams, N.M. 1994. *Seaweeds of New Zealand*. Christchurch, Canterbury University Press. 360p.
- Adams, N.M., Conway, E., and Norris, R.E. 1974. The marine algae of Stewart Island. *Records of the Dominion Museum* 8(14): 185–245.
- Adams, N.M. and Nelson, W.A. 1985. The marine algae of the Three Kings Islands. *National Museum of New Zealand, Miscellaneous Series* 13: 1–29.
- Batham, E.J. 1965. Rocky shore ecology of a southern New Zealand fjord. *Transactions of the Royal Society of New Zealand, Zoology* 6(21): 215–227.
- Beaglehole, J.C. 1974. *The Life of Captain James Cook*. Adam & Charles Black, London. 760p.
- Broom, J.E., Jones, W.A., Hill, D.F., Knight, G.A., and Nelson, W.A. 1999. Species recognition in New Zealand *Porphyra* using 18s rDNA sequencing. *Journal of Applied Phycology* 11: 421–428.
- Daume, S., Brand-Gardner, S., and Woelkerling, W.J. 1999a. Preferential settlement of abalone larvae: diatom films vs. non-geniculate coralline red algae. *Aquaculture* 174: 243–254.
- Daume, S., Brand-Gardner, S., and Woelkerling, W.J. 1999b. Settlement of abalone larvae (*Haliotis laevis* Donovan) in response to non-geniculate coralline red algae (Corallinales, Rhodophyta). *Journal of Experimental Marine Biology and Ecology* 234: 125–143.
- Farr, T.J., Nelson, W.A., Broom, J.E., and Jones, W.A. 2001. Splitting hairs: diversity in New Zealand *Bangia*. *Phycologia* 40 (4 – Suppl.): 114–115.
- Gibbs, M.T. 2001. Aspects of the structure and variability of the low-salinity-layer in Doubtful Sound, a New Zealand fiord. *New Zealand Journal of Marine and Freshwater Research* 35: 59–72.
- Gibbs, M.T., Bowman, M.J., and Dietrich, D. 2000. Maintenance of near-surface stratification in Doubtful Sound, a New Zealand fiord. *Estuarine, Coastal and Shelf Science* 51(6): 683–704.
- Grange, K.R., Singleton, R.J., Richardson, J.R., Hill, P.J., and Main, W.DeL. 1981. Shallow rock-wall biological association of some southern fiords of New Zealand. *New Zealand Journal of Zoology* 8: 209–227.
- Harvey, W.H. 1855. Algae. In: Hooker, J.D. *The Botany of the Antarctic Voyage of the H.M. Discovery ships Erebus and Terror in the years 1839–1843. II. Flora Novae-Zelandiae*. Part II. pp. 211–266, pl. 107–121. London, Reeve.
- Hay, C.H., Adams, N.M., and Parsons, M.J. 1985. The marine algae

- of the subantarctic islands of New Zealand. *National Museum of New Zealand, Miscellaneous Series* 11: 1–70.
- Heath, R.A. 1985. A review of the physical oceanography of the seas around New Zealand – 1982. *New Zealand Journal of Marine and Freshwater Research* 19: 79–124.
- Hoek, C. van den, Mann, D.G., and Jahns, H.M. 1995. *Algae. An Introduction to Phycology*. Cambridge University Press, Cambridge. 623p.
- Hommersand, M.H., Fredericq, S., and Freshwater, D.W. 1994. Phylogenetic systematics and biogeography of the Gigartinales (Gigartinales, Rhodophyta) based on sequence analysis of *rbcL*. *Botanica Marina* 37: 193–203.
- Hommersand, M.H., Fredericq, S., Freshwater, D.W., and Hughey, J. 1999. Recent developments in the systematics of the Gigartinales (Gigartinales, Rhodophyta) based on *rbcL* sequence analysis and morphological evidence. *Phycological Research* 47: 139–151.
- Hommersand, M.H., Guiry, M.D., Fredericq, S., and Leister, G.L. 1993. New perspectives in the taxonomy of the Gigartinales (Gigartinales, Rhodophyta). *Hydrobiologia* 260/261: 105–120.
- Laing, R.M., and Gourlay, H.W. 1929. The New Zealand species of Gigartina. *Transactions of the N.Z. Institute* 60: 102–135.
- McShane, P.E., and Naylor, J.R. 1991. A survey of kina populations (*Evechinus chloroticus*) in Dusky Sound and Chalky Inlet, southwestern New Zealand. *New Zealand Fisheries Assessment Research Document* 91/17. 21 p.
- McShane, P.E., Naylor, J.R., Anderson, O.A., Gerring, P., and Stewart, R. 1993. Pre-fishing surveys of kina (*Evechinus chloroticus*) in Dusky Sound, southwestern New Zealand. *New Zealand Fisheries Assessment Research Document* 93/8. 28 p.
- McShane, P.E., Anderson, O.A., Gerring, P., Stewart, R., and Naylor, J.R. 1994. Fisheries biology of kina (*Evechinus chloroticus*). *New Zealand Fisheries Assessment Research Document* 94/17. 35 p.
- Millar, A.J.K., Nelson, W.A. (in press) The genera *Nancythalia humilis* gen. et sp. nov. and *Abroteia suborbicularis* (Harv.) Kylin (Delesseriaceae, Rhodophyta) from New Zealand. *Phycologia*.
- Miller, S. 2002. Eco-physiological aspects of *Ecklonia radiata* (Alariaceae, Laminariales) in Doubtful Sound, Fiordland, New Zealand. PhD thesis, University of Otago, Dunedin.
- Miller, S., Loughnan, A., and Russell, L. (in prep.) Stratified sampling of macroalgae in Doubtful Sound, Fiordland – physical gradients and algal distribution.
- Neale, D. and Nelson, W.A. 1998. Marine algae of the West Coast, South Island, New Zealand. *Tuhinga* 10: 87–118.
- Nelson, W.A. 1999. A revised checklist of marine algae naturalised in New Zealand. *New Zealand Journal of Botany* 37: 355–359.
- Nelson, W.A. (in press – a) Marine green macroalgae. *The New Zealand Inventory of Biodiversity: A Species 2000 Symposium Review*. Canterbury University Press.
- Nelson, W.A. (in press – b) Heterokontophyta marine macroalgae (Phaeophyceae, Xanthophyceae, Chrysophyceae). *The New Zealand Inventory of Biodiversity: A Species 2000 Symposium Review*. Canterbury University Press.
- Nelson, W.A. (in press – c) Marine and freshwater Rhodophyta. *The New Zealand Inventory of Biodiversity: A Species 2000 Symposium Review*. Canterbury University Press.
- Nelson, W.A. and Adams, N.M. 1984. Marine algae of the Kermadec Islands. *National Museum of New Zealand, Miscellaneous Series* 10: 1–29.
- Nelson, W.A. and Adams, N.M. 1987. Marine algae of the Bay of Islands area. *National Museum of New Zealand, Miscellaneous Series* 16: 1–47.
- Nelson, W.A., Adams, N.M., and Hay, C.H. 1991. Marine Algae of the Chatham Islands. *National Museum of New Zealand, Miscellaneous Series* 23: 1–58.
- Nelson, W.A., Adams, N.M., and Fox, J.M. 1992. Marine algae of the northern South Island – a list of species. *National Museum of New Zealand, Miscellaneous Series* 26: 1–70.
- Peat, N. and Patrick, B. 1996. *Wild Fiordland*. University of Otago Press, Dunedin. 143pp.
- Slivsgaard, R. 1996. *Makroalger i New Zealand – en fytogeografisk opdeling af den sydlige vestkyst*. c. 90 p. Botanisk institut, Afdeling for Alger. Københavns Universitet. 1996.
- Smith, F. and Witman, J.D. 1999. Species diversity in subtidal landscapes: maintenance by physical processes and larval recruitment. *Ecology* 80: 51–69.
- South, G.R. and Adams, N.M. 1976. The marine algae of the Kaikoura coast. *National Museum of New Zealand, Miscellaneous Series* 1: 1–71.
- Stanton, B.R. 1986. Winter oceanographic observations in some New Zealand fiords. *New Zealand Journal of Marine and Freshwater Research* 20: 299–314.
- Stanton, B.R. and Pickard, G.L. 1981. Physical oceanography of the New Zealand fiords. *New Zealand Oceanographic Institute Memoir* 88: 3–37.
- Villouta, E. 2000. Potential ecological impacts of harvesting kina (*Evechinus chloroticus*) in Fiordland. *Conservation Advisory Science Notes* No. 286, Department of Conservation, Wellington.
- Villouta, E., Chadderton, W.L., Pugsley, C.W., and Hay, C.H. 2001. Effects of sea urchin (*Evechinus chloroticus*) in Dusky Sound, Fiordland, New Zealand. *New Zealand Journal of Marine and Freshwater Research* 35 (in press).
- Witman, J.D. and Grange, K.R. 1998. Links between rain, salinity and predation in a rocky subtidal community. *Ecology* 79: 2429–2447.
- Wynne, M.J. 2002. *Plocamium cirrhosum* comb. nov. (Plocamiales, Rhodophyta) to replace *P. costatum*. *New Zealand Journal of Botany* 40: 137–142.

Chlorophyta

Ulvophyceae

Codiolales

Monostromataceae

Monostroma latissimum Witt.

Bradshaw Sound, Gaer Arm, *Miller & Harder, Heesch*, Oct 2000, WELT A025694, A025704.

Dusky Sound, *Slivsgaard*, Nov 1994, WELT A020999.

Ulvales

Ulvaceae

Enteromorpha bulbosa (Suhr) Mont.

Doubtful Sound, *Chapman*, Feb 1987, WELT A022475.

Enteromorpha compressa (L.) Nees

Dusky Sound, Stop Island, *Baker*, Feb 1985, WELT A016280.

Enteromorpha intestinalis (L.) Nees

Doubtful Sound, Deep Cove, *Wing & Goebel*, Oct 2000, WELT A025797.

Breaksea Sound, *Williams*, Feb 2000, WELT A025385.

Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025751.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025735.

Enteromorpha linza (L.) J.Agardh

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025736.

Enteromorpha muscoides (Clemente) Cremades

Bligh Sound, *Francis*, Feb 1987, WELT A025942.

Bradshaw Sound, Gaer Arm, *Miller & Harder, Heesch*, Oct 2000, WELT A025663, A025705.

Dagg Sound, *Hay*, Dec 1977, WELT A010020.

Dusky Sound, Facile Harbour, *Baker*, Feb 1985, WELT A016297.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A025939.

Dusky Sound, Lama Island, *Slivsgaard*, Nov 1994, WELT A021004.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025724.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025922.

Preservation Inlet, Welcome Bay, Dec 1977, WELT A009989.

Enteromorpha spp.

Milford Sound, *Hunt & Anderson*, Jul 1982, WELT A015983.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025541.

Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022463, A022464.

Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022472.

Ulva rigida C.Agardh

(including specimens previously placed in *Ulva spathulata* Papenf.)

Milford Sound, Sterling Basin, *RV Tangaroa*, Feb 1980, WELT A014701.

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010302.

Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025733.

Dusky Sound, *Slivsgaard*, Mar 1995, WELT A022561.

Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A021001.

Dusky Sound, *Williams*, Feb 2000, WELT A025711, A025712.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016273.

Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022515.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025725, A025726.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025379.

Ulva sp.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013202, A013204.

George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013063, A013070, A013077, A013187.

Caswell Sound, *Aaron*, Apr 1984, WELT A025033.

Doubtful Sound, Deep Cove, Feb 1983, WELT A014702.

Doubtful Sound, Deep Cove, *Aaron*, Apr 1984, WELT A016224.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026057.

Dagg Sound, *Hay*, Dec 1977, WELT A009999.
 Breaksea Sound, *Williams*, Feb 2000, WELT A025384, A025389.
 Dusky Sound, Many Island, *Hay*, Feb 1993, WELT A020960.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013090, A013096, A013160.
 Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A014696.
 Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025937.

Cladophorophyceae

Cladophorales

Cladophoraceae

Chaetomorpha aerea (Dillwyn) Kuetz.
 Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025547.
 Secretary Island, *Duffy*, Jan 2000, WELT A025627.

Chaetomorpha coliformis (Mont.) Kuetz.
 George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013117, A013071.
 Thompson Sound, *Wing*, Oct 2000, WELT A025910.
 Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A021000.

Cladophora feredayi Harv.
 Doubtful Sound, Bauza Island, *Goebel*, Oct 2000, WELT A025583.

Cladophora incompta (Hook.f. & Harv.) Hook.f. & Harv.
 Doubtful Sound, Deep Cove, *Heesch*, Oct 2000, WELT A025842.

Cladophora sericea (Huds.) Kuetz.
 Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026074.

Cladophora subsimplex Kuetz.
 Doubtful Sound, Deep Cove, *Wing & Goebel*, Oct 2000, WELT A025687.

Cladophora verticillata (Hook.f. & Harv.) J.Agardh
 Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025673.

Cladophora sp.
 Doubtful Sound, Deep Cove, *Hepburn & Phillips*, Oct 2000, WELT A025821.
 Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026059.
 Dusky Sound, Cormorant Cove Inlet, *Shaw & Adams*, Nov 1994, WELT A015957.
 Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020994.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013163.
 Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025383.

Rhizoclonium ambiguum (Hook.f. & Harv.) Kuetz
 Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025749.

Rhizoclonium sp.
 Doubtful Sound, Deep Cove, Feb 1980, WELT A014792.
 Breaksea Sound, Broughton Arm, *Williams*, Feb 2000, WELT A025759.

Witrockiella lyallii (Harv.) C.Hoek Ducker & Womersley
 Milford Sound, *Hunt & Anderson*, Jul 1982, WELT A013201.
 Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010309.
 Bradshaw Sound, Gaer Arm, *Heesch*, Oct 2000, WELT A025703.
 Doubtful Sound, Tricky Cove, *Russell*, Oct 2000, WELT A025689.
 Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025332.
 Breaksea Sound, *Williams*, Feb 2000, WELT A025730, A025731.
 Dusky Sound, Goose Cove, *Johnson*, Nov 1984, WELT A015958.
 Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022471.
 Dusky Sound, Pickersgill Harbour, *Hay*, Dec 1977, WELT A009968.

Bryopsidophyceae

Bryopsidales

Bryopsidaceae

Bryopsis vestita J.Agardh

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025550, A025553.

Dusky Sound, *Slivsgaard*, Nov 1994, WELT A020998.

Derbesiaceae

Derbesia novae-zelandiae V.J.Chapm.

Chalky Inlet, Cunaris Sound, *Mundy*, Feb 2000, WELT A025370.

Halicystis sp.

Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025677.

Dusky Sound, Cooper Island, *Hay*, Apr 1991, DOC.

Codiaceae

Codium convolutum (Dellow) P.C.Silva

Milford Sound, Dale Point, *Shears*, Jan 2000, WELT A025621.

Sutherland Sound, *Francis*, Feb 1987, WELT A018140.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025744.

Dusky Sound, Five Fingers Peninsula, *Bolton*, May 1986, WELT A018139.

Dusky Sound, *Williams*, Feb 2000, WELT A025714, A025716.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018137.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018138.

Chalky Inlet, South Port, *Davison*, May 1986, WELT A018141.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025919.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009969.

Codium dichotomum (Huds.) S.F.Gray

Dagg Sound, *Hay*, Dec 1977, WELT A010031.

Dusky Sound, *Baird*, Nov 1994, WELT A020976.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025727.

Codium dimorphum Sved.

Milford Sound, Dale Point, *RV Tangaroa*, Feb 1980, WELT A014700.

Bligh Sound, Turnabout Point, *Francis*, Feb 1987, WELT A018135.

George Sound, *SCUBA team*, Jul 1982, WELT A013120.

Dusky Sound, Fiblister Bay, *Bettjeman*, Nov 1994, WELT A021002.

Dusky Sound, Stop Island, *Baker*, Feb 1985, WELT A016286.

Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013101, A013131.

Chalky Inlet, Cunaris Sound, *SCUBA team*, Jul 1983, WELT A013156.

Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A018136.

Codium fragile (Suringar) Har. ssp. *novae-zelandiae* (J.Agardh) P.C.Silva

Bligh Sound, Turnabout Point, *Duffy*, Jan 2000, WELT A025625.

Dagg Sound, *Hay*, Dec 1977, WELT A010000.

Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025732.

Dusky Sound, *Williams*, Feb 2000, WELT A025758.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018188.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025936.

Codium gracile (O.C.Schmidt) Dellow

Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013245, WELT A013260, WELT A073237.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013207.

Milford Sound, Jul 1982, WELT A013254.

Milford Sound, Sterling Basin, *Hay*, Feb 1980, WELT A014699.

Sutherland Sound, *Francis*, Feb 1987, WELT A018145.

Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A025917.

Bligh Sound, Jul 1982, WELT A013088.

George Sound, *Hill*, Feb 1987, WELT A022479, A025930.

George Sound, *SCUBA team*, Jul 1982, WELT A013079.

George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013064.

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010305/A, A010305/B.

Charles Sound, *Hay*, Dec 1977, WELT A009970.

- Charles Sound, *Duffy*, Jan 2000, WELT A026086.
 Nancy Sound, Foot Arm, *RV Tangaroa*, WELT A014698.
 Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025651.
 Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A025622.
 Doubtful Sound, Prinham Point, *Hay*, May 1990, WELT A019600/A.
 Dagg Sound, *Aaron*, Apr 1984, WELT A016204.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025338, A025341.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018144.
 Dusky Sound, Five Fingers Peninsula, *Shaw*, Nov 1984, WELT A015971.
 Dusky Sound, Duck Cove, *Black*, Feb 1977, WELT A010275/A, A010275/D.
 Dusky Sound, Lama Island, *Baird*, Nov 1994, WELT A021003.
 Dusky Sound, Cormorant Cove Inlet, *Shaw*, Nov 1984, WELT A015977.
 Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022525.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013099.
 Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A014697.
 Chalky Inlet, Cunaris Sound, *Hill*, Feb 1987, WELT A025914.
 Preservation Inlet, Long Sound, *Hill & Singleton*, Jul 1982, WELT A013220.
 Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010687.

Halimediales

Caulerpaceae

- Caulerpa brownii* (C.Agardh) Endlicher
 (Chalky Bay, *Lyall*, Fl.NZ, p.260)
 Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013249.
 Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A022459.
 George Sound, *Francis*, Feb 1987, WELT A018185.
 George Sound, *SCUBA team*, Jul 1982, WELT A013113.
 Charles Sound, *Hay*, Dec 1977, WELT A010008.
 Charles Sound, *Duffy*, Jan 2000, WELT A026085.
 Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025905.

- Dagg Sound, *Aaron*, Apr 1984, WELT A016205/A, A016205/B.
 Dagg Sound, *Bolton*, May 1986, WELT A018187.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025728.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018143.
 Breaksea Sound, Wet Jacket Arm, *Bolton*, May 1986, WELT A018186.
 Dusky Sound, Earshell Cove, *Baker*, Feb 1985, WELT A016279/A.
 Dusky Sound, Anchor Island Harbour, *Villouta*, Nov 1994, WELT A020995.
 Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A014695.
 Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018142.

Trebouxiophyceae

Prasiolales

Prasiolaceae

- Prasiola crispa* (Lightfoot) Kuetz.
 Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016270.

Heterokontophyta

Phaeophyceae

Ectocarpales

Chordariaceae

- Tinocladia novae-zelandiae* Kylin
 Dagg Sound, *Hay*, Dec 1977, WELT A010013.

Ectocarpaceae

- Hincksia mitchelliae* (Harv.) P.C. Silva
 Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025739.
Pilayella littoralis (L.) Kjellm.
 Thompson Sound, Deas Cove, *Neill*, Oct 2000, WELT A025602.
 Bradshaw Sound, Gaer Arm, *Heesch*, Oct 2000, WELT A025706.
 Doubtful Sound, Deep Cove, *Aaron*, Apr 1984, WELT A016225.

Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025672.

Doubtful Sound, Tricky Cove, *Wing & Goebel*, Oct 2000, WELT A025676.

Dagg Sound, *Hay*, Dec 1977, WELT A010023, A010029.

Breaksea Sound, Vancouver Arm, *Williams*, Feb 2000, WELT A025381.

Leathesiaceae

Leathesia difformis (L.) Aresch.

Dusky Sound, *Baker*, Feb 1985, WELT A016283.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009966.

Myrionemataceae

Herponema maculaeforme (J. Agardh) Laing

Dusky Sound, Long Island, *Bolton*, May 1986, WELT A018261.

Myrionema strangulans Grev.

Bradshaw Sound, Richards Point, *Neill*, Oct 2000, WELT A025591.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026060.

Dagg Sound, *Hay*, Dec 1977, WELT A010021.

Breaksea Sound, *Williams*, Feb 2000, WELT A025392.

Ralfsiaceae

Ralfsia cf. *verrucosa* (Aresch.) J. Agardh

Dusky Sound, Cooper Island, *Hay*, Apr 1991, DOC.

Scytosiphonaceae

Colpomenia peregrina (Sauv.) Hamel

Milford Sound, Dale Point, *RV Tangaroa*, Feb 1980, WELT A014710.

George Sound, *Duffy*, Jan 2000, WELT A026066.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025551, WELT A025569.

Dagg Sound, *Hay*, Dec 1977, WELT A010035.

Dusky Sound, Parrot Island, *Hay*, Feb 1993, WELT A020966.

Dusky Sound, Stop Island, *Baker*, Feb 1985, WELT A016282.

Scytosiphon lomentaria (Lyngb.) Link

Dusky Sound, Five Fingers Peninsula, *Brotherston*, Nov 1984, WELT A015976.

Dusky Sound, Wales Point, *Slivsgaard*, Nov 1994, WELT A020997.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025737.

Preservation Inlet, Weka Island, *Bolton*, May 1986, WELT A018155.

Scytothamnales

Scytothamnaceae

Adenocystis utricularis (Bory) Skottsdb.

Dagg Sound, *Hay*, Dec 1978, WELT A009991.

Dusky Sound, Pickersgill Harbour, *Hay*, Dec 1977, WELT A009990.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022499, A025748.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025380.

Scytothamnus australis (J. Agardh) Hook. f. et Harv.

Milford Sound, Dale Point, Feb 1980, WELT A014709

Dusky Sound, Crayfish Island, *Slivsgaard*, Nov 1994, WELT A020986.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025378.

Puysegur Point, *Hay*, Feb 1972, WELT A013039.

Scytothamnus fasciculatus (Hook. f. et Harv.) Cotton

Preservation Inlet, Long Sound, *Hill & Singleton*, Jul 1982, WELT A013221.

Splachnidiaceae

Splachnidium rugosum (L.) Grev.

Dusky Sound, *Slivsgaard*, Nov 1994, WELT A020987.

Dusky Sound, Stop Island, *Baker*, Feb 1985, WELT A016281.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025296.

Chalky Inlet, South Port, *Davison*, May 1986, WELT A018116.

Sphacelariales

Cladostephaceae

Cladostephus spongiosus (Huds.) C. Agardh f. *verticillatus*

Dusky Sound, Pickersgill Harbour, *Baker*, Feb 1985, WELT A016290.

Sphacelariaceae

Spachelaria sp.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013199, A013914.

Stypocaulaceae

Halopteris congesta (Reinke) Sauv.

Chalky Inlet, Edwardson Sound, *Hill & Singleton*, Jul 1982, WELT A013125, A013128.

Halopteris funicularis (Mont.) Sauv.

Milford Sound, Jul 1982, WELT A013238.
 Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A022527.
 George Sound, *Francis*, Feb 1987, WELT A018160.
 George Sound, *Hill*, Feb 1987, WELT A025931.
 George Sound, Southwest Arm, Jul 1982, WELT A013092.
 Charles Sound, *Hay*, Dec 1977, WELT A010007, A010066.
 Nancy Sound, Foot Arm, *RV Tangaroa*, WELT A014711.
 Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016207.
 Dusky Sound, Pickersgill Harbour, *Baker*, Feb 1984, WELT A016277.
 Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022518, A022520.
 Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013098.
 Chalky Inlet, Edwardson Sound, Feb 1980, WELT A014706.
 Chalky Inlet, Cunaris Sound, WELT A013157.
 Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018157.

Halopteris novae-zelandiae Sauv.

Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013239.
 Doubtful Sound, Bauza Island, *Phillips & Hepburn*, Stuart, Oct 2000, WELT A025573, A025578.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025406.
 Dusky Sound, Five Fingers Peninsula, *Bolton*, May 1986, WELT A018163.
 Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013100.
 Chalky Inlet, Edwardson Sound, Feb 1980, WELT A014707.

Halopteris pseudospicata Sauv.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013236.

Milford Sound, Jul 1982, WELT A013191.

Dagg Sound, *Bolton*, May 1986, WELT A018156.
 Breaksea Sound, *Bolton*, May 1986, WELT A018159.
 Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018158.

Halopteris virgata (Hook. f. et Harv.) Adams.

George Sound, *Duffy*, Jan 2000, WELT A026070.
 Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025351.
 Dusky Sound, *Williams*, Feb 2000, WELT A025315.
 Chalky Inlet, *Davison*, May 1986, WELT A018162.

Dictyotales

Dictyotaceae

Dictyota dichotoma (Huds.) J.V.Lamour.

Bligh Sound, Clio Bank, *Hay*, Dec 1977, WELT A010006.
 Bligh Sound, *Hay*, Dec 1977, WELT A009955.
 George Sound, Jul 1982, WELT A013080.
 George Sound, *Villouta*, Nov 1994, WELT A020983.
 Charles Sound, Jul 1982, WELT A013129.

Dictyota papenfussii Lindauer

Charles Sound, *Francis*, Feb 1987, WELT A018149.
 Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025577.
 Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026094.
 Dagg Sound, Four Fathom Bank, *Hill*, Feb 1987, WELT A022526.
 Dusky Sound, Five Fingers Peninsula, *Duffy*, Jan 2000, WELT A025607.
 Dusky Sound, Anchor Island Harbour, *Smith*, Feb 2000, WELT A025347.
 Dusky Sound, Wales Point, *Brotherson*, Nov 1984, WELT A016265.
 Chalky Inlet, Edwardson Sound, *Villouta*, Nov 1994, WELT A020982.

Glossophora kunthii (C. Agardh) J. Agardh

George Sound, *Francis*, Feb 1987, WELT A018148.
 George Sound, *Duffy*, Jan 2000, WELT A026065.
 Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020980.
 Dusky Sound, *Williams*, Feb 2000, WELT A025316.

Spatoglossum chapmanii Lindauer

- George Sound, *Francis*, Feb 1987, WELT A018150.
 Charles Sound, *Hay*, Dec 1977, WELT A009958, A009980, A010005, A010068, A010069.
 Doubtful Sound, Bauza Island, *Phillips*, Oct 2000, WELT A026105.
 Dusky Sound, Five Fingers Peninsula, *Shaw & Adams*, Nov 1984, WELT A015972.
 Dusky Sound, Anchor Island Harbour, *Villouta*, Nov 1994, WELT A020970.

Zonaria turneriana J. Agardh

- Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A022457.
 George Sound, *Francis*, Feb 1987, WELT A018154.
 George Sound, *Hill & Singleton*, Jul 1982, WELT A013119, A013150, A013232,
 George Sound, Jul 1982, WELT A013143, A013231.
 George Sound, Southwest Arm, *Hill & Singleton*, Jul 1982, WELT A013149.
 Charles Sound, *Hay*, Dec 1977, WELT A009961, A010004, A010075, A010079.
 Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026081.
 Nancy Sound, *Aaron*, Apr 1984, WELT A016222.
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025658.
 Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025902.
 Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016214.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025339.
 Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A018153.
 Breaksea Sound, *Bolton*, May 1986, WELT A018152.
 Dusky Sound, *Williams*, Feb 2000, WELT A025314, A025391.
 Dusky Sound, Fixed Head, *Bettjeman*, Nov 1994, WELT A020988.
 Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025293.
 Chalky Inlet, Edwardson Sound, Feb 1980, WELT A014705.
 Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018193.

Sporochnales**Sporochnaceae**

- Carpomitra costata* (Stackh.) Batters
 Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013246.
 Sutherland Sound, *Francis*, Feb 1987, WELT A018122.
 Bligh Sound, Turnaround Point, *Hill & Singleton*, Jul 1982, WELT A013234.
 George Sound, *Francis*, Feb 1987, WELT A018124.
 George Sound, *Hill & Singleton*, Jul 1982, WELT A013230, A013233.
 George Sound, *Duffy*, Jan 2000, WELT A026071.
 Charles Sound, *Hay*, Dec 1978, WELT A009957, A010078.
 Charles Sound, *Duffy*, Jan 2000, WELT A026087.
 Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025346.
 Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016211.
 Dusky Sound, Anchor Island Harbour, *Villouta*, Nov 1994, WELT A020981.
 Dusky Sound, *Williams*, Feb 2000, WELT A025312.
 Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013112, A018125.
 Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018126.
 Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018123.

Sporochnus stylosus Harv.

- George Sound, Anchorage Cove, *Hay*, Apr 1991, DOC.
 Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026102.
 Breaksea Sound, Vancouver Arm, Dec 2000, WELT A025980.
 Dusky Sound, Five Fingers Peninsula, *Shaw*, Nov 1994, WELT A015970.

Cutleriales**Cutleriaceae**

- Microzonia velutina* (Harv.) J. Agardh
 (Milford Haven, *Lyall*, FLNZ p.218)
 Milford Sound, Jul 1982, WELT A013176.
 Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013203.
 George Sound, *Duffy*, Jan 2000, WELT A026068.
 Charles Sound, *Hay*, Dec 1977, WELT A010077.
 Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026080.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026096.

Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025336.

Dusky Sound, *Williams*, Feb 2000, WELT A025366.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018151.

Desmarestiales

Desmarestiaceae

Desmarestia ligulata (Lightf.) J.V.Lamour.

Dusky Sound, Lama Island, *Villouta & Slivsgaard*, Nov 1994, C.

Chalky Inlet, Passage Island, *Hay*, Apr 1991, DOC.

Laminariales

Alariaceae

Ecklonia brevipes J. Agardh

Bligh Sound, *Francis*, Feb 1987, WELT A022528.

George Sound, *Duffy*, Jan 2000, WELT A026069.

Charles Sound, *Duffy*, Jan 2000 WELT A026089.

Breaksea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010296, A010297, A010298.

Breaksea Sound, Wet Jacket Arm, *Bolton*, May 1986, WELT A018164.

Dusky Sound, Duck Cove, *Black*, Feb 1977, WELT A010284.

Dusky Sound, Cooper Island, *Bolton*, May 1986, WELT A018165.

Dusky Sound, Lama Island, *Hay*, Feb 1993, WELT A020965.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010685, A010686.

Ecklonia radiata (C. Agardh) J. Agardh

Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013261, A013225, A013262.

Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A022456.

George Sound, *Francis*, Feb 1987, WELT A018168.

George Sound, *Hill*, Feb 1987, WELT A022481.

George Sound, Southwest Arm, *Hill & Singleton*, Jul 1982, WELT A013267.

Charles Sound, *Hay*, Dec 1977, WELT A009959.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025647.

Doubtful Sound, Bauza Island, *Miller & Harder*, Goebel,

Oct 2000, WELT A025559, A025585.

Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025334, A025335.

Dagg Sound, Four Fathom Bank, *Bolton*, May 1986, WELT A018166.

Dagg Sound, Seventy Fathom Bank, *Bolton*, May 1986, WELT A022483.

Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A018170.

Breaksea Sound, *Bolton*, May 1986, WELT A018167.

Breaksea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010299.

Dusky Sound, *Hay*, Feb 1993, WELT A020959.

Dusky Sound, *Williams*, Feb 2000, WELT A025723.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018169.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013085, A013093.

Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980 WELT A014703, A014704.

Chalky Inlet, Cunaris Sound, *Hill*, Feb 1987, WELT A022461.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018171, A018173.

Chalky Inlet, Cunaris Sound, Jul 1982, WELT A013108.

Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018172.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010698.

Puysegur Point, *Hay*, Feb 1972, WELT A013041.

Lessoniaceae

Lessonia variegata J. Agardh

Doubtful Sound, Shelter Island, *Hay*, Apr 1991, DOC.

Breaksea Sound, *Bolton*, May 1986, WELT A018115.

Puysegur Point, *Hay*, Feb 1972, WELT A013043.

Macrocystis pyrifera (L.) C. Agardh

Caswell Sound, *Hay & Battershill*!, Apr 1991.

Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025903.

Breaksea Sound, *Williams*, Feb 2000, WELT A025328.

Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020952.

Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020975.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013097.
 Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000 WELT A025302.
 Preservation Inlet, Cording Islands, *Hay*, Dec 1977, WELT A009983, A009984.

Durvillales

Durvillaceae

Durvillaea antarctica (Cham.) Har.
 Milford Sound, Brig Rock, *Hay*!, Apr 1991.
 Caswell Sound, entrance, *Hay*!, Apr 1991.
 Doubtful Sound, entrance, *Nelson*!, Oct 2000.
 Breaksea Sound, Gilbert Islands, *Hay*!, Apr 1991.
 Dusky Sound, *Hay* & *Villouta*!, Oct 1992.
 Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018114.
 Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022523, A022524.
 Chalky Inlet, Cunaris Sound, *Hay*!, Apr 1991.
 Puysegur Point, *Hay*!, Mar 1972.

Durvillaea willana Lindauer

Breaksea Sound, Gilbert Islands, *Hay*!, Apr 1991.
 Chalky Inlet, Cunaris Sound, *Hay*!, Apr 1991.
 Puysegur Point, *Hay*!, Mar 1972.

Fucales

Cystosciraceae

Cystophora congesta Womersley et Nizam.
 Dusky Sound, Facile Harbour, *Hay*, Dec 1977, WELT A009978.

Cystophora distenta J. Agardh

Bligh Sound, *Hay*, Dec 1977, WELT A010076.
 Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A025916.
 Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025561.
 Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020971.
 Chalky Inlet, Cunaris Sound, *Hill*, Feb 1987, WELT A025913.

Cystophora platylobium (Mertens) J. Agardh

Chalky Inlet, North Port, *Bolton*, May 1986, WELT A018105.

Cystophora retroflexa (Labill.) J. Agardh

Bligh Sound, *Duffy*, Jan 2000, WELT A025605.

George Sound, *Duffy*, Jan 2000, WELT A026062.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025545.

Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A022537.

Dusky Sound, Cooks Channel, *Bolton*, May 1986, WELT A022469.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A025915.

Chalky Inlet, North Port, *Bolton*, May 1986, WELT A022535.

Chalky Inlet, South Port, *Davison*, May 1986, WELT A022533, A022534.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022543.

Cystophora scalaris J. Agardh

Dusky Sound, Parrot Island, *Hay*, Feb 1993, WELT A020968.

Dusky Sound, *Hay*, Dec 1977, WELT A010002.

Preservation Inlet, Cuttle Cove, *Hay*, Dec 1977, WELT A009965.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009964.

Landsburgia quercifolia (Hook. f. et Harv.) Harv.

Sutherland Sound, *Francis*, Feb 1987, WELT A018179.
 Charles Sound, *Hay*, Dec 1977, WELT A009956.
 Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025906.

Dagg Sound, *Bolton*, May 1986, WELT A018175.

Breaksea Sound, *Bolton*, Feb 1972, WELT A018178.

Dusky Sound, Five Fingers Peninsula, *Bolton*, May 1986, WELT A018174A.

Dusky Sound, Crayfish Island, *Baird*, Nov 1994, WELT A020979.

Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A018177.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018176.

Fucaceae

Xiphophora gladiata (Labill.) Mont.

Bligh Sound, *Managh*, Jan 2000, WELT A025609, A025610.

George Sound, *Hill & Singleton*, Jul 1982, WELT A013226, A013227, A013228.

George Sound, *Duffy*, Jan 2000, WELT A026061.
 Doubtful Sound, Utah Island, *Hepburn*, Oct 2000, WELT A025641.
 Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A026098.
 Dagg Sound, *Bolton*, May 1986, WELT A018180.
 Dusky Sound, *Slivsgaard*, Nov 1994, WELT A020973.
 Dusky Sound, *Williams*, Feb 2000, WELT A025319/A, A025319/B, A025319/C, A025319/D, A025444.
 Dusky Sound, Long Island, *Bolton*, May 1986, WELT A018184.
 Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022522.
 Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025287/A, A025287/B.
 Chalky Inlet, North Port, *Bolton*, May 1986, WELT A018183.
 Preservation Inlet, Cuttle Cove, *Hay*, Dec 1977, WELT A009982.
 Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A018181.
 Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018182.

Hormosiraceae

Hormosira banksii (Turner) Decne
 Milford Sound, Dale Point, *RV Tangaroa*, Feb 1980, WELT A014708.
 Bligh Sound, *Francis*, Feb 1987, WELT A018118.
 Bligh Sound, WELT A013109.
 George Sound, *Hill*, Feb 1987, WELT A025929.
 George Sound, Southwest Arm, Jul 1982, WELT A013078, A013058.
 George Sound, Southwest Arm, *RV Tangaroa*, Jul 1982, WELT A013059.
 Caswell Sound, *Dawson*, Oct 1967, WELT A014790.
 Caswell Sound, *Aaron*, Apr 1984, WELT A013298.
 Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025542, A025543.
 Dagg Sound, *Hay*, Dec 1977, WELT A009967.
 Dusky Sound, Parrot Island, *Hay*, Feb 1993 WELT A020967.
 Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022462.
 Chalky Inlet, North Port, *Bolton*, May 1986, WELT A018119.

Chalky Inlet, South Port, *Davison*, May 1986, WELT A018120.
 Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018121.
 Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022500, A022573.
 Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010714.
 Preservation Inlet, Welcome Bay, *Hay*, Jul 1977, WELT A009962.
 Preservation Inlet, Weka Island, *Bolton*, May 1986, WELT A018117.

Notheiaceae

Notheia anomala Harv. & Bailey
 Dusky Sound, Pickersgill Harbour, *Slivsgaard*, Mar 1995, C.

Sargassaceae

Carpophyllum flexuosum (Esper) Grev.
 Sutherland Sound, *Francis*, Feb 1987, WELT A018192.
 Bligh Sound, Clio Bank, Jul 1982, WELT A013106, A013107.
 Bligh Sound, Clio Bank, *Hill*, Feb 1987, WELT A022458.
 George Sound, *Francis*, Feb 1987, WELT A018191.
 George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016203.
 George Sound, *Duffy*, Jan 2000, WELT A026073.
 Charles Sound, *Hay*, Dec 1977, WELT A009981.
 Doubtful Sound, Bauza Island, *Hepburn & Phillips, Miller & Harder*, Oct 2000 WELT A025555, A025558.
 Dagg Sound, *Bolton*, May 1986, WELT A018190.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018189.
 Breaksea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010304.
 Dusky Sound, Facile Harbour, *Hay*, Dec 1977, WELT A009954.
 Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022465.
 Dusky Sound, Larna Island, *Villouta*, Nov 1994, WELT A020974.
 Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022517.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1982, WELT A013111.
 Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025304.

Chalky Inlet, Cunaris Sound, *Hill*, Feb 1987, WELT A022460.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A025742.

Chalky Inlet, Cunaris Sound, Jul 1982, WELT A013102.

Preservation Inlet, Centre Cording Island, *Hill*, Feb 1987, WELT A022544.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010702.

Puyssegur Point, Feb 1972, WELT A013044.

Carpophyllum maschalocarpum (Turner) Grev.

Milford Sound, Dale Point, *RV Tangaroa*, Feb 1980, WELT A014708/1.

Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025589.

Dusky Sound, *Villouta & Slivsgaard*, Nov 1994, C.

Sargassum sinclairii Hook. f. et Harv.

Milford Sound, Anita Bay, *Hunt & Anderson*, Jul 1982, WELT A013210.

Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013235.

Bligh Sound, Turnaround Point, Feb 1987, WELT A018112.

Bligh Sound, *Duffy*, Jan 2000, WELT A025606.

George Sound, *Hill*, Feb 1987, WELT A025925.

George Sound, Southwest Arm, *Hill & Singleton*, Jul 1982, WELT A013263, A013264/1.

Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025554.

Dagg Sound, *Bolton*, May 1986, WELT A018113.

Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A018111.

Dusky Sound, Facile Harbour, *Baker*, Feb 1985, WELT A016295.

Dusky Sound, *Williams*, Feb 2000, WELT A025722.

Dusky Sound, Fiblister Bay, *Slivsgaard*, Nov 1994, WELT A020978.

Dusky Sound, Long Island, *Bolton*, May 1986, WELT A018194.

Preservation Inlet, *Hay*, Dec 1977, WELT A009963.

Puyssegur Point, *Hay*, Feb 1972, WELT A013040, A013042.

Sargassum verruculosum (Mertens) C. Agardh

Bligh Sound, *Hill & Singleton*, Jul 1982, WELT A013135.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025648.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026050, A026051.

Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A018108.

Breaksea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010303.

Breaksea Sound, Wet Jacket Arm, *Bolton*, May 1986, WELT A018107.

Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022575.

Dusky Sound, Cooper Island, *Bolton*, May 1986, WELT A018109.

Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020977.

Dusky Sound, Cook Channel, *Bolton*, May 1986, WELT A018106.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018110.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010699.

Seirococcaceae

Marginariella boryana (A. Rich.) Tandy

Milford Sound, Anita Bay, *Hunt & Anderson*, Jul 1982, WELT A013209.

George Sound, *Hill & Singleton*, Jul 1982, WELT A013081, A013224.

Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025904.

Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020951.

Marginariella urvilliana (A. Rich.) Tandy

Milford Sound, Anita Bay, *Hunt & Anderson*, Jul 1982, WELT A013211.

George Sound, *Francis*, Feb 1987, WELT A018131.

George Sound, Southwest Arm, *Hill & Singleton*, Jul 1982, WELT A013264, A013266, A013268.

George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016206.

George Sound, *Aaron*, Jul 1982, WELT A016206/1.

George Sound, *Duffy*, Jan 2000, WELT A026063, A026072.

Charles Sound, *Hay*, Dec 1977, WELT A009960, A021149.

Charles Sound, *Duffy*, Jan 2000, WELT A026092.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025649, A025652.

Doubtful Sound, Bauza Island, *Goebel*, Oct 2000, WELT A025586.

Dagg Sound, *Bolton*, May 1986, WELT A018127.

Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018132.

Dusky Sound, Pigeon Island, *Hay*, Dec 1977, WELT A009953.

Dusky Sound, Passage Island, *Baker*, Feb 1985, WELT A016296.

Dusky Sound, Long Island, *Bolton*, May 1986, WELT A018130.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018129, A018133.

Chalky Inlet, North Port, *Bolton*, May 1986, WELT A018128.

Rhodophyta

Bangiales

Bangiaceae

Bangia sp. 1

Thompson Sound, Deas Cove, *Farr*, Oct 2000, WELT A025596, A025597, A025598.

Bangia sp. 2

Doubtful Sound, Crooked Arm, *Nelson*, Oct 2000, WELT A025692, A025806.

Porphyra sp. 1

Thompson Sound, Deas Cove, *Stuart, Neill*, Oct 2000, WELT A025599-A025601.

Doubtful Sound, Bauza Island, *Russell*, Oct 2000, WELT A025566.

Doubtful Sound, Crooked Arm, *Nelson*, Oct 2000, WELT A025807.

Doubtful Sound, Tricky Cove, *Russell*, Oct 2000, WELT A025690.

Breaksea Sound, *Williams*, Feb 2000, WELT A025393.

Breaksea Sound, Sunday Cove, *Williams*, Feb 2000, WELT A025358/A-B, A025447.

Porphyra sp. 2

Preservation Inlet, Te Whara Beach, *West*, Nov 1996, WELT A025224, A026108.

(Systematic studies of the *Bangia/Porphyra* complex throughout the New Zealand region have revealed significant

numbers of undescribed species – e.g. *Broom et al.* 1999, *Farr et al.* 2001. The taxa listed above have been distinguished using 18S rDNA sequence data.)

Hildenbrandiales

Hildenbrandiaceae

Apophlaea lyallii Hook.f. et Harv.

(Preservation Harbour – type locality, *Lyall*, FLNZ p.244)

Milford Sound, *Hunt & Anderson*, Jul 1982, WELT A013200.

Milford Sound, Anita Bay, *Hunt & Anderson*, Jul 1982, WELT A013212.

Bligh Sound, Jul 1982, WELT A013138.

George Sound, *Zotov*, Apr 1949, WELT A003072, A016083.

George Sound, Jul 1982, WELT A013084.

George Sound, Southwest Arm, Jul 1982, WELT A013076.
Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010310.

Caswell Sound, *Dawson*, Oct 1967, WELT A016815.

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026083.

Thompson Sound, Deas Cove, *Farr, Loughman*, Oct 2000, WELT A025594, A025595.

Doubtful Sound, *Williams*, Feb 2000, WELT A025753.

Doubtful Sound, Deep Cove, Dec 1909, WELT A001338.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026047.

Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025331.

Dagg Sound, *Hay*, Dec 1977, WELT A009952.

Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A018195, A018207.

Dusky Sound, Cooper Island, *Chapman*, Jan 1987, WELT A022466, A022470.

Dusky Sound, Fiblister Bay, *Turnball*, Aug 1993, WELT A020955.

Dusky Sound, Pickersgill Harbour, *Baker*, Feb 1985, WELT A016289.

Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022521.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025360.

Chalky Inlet, Edwardson Sound, *Hay*, Dec 1977, WELT A009946.

Chalky Inlet, South Port, *Davison*, May 1986, WELT A018208.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022503.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018206.

Preservation Inlet, Weka Island, *Bolton*, May 1986, WELT A018205.

Acrochaetiales

Acrochaetiaceae

Audouinella spp.

Bradshaw Sound, *Neill*, Oct 2000, WELT A025593.

Doubtful Sound, Bauza Island, *Neill, Hepburn & Phillips*, Oct 2000, WELT A025539, A025572.

Doubtful Sound, Tricky Cove, *Wing & Goebel*, Oct 2000, WELT A025818.

Doubtful Sound, *Harder & Hepburn*, Oct 2000, WELT A025792.

Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025668.

Palmariales

Rhodothamniellaceae

Camontagnea hirsuta (E.M.Woll.) Woelk. et Womersley

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016271, A016284.

Camontagnea oxyclada (Mont.) Pujals

(Preservation Harbour – as *Callithamnion scoparium*, *Lyall*, FLNZ p.259)

Dusky Sound, Crayfish Island, *Slivsgaard*, Mar 1995, WELT A022565.

Nemaliales

Galaxauraceae

Nothogenia fastigiata (Bory) P.G.Parkinson

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025701.

Dusky Sound, *Williams*, Feb 2000, WELT A025721.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A022542, A022554.

Liagoraceae

Nemalion helminthoides (Vellay) Batters

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016272.

Corallinales

Corallinaceae

Amphiroa anceps (Lamarck) Decne.

George Sound, *SCUBA team*, Jul 1982, WELT A013114.

Arthrocardia corymbosa (Lamarck) Decne.

Charles Sound, *Hay*, Dec 1977, WELT A009987, A010071.

Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025909.

Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016213.

Dagg Sound, *Bolton*, May 1986, WELT A022486.

Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A022491.

Dusky Sound, Five Fingers Peninsula, *Bolton*, May 1986, WELT A022482.

Dusky Sound, *Williams*, Feb 2000, WELT A025720.

Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A022495.

Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A022498.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A022510.

Arthrocardia wardii (Harv.) Aresch.

George Sound, *Duffy*, Jan 2000, WELT A026064.

Corallina officinalis L.

Bligh Sound, Jul 1982, WELT A013136.

George Sound, *Hill*, Feb 1987, WELT A025981.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025695.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026095.

Haliptilon roseum (Lamarck) Garbary et Johansen

Charles Sound, *Hay*, Dec 1977, WELT A010072.

Charles Sound, *Duffy*, Jan 2000, WELT A026090.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026049.

Doubtful Sound, Bauza Island, *Goebel, Wing*, Oct 2000, WELT A025582, A025908.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025357.

Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016212.

Dagg Sound, *Bolton*, May 1986, WELT A022488.

Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A022489.

- Dusky Sound, *Slivsgaard*, Nov 1994, WELT A021005.
 Dusky Sound, Resolution Island, *Bolton*, May 1986, WELT A025740, A025741.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013152.
 Chalky Inlet, Edwardson Sound, *Miller*, Feb 2000, WELT A025289.
 Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009934.
 Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A022532.
 Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A022509.
 Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022549.
 Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025963.
- Synarthrophyton patena* (Hook.f. et Harv.) R.A.Towns.
 Charles Sound, *Hay*, Dec 1977, WELT A009972.
 Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A026101.
 Dagg Sound, *Bolton*, May 1986, WELT A022487.
 Dusky Sound, *Williams*, Feb 2000, WELT A025322, A025364, A025717.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013158, A013164.
 Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022546.
- Synarthrophyton schielianum* Woelk. et M.S.Foster
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025812.
- Non-geniculate corallines
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025813.
 Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025809.
 Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025810.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A022541.
 Dusky Sound, Pigeon Island, *Hay*, Dec 1977, WELT A010001.
 Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A025932.

Balliales

Balliaceae

- Ballia callitricha* (C.Agardh) Kuetz.
 Charles Sound, *Hay*, Dec 1977, WELT A010073.
 Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026078.
 Doubtful Sound, Bauza Island, *Goebel*, Oct 2000, WELT A025584.
 Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025620.
 Dagg Sound, *Bolton*, May 1986, WELT A022485.
 Dusky Sound, Ship Cove, *Baker*, Feb 1985, WELT A016291.
 Dusky Sound, Long Island, *Bolton*, May 1986, WELT A022557.
 Dusky Sound, *Williams*, Feb 2000, WELT A025320, A025321.
 Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A022497.
 Preservation Inlet, Coal Island, *Wing*, Nov 2000, WELT A025971.

Gracilariales

Gracilariceae

- Gracilaria chilensis* Bird, McLachlan et Oliveira
 Caswell Sound, *Hay*, Dec 1977, WELT A010038.
 Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025544.
 Dagg Sound, *Hay*, Dec 1977, WELT A010011.
 Breaksea Sound, Vancouver Arm, *Williams*, Feb 2000, WELT A025382.
 Breaksea Sound, Wer Jacket Arm, *Main*, Nov 1978, WELT A010249.
- Gracilaria secundata* Harv.
 Bradshaw Sound, Gaer Arm, *Miller & Harder*, Oct 2000, WELT A025664.
 Doubtful Sound, Elizabeth Island, *Stuart & McDonald*, Oct 2000, WELT A025801.
- Gracilaria truncata* Kraft
 Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025556.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025338.
 Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015974.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013170.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018267.

Bonnemaisoniales

Bonnemaisoniaceae

Asparagopsis armata Harv.

George Sound, *Francis*, Feb 1987, WELT A018198.

George Sound, *Duffy*, Jan 2000, WELT A026067, A026088.

Charles Sound, *Hay*, Dec 1977, WELT A009971, A010009.

Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A025626.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025353.

Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025337.

Breakea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010250.

Dusky Sound, Goose Cove, *Shaw & Adams*, Nov 1984, WELT A015961.

Dusky Sound, *Villouta*, Nov 1994, WELT A021007.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A025310, A025368, A025369, A025443.

Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A016813.

Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018197.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010696/A, A010696/B, A010696/C.

Delisea elegans J.V.Lamour.

Sutherland Sound, *Francis*, Feb 1987, WELT A018223.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A025623, A026048, A026056.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025352, A025355.

Dagg Sound, Four Fathom Bank, *Mundy*, Feb 2000, WELT A025356.

Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015960.

Dusky Sound, Cooper Island, *Singleton*, Jan 1987, WELT A022556.

Dusky Sound, Lama Island, *Hay*, Feb 1993, WELT A020964.

Dusky Sound, *Ostrow*, Dec 2000, WELT A025976.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025290.

Chalky Inlet, Edwardson Sound, Feb 1980, WELT A014766.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018227.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018229.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025957.

Delisea plumosa Levring

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A025309.

Ptilonia willana Lindauer

Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025560.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026104.

Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015959.

Dusky Sound, Wales Point, *Slivsgaard*, Nov 1994, WELT A021014.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025962.

Preservation Inlet, Coal Island, *Wing*, Nov 2000, WELT A025974.

Halymeniales

Halymeniaceae

Aeodes nitidissima J.Agardh

George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016219/A, A016219/B.

Dagg Sound, *Hay*, Dec 1977, WELT A009992.

Dusky Sound, *Williams*, Feb 2000, WELT A022788 – A022790.

Preservation Inlet, *Williams*, Feb 2000, WELT A022787.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A022791 – A022793.

Grateloupia intestinalis (Hook.f. et Harv.) Setchell ex Parkinson (Preservation Harbour – *Nemastoma intestinalis* – type locality, *Lyall*, Fl.NZ p.254)

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009993.

Grateloupia prolifera J.Agardh

Dagg Sound, *Hay*, Dec 1977, WELT A010018/A-C.

Dusky Sound, *Williams*, Feb 2000, WELT A025708.

Grateloupia urvilleana (Mont.) Parkinson

Doubtful Sound, Deep Cove, *Aaron*, Apr 1984, WELT A016260.

Dagg Sound, *Hay*, Dec 1977, WELT A010012.

Halymenia sp.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A025308.

Pachymenia lusoria (Grev.) J.Agardh

George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013060, A013061.

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010306/A, A010306/B.

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026082.

Nancy Sound, Foot Arm, *Aaron*, Feb 1980, WELT A014744.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025654.

Doubtful Sound, *Williams*, Feb 2000, WELT A025746.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A026046.

Dagg Sound, *Hay*, Dec 1977, WELT A009995.

Breaksea Sound, *Williams*, Feb 2000, WELT A025329/A - A025329/D.

Dusky Sound, Five Fingers Peninsula, *Johnson*, Nov 1984, WELT A015973/A, A015973/B.

Dusky Sound, Frozen Bird, *Slivsgaard*, Apr 1995, WELT A022560.

Dusky Sound, Cooper Island, *Chapman*, Jan 1987, WELT A022467.

Dusky Sound, *Williams*, Feb 2000, WELT A025325.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016276/A, A016276/B.

Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022516.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018134.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025303.

Preservation Inlet, Cunaris Sound, *Hay*, Dec 1977, WELT A009947, A009948.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022501, A022502.

Preservation Inlet, Weka Island, *Bolton*, May 1986, WELT A022506.

Plocamiales

Plocamiaceae

Plocamium angustum (J.Agardh) Hook.f. et Harv.

Milford Sound, Dale Point, *Hill & Singleton*, Jul 1982, WELT A013242, A013243.

Bligh Sound, Turnabout Point, *Francis*, Feb 1987, WELT A018217.

George Sound, *Francis*, Feb 1987, WELT A018221.

George Sound, *SCUBA team*, Jul 1982, WELT A013147.

Charles Sound, *Hay*, Dec 1977, WELT A009973, A010039.

Nancy Sound, Foot Arm, Feb 1980, WELT A014791, A014793.

Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025574.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026054.

Dagg Sound, Four Fathom Bank, *Mundy*, Feb 2000, WELT A022845, A022846, A022849.

Dusky Sound, Wales Point, *Bettjeman*, Nov 1994, WELT A021016.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018219.

Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013110, A013122, A013133.

Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A018212.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018216.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025953, A025959.

Preservation Inlet, Coal Island, *Wing*, Nov 2000, WELT A025975.

Plocamium cartilagineum (L.) P.S.Dixon

Dusky Sound, Supper Cove, *RV Acheron*, Jan 1977, WELT A010287/A, A010287/B, A010287/C.

Dusky Sound, *Williams*, Feb 2000, WELT A025718.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018214.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018220.

Plocamium cirrhosum (Turner) M.J.Wynne

(previously known as *P. costatum* (C.Agardh) Hook.f. et Harv. - Wynne, 2002)

(Dusky Bay - as *Plocamium conallorhiza*, *Forster*, FLNZ p.246) Sutherland Sound, *Bolton*, Feb 1987, WELT A018211.

Charles Sound, *Hay*, Dec 1977, WELT A009974.
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025699.
 Dagg Sound, Four Fathom Bank, *Mundy*, Feb 2000, WELT A022848.
 Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025348, A025354.
 Dagg Sound, *Bolton*, May 1986, WELT A018218.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A022850, A025338.
 Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A018274.
 Dusky Sound, Fixed Head Point, *Bettjeman*, Nov 1994, WELT A021017.
 Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A018215.
 Preservation Inlet, Centre Cording Island, *Hill*, Feb 1987, WELT A022550.
 Preservation Inlet, Balleny Reef, *Davison*, May 1986, WELT A018213.

Plocamium leptophyllum Kuetz.

George Sound, *Francis*, Feb 1987, WELT A018230.
 Dusky Sound, Many Islands, *Hay*, Feb 1993, WELT A020961.

Plocamium microcladioides South et N.M.Adams

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025655.
 Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025548.
 Dusky Sound, *Williams*, Feb 2000, WELT A022847.
 Dusky Sound, Crayfish Island, *Slivsgaard*, Mar 1995, WELT A022570.
 Dusky Sound, Ship Cove, *Baker*, Feb 1985, WELT A016292.

Rhodymeniales

Champiaceae

Champia affinis (Hook.f. et Harv.) J.Agardh
 Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010690.

Champia chathamensis V.J.Chapm. et Dromgoole
 Bligh Sound, *Duffy*, Jan 2000, WELT A025608.
 Nancy Sound, *Aaron*, Apr 1984, WELT A016221.
 Doubtful Sound, Bauza Island, *Phillips*, Oct 2000, WELT A026106.

Dagg Sound, *Bolton*, May 1986, WELT A018203.
 Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A018204.
 Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A022539/A, A022539/B.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018202.
 Dusky Sound, *Baird*, Nov 1994, WELT A020985.

Fauchaeaceae

Gloiocladia saccata (J.Agardh) R.E.Norris
 Dusky Sound, Facile Harbour, *Hay*, Oct 1992, WELT A022568.

Lomentariaceae

Lomentaria caespitosa (Harv.) V.J.Chapm.
 Bligh Sound, *SCUBA team*, Jul 1982, WELT A013142.
 George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013073.

Rhodymeniaceae

Rhodymenia dichotoma Hook.f. et Harv.
 Dusky Sound, Duck Cove, *Black*, Feb 1977, WELT A010286.

Rhodymenia obtusa (Grev.) Womersley

Bligh Sound, Turnabout Point, *Francis*, Feb 1987, WELT A018268.
 Charles Sound, *Duffy*, Jan 2000, WELT A026084.
 Charles Sound, *Hay*, Dec 1977, WELT A009945.
 Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A018263.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025344.
 Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A018269.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018265, A018266.
 Dusky Sound, *Villouta*, Nov 1994, WELT A021011.
 Dusky Sound, *Williams*, Feb 2000, WELT A025311, A025313, A025709, A025719.
 Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1982, WELT A013126.
 Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A014764.
 Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010697/A - A010697/C.

Rhodymenia sp. sensu Adams 1994

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013247.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A018264.

Rhodymenia sp.

Bradshaw Sound, Gaer Arm, *Goebel & Wing*, Oct 2000, WELT A025661.

Doubtful Sound, Tricky Cove, *Wing & Goebel*, Oct 2000, WELT A025674.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A025624, A025628, A026052.

Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025442.

Gelidiales

Gelidiaceae

Capreolia implexa Guiry et Womersley

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016302.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025299.

Gelidium caulacanthum J.Agardh

Milford Sound, Dale Point, Feb 1980, WELT A014768.

Bligh Sound, Jul 1982, WELT A013141.

Gelidium sp.

Doubtful Sound, Deep Cove, *Wing & Goebel*, Oct 2000, WELT A025798.

Dagg Sound, *Hay*, Dec 1977, WELT A009997, A010019.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025920.

Pterocladia capillacea (S.G.Gmel.) Santel. et Hommers.

Bligh Sound, *Duffy & Shears*, Jan 2000, WELT A025604.

George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013075.

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026079.

Dagg Sound, *Hay*, Dec 1977, WELT A010034.

Dusky Sound, *Slivsgaard*, Mar 1995, WELT A022566.

Gigartinales

Cystocloniaceae

Craspedocarpus erosus (Hook.f. et Harv.) Schmitz

Dusky Sound, *Pugsley*, Nov 1994, WELT A021015.

Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013165.

Rhodophyllis centrocarpa (Mont.) M.J.Wynne

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025644.

Dusky Sound, *Ostrow*, Dec 2000, WELT A025977.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025965.

Rhodophyllis membranacea (Harv.) Hook.f. et Harv.

(Preservation Harbour and Chalky Bay – as *R. gumii*, *Lyall*, FLNZ p.247)

George Sound, *Francis*, Feb 1987, WELT A018275.

Charles Sound, *Hay*, Dec 1977, WELT A009935, A010040.

Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025901.

Dagg Sound, Four Fathom Bank, *Mundy*, Feb 2000, WELT A022770.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A022772, A022773.

Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A021013.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A022767 - A022769 A022771.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A022508.

Preservation Inlet, Kisbee Bay, *RV Tangaroa*, Feb 1980, WELT A014765.

Preservation Inlet, Coal Island, *Wing*, Nov 2000, WELT A025973.

Gigartinaceae

Chondracanthus chapmanii (Hook.f. et Harv.) Fredericq

Dagg Sound, *Hay*, Dec 1977, WELT A010025.

Gigartina clavifera J.Agardh

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026077.

Iridea sp.

Dagg Sound, *Hay*, Dec 1978, WELT A009950.

Rhodoglossum sp.

Bradshaw Sound, *Neill*, Oct 2000, WELT A025826.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025799, A025681, A025682, A025841.

Doubtful Sound, Deep Cove, *Hay*, Oct 1992, WELT A025945-A025950.

Dusky Sound, Lama Island II, *Slivsgaard*, Mar 1995, WELT A025944.

Sarcothalia livida (Turner) Grev.

George Sound, *Hill*, Feb 1987, WELT A025927, A025928.

George Sound, Southwest Arm, *Hill & Singleton*, Jul 1982, WELT A013208.

Bradshaw Sound, *Neill*, Oct 2000, WELT A025691.

Doubtful Sound, *Williams*, Feb 2000, WELT A025745.

Doubtful Sound, Tricky Cove, *Wing & Goebel*, Oct 2000, WELT A025707.

Doubtful Sound, Deep Cove, *Aaron*, Apr 1984, WELT A016257.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025685.

Dagg Sound, *Hay*, Dec 1977, WELT A010030.

Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025345.

Dagg Sound, *Hay*, Dec 1977, WELT A009994.

Breaksea Sound, *Williams*, Feb 2000, WELT A025330, A025754, A025755.

Dusky Sound, *Williams*, Feb 2000, WELT A025713.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016275.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010688.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A022476, A022553.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025921.

The following taxa are of uncertain generic placement (Hommersand)

Gigartina ancistroclada (Turner) J.Agardh

Bligh Sound, *Francis*, Feb 1987, WELT A022529, A022530.

Doubtful Sound, Tricky Cove, *Russell*, Oct 2000, WELT A025688.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A022545, A022552.

Gigartina atropurpurea (J.Agardh) J.Agardh

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026075.

Gigartina decipiens (Hook.f et Harv.) Hook.f et Harv.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013205, A013257, A013258.

Bligh Sound, Jul 1982, WELT A013139.

George Sound, Southwest Arm, *SCUBA team*, Jul 1982, WELT A013065.

George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016215, A016216.

Caswell Sound, *Aaron*, Apr 1984, WELT A016263, A016809.

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010307.

Charles Sound, *Hay*, Dec 1977, WELT A010041, A010070.

Doubtful Sound, Deep Cove, *Shaw*, Jan 1988, WELT A022531.

Dagg Sound, *Hay*, Dec 1977, WELT A009951, A009976, A010016.

Dusky Sound, Stop Island, *Baker*, Feb 1985, WELT A016287.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009943.

Gigartina sp. sensu Lindauer Algae Nova Zelandiae Exsiccatae 164

Dusky Sound, Five Fingers Peninsula, *Brotherston*, Nov 1984, WELT A015967.

Kallymeniaceae

Callophyllis calliblepharoides J.Agardh

Charles Sound, Old Point, *Duffy*, Jan 2000, WELT A026076.

Callophyllis depressa (J.Agardh) Laing

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025816.

Doubtful Sound, Elizabeth Island, *Stuart & McDonald*, Oct 2000, WELT A025819.

Dusky Sound, *Williams*, Feb 2000, WELT A025390.

Callophyllis ornata (Mont.) Kuetz.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025954, WELT A025956, WELT A025967.

Callophyllis variegata (Bory) Kuetz.

Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020948.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025955.

Callophyllis sp.

- Milford Sound, Jul 1982, WELT A013190, A013193.
Breaksea Sound, Vancouver Arm, *Mundy*, Feb 2000, WELT A025326.
Preservation Inlet, Isthmus Sound, *Williams*, Feb 2000, WELT A025734.

Kallymenia sp.

- Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025458.
Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A025409.
Breaksea Sound, Vancouver Arm, *Mundy*, Feb 2000, WELT A025327.

Pugetia delicatissima R.E.Norris

- Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025646.
Doubtful Sound, Elizabeth Island, *Stuart & McDonald*, Oct 2000, WELT A025820.
Dusky Sound, *Ostrow*, Dec 2000, WELT A025979.
Preservation Inlet, *Hay*, Dec 1977, WELT A009936.
Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025964.

Rhizopogonia asperata (Harv.) Kylin

- Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025643.
Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015978.

Thamnophyllis laingii (J.Agardh) R.E.Norris

- Dagg Sound, *Hay*, Dec 1977, WELT A010017.
Dusky Sound, Five Fingers Peninsula, *Brotherson*, Nov 1984, WELT A015975.
Dusky Sound, *Slivsgaard*, Mar 1995, WELT A022567.

Nemastomaceae

Platoma sp.

- Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A026107.

Tsengia laingii (Kylin) Womersley et Kraft

- Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025297, A025300, A025305.

Peyssonneliaceae

Peyssonnelia spp.

- Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025576, A025811.
Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025667.
Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025670.
Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025757.
Chalky Inlet, Cunarid Sound, *Mundy*, Feb 2000, WELT A025373.
Preservation Inlet, *Mundy*, Feb 2000, WELT A025372.

Phylloporaceae

Gymnogongrus furcatus (Hook.f. et Harv.) Kuetz.

- (Milford Haven – *Gymnogongrus vermicularis*, *Lyall*, Fl.NZ p.250)
Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009940.

Gymnogongrus torulosa (Hook.f. et Harv.) F.Schmitz

- Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013206, A013255, A013259.

Stenogramme interrupta (C.Agardh) Mont. ex Harv.

- (Chalky Bay, *Lyall*, Fl.NZ p.249)
Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025686.
Dusky Sound, *Henry*, Mar 1900, WELT A001387.
Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020949.

Sarcodiaceae

Sarcodia flabellata Levring

- Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020947.

Ceramiales

Ceramiaceae

Anotrichium crinitum (Kuetz.) Baldock

- George Sound, *Hill*, Feb 1987, WELT A025926.
Doubtful Sound, Bauza Island, *Goebel & Wing*, Russell, Oct 2000, WELT A025588, A025679.
Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A022778.

Dagg Sound, Four Fathom Bank, *Mundy*, Feb 2000, WELT A022779.

Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016210.

Dagg Sound, *Bolton*, May 1986, WELT A018238.

Breaksea Sound, Vancouver Arm, *Williams*, Feb 2000, WELT A022777.

Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A018239.

Dusky Sound, Parrot Island, *Hay*, Feb 1993, WELT A020954.

Dusky Sound, *Williams*, Feb 2000, WELT A022774, A022775.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013089.

Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A016811.

Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018237.

Preservation Inlet, Isthmus Sound, *Williams*, Feb 2000, WELT A022776.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010695.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025958, A025966.

Antithamnion pectinatum (Mont.) Brauner

Milford Sound, Anita Bay, *Hunt & Anderson*, Jul 1982, WELT A013213.

Caswell Sound, *Aaron*, Apr 1984, WELT A016810.

Breaksea Sound, *Williams*, Feb 2000, WELT A025386.

Antithamnion sp.

Milford Sound, Dale Point, Jul 1982, WELT A013240.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016301.

Antithamnionella adnata (J.Agardh) N.M.Adams

Milford Sound, Jul 1982, WELT A013177, A013197.

Chalky Inlet, North Port, *Bolton*, May 1986, WELT A025933.

Callithamnion brachygonum Hook.f et Harv.

Breaksea Sound, *Williams*, Feb 2000, WELT A025405.

Callithamnion consanguineum Hook.f et Harv.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025653.

Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025665.

Callithamnion sp.

George Sound, Southwest Arm, Jul 1982, WELT A013069, A013072.

Thompson Sound, *Stuart & McDonald*, Oct 2000, WELT A025697.

Bradshaw Sound, *Neill*, Oct 2000, WELT A025592.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025683, A025684, A025840.

Centroceras clavulatum (C.Agardh) Mont.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013168.

Ceramium apiculatum J.Agardh

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013132.

Ceramium rubrum (Huds.) C.Agardh

Bligh Sound, *Hay*, Dec 1977, WELT A010081.

Bligh Sound, *Francis*, Feb 1987, WELT A025941.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025828.

Dagg Sound, *Hay*, Dec 1977, WELT A009998, A010036, A010037.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A025940.

Dusky Sound, Lama Island, *Villouta*, Nov 1994, WELT A020972.

Preservation Inlet, Long Sound, *RV Tangaroa*, Feb 1980, WELT A016812.

Ceramium tasmanicum (Kuetz.) Womersley

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025618.

Ceramium sp.

Milford Sound, Jul 1982, WELT A013172,

A013173, A013175, A013178.

George Sound, Jul 1982, WELT A025460.

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025835, A025836.

Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025678.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025538.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025837.

Doubtful Sound, Deep Cove, *Aaron*, Apr 1984, WELT A016226, A016258, A016261, A016264, A025634.

Dagg Sound, Dec 1977, WELT A009996.
 Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A018273.
 Breaksea Sound, *Williams*, Feb 2000, WELT A025396.
 Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025323.
 Dusky Sound, Wet Jacket Arm, *Bolton*, May 1986, WELT A018272.
 Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018271.

Crouania willae R.E.Norris

Milford Sound, Jul 1982, WELT A013174.

Crouania sp.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025839.

Dasyptilon pellucidum (Harv.) Feldmann

Charles Sound, *Duffy*, Jan 2000, WELT A026091.
 Doubtful Sound, Bauza Island, *Goebel & Wing*, Oct 2000, WELT A025587.
 Dagg Sound, *Bolton*, May 1986, WELT A022484.
 Chalky Inlet, Passage Island, *Hay*, Apr 1991, DOC.

Euptilota formosissima (Mont.) Kuetz.

Milford Sound, *Hill & Singleton*, Jul 1982, WELT A013251, A013252, A013253/A, A013253/B, A013256.
 George Sound, *Francis*, Feb 1987, WELT A018226.
 George Sound, Jul 1982, WELT A013270.
 Charles Sound, *Hay*, Dec 1977, WELT A010010, A010074.
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025986.
 Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026053.
 Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A026100.
 Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025985.
 Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A022780, A025349.
 Dagg Sound, Otago Point, *Aaron*, Apr 1984, WELT A016208, A016209.
 Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A018199.
 Dagg Sound, Seventy Fathom Bank, *Miller*, Feb 2000, WELT A022784, A022786.

Breaksea Sound, North Bank, *Bolton*, May 1986, WELT A018224.

Dusky Sound, *Baird*, Nov 1994, WELT A021018.

Dusky Sound, *Williams*, Feb 2000, WELT A022781-A022783.

Dusky Sound, Whidbey Point, *Adams*, Nov 1984, WELT A015966.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013095.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A022785.

Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A014767.

Chalky Inlet, Chalky Island, *Davison*, May 1986, WELT A018225.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018222.

Preservation Inlet, Coal Island, *Wing*, Nov 2000, WELT A025972.

Griffithsia antarctica Hook.f. et Harv.

Bligh Sound, *SCUBA team*, Jul 1982, WELT A013082.
 George Sound, Southwest Arm, Jul 1982, WELT A013179.
 Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025659.
 Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025805.
 Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A018236.
 Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013171.

Griffithsia traversii (J.Agardh) Baldock

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022504.

Lophothamnion hirtum (Hook.f. et Harv.) Womersley

Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025750.

Medeiothamnion lyallii (Harv.) Gordon

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010246.
 Thompson Sound, *Stuart & McDonald*, Oct 2000, WELT A025831.
 Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025829.
 Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025843.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025838.

Dusky Sound, *Villouta*, Nov 1994, WELT A021006.

Microcladia sp.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025397.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009938, A009944.

Perithamnion ceramoides J.Agardh

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025834.

Pterothamnion squarrulosum (Harv.) Athanasiadis et Kraft
(Preservation Harbour – as *Wrangelia squarrulosa*, *Lyall*, FL.NZ p.236)

Thompson Sound, *Stuart & McDonald*, Oct 2000, WELT A025830.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025970.

Pterothamnion lindaueri (Feldmann) Athanasiadis et Kraft

Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A026099.

Spongoclonium pastorale Laing

Breaksea Sound, *Williams*, Feb 2000, WELT A025388.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025804.

Spyridia dasyoides Sonder

(Chalky Bay – as *Spyridia opposita*, *Lyall*, FL.NZ p.256)

Doubtful Sound, Causet Cove, *Wing*!, Oct 2000.

Dusky Sound, Parrot Island, *Hay & Sliusgaard*, Feb 1993, C.

Dasyaceae

Dasya collabens Hook.f. et Harv.

(Chalky Bay, *Lyall*, FL.NZ p.232)

Dusky Sound, Lama Island, *Hay*, Aug 1993, WELT A020953.

Chalky Inlet, Edwardson Sound, *Davison*, Jun 1986, WELT A025938.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A025935.

Heterosiphonia concinna (Hook.f. et Harv.) Reinbold

(Chalky Bay – as *Rhodomela concinna* – syntype locality, *Lyall*, FL.NZ p. 225)

Caswell Sound, *Aaron*, Apr 1984, WELT A016262.

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025657, A025698.

Thompson Sound, *Stuart & McDonald*, Oct 2000, WELT A025696.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025614, A025615.

Dusky Sound, Latrine, *Sliusgaard*, Mar 1995, WELT A022572.

Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015962.

Dusky Sound, *Henry*, Jan 1900, WELT A001454.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018270.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025951.

Heterosiphonia squarrosa (Hook.f. et Harv.) Falkenberg

Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A022571.

Heterosiphonia tessellata (Harv.) Reinbold

Milford Sound, Dale Point, Jul 1982, WELT A013241.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013127, A013130, A013162.

Deleseriaceae

Abrotea suborbiculare (Harv.) Kylin

Doubtful Sound, Bauza Island, *Stuart, Nelson*, Oct 2000, WELT A025580, A025680.

(Millar & Nelson (in press) discuss the identity and taxonomy of this species.)

Acrosorium decumbens (J.Agardh) Kylin

George Sound, *Francis*, Feb 1987, WELT A018278.

Dagg Sound, *Hay*, Dec 1977, WELT A010026.

Breaksea Sound, *Williams*, Feb 2000, WELT A025407/A, A025407/B.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A018262, A018279.

Acrosorium venulosum (Zanardini) Kylin

Dagg Sound, *Hay*, Dec 1977, WELT A010024.

Dusky Sound, Ship Cove, *Baker*, Feb 1985, WELT A016293.

Apoglossum oppositifolium (Harv.) J.Agardh

Thompson Sound, *Stuart & McDonald*, Oct 2000, WELT A025832.

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025814.

Bradshaw Sound, Gaer Arm, *Goebel & Wing*, Oct 2000, WELT A025793.

Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025803, A025844.

Doubtful Sound, Deep Cove, *Wing & Goebel*, Oct 2000, WELT A025795.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018276, A018277.

Caloglossa leprieurii (Mont.) J. Agardh

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010308.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025546.

Delesseria crassinervia Mont.

Breaksea Sound, *Williams*, Feb 2000, WELT A025395.

Delesseria nereifolia Harv.

(Preservation Harbour, *Lyall*, FLNZ p.238)

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025952.

Delesseria sp.

Dusky Sound, Crayfish Island, *Villouta*, Nov 1994, WELT A020990.

Erythroglossum undulatissimum (J. Agardh) Kylin

Milford Sound, Jul 1982, WELT A013192.

George Sound, Southwest Arm, Jul 1982, WELT A013183.

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025817.

Doubtful Sound, *Stuart*, Oct 2000, WELT A025761.

Doubtful Sound, Deep Cove, *Phillips & Hepburn*, Oct 2000, WELT A025760.

Breaksea Sound, *Williams*, Feb 2000, WELT A025361.

Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025363.

Dusky Sound, *Williams*, Feb 2000, WELT A025365.

Dusky Sound, Wet Jacket Arm, *Bolton*, May 1986, WELT A022558.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A022468.

Preservation Inlet, Long Sound, *Williams*, Feb 2000, WELT A025374.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025375.

(As noted by Adams (1994) this species requires taxonomic attention).

Hymenena curdieana (Harv.) Kylin

Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025590.

Chalky Inlet, Cunaris Sound, Jul 1982, WELT A013154.

Hymenena harveyana (J. Agardh) Kylin

Charles Sound, *Hay*, Dec 1977, WELT A009985.

Hymenena palmata (Harv.) Kylin

Dusky Sound, Parrot Island, *Slivsgaard*, Mar 1995, WELT A022564.

Dusky Sound, Lama Island, *Hay*, Apr 1994, WELT A020946.

Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013153.

Chalky Inlet, Edwardson Sound, *RV Tangaroa*, Feb 1980, WELT A016802, A016803.

Hymenena variolosa (Harv.) Kylin

Sutherland Sound, *Bolton*, Feb 1987, WELT A022536.

Bligh Sound, *Duffy*, Jan 2000, WELT A026093.

Charles Sound, *Hay*, Dec 1977, WELT A009986.

Bradshaw Sound, Gaer Arm, *Goebel & Wing*, Oct 2000, WELT A025662.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025540.

Doubtful Sound, Elizabeth Island, *Stuart & McDonald*, Oct 2000, WELT A025802.

Doubtful Sound, Deep Cove, *Wing & Goebel, Phillips & Hepburn*, Oct 2000, WELT A025796, A025800, A025822.

Dusky Sound, *Pugsley*, Nov 1994, WELT A020984.

Dusky Sound, Lama Island II, *Slivsgaard*, Mar 1995, WELT A022555.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A025307.

Chalky Inlet, Cunaris Sound, *Hill*, Feb 1987, WELT A025912.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010692.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022548.

Hymenena sp.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025619.

Chalky Inlet, Edwardson Sound, *Mundy*, Feb 2000, WELT A025306.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025960.

Hypoglossum sp. sensu Adams 1994

Milford Sound, Jul 1982, WELT A013185.

Myriogramme denticulata (Harv.) Kylin

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025642.

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025656.

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026058.

Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025671.

Doubtful Sound, *Wing*, Oct 2000, WELT A025693.

Breaksea Sound, Vancouver Arm, *Williams*, Feb 2000, WELT A025984.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A025943.

Chalky Inlet, Cunaris Sound, *Bolton*, May 1986, WELT A018281.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018282, A022507, A022511, A022513.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025376.

Myriogramme sp.

George Sound, *SCUBA team*, Jul 1982, WELT A013146.

Dagg Sound, *Hay*, Dec 1977, WELT A010014.

Phycodrys profunda E.Y.Dawson

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025815.

Bradshaw Sound, Gaer Arm, *Goebel & Wing*, Oct 2000, WELT A025660, A025794.

Doubtful Sound, Bauza Island, *Hepburn & Phillips*, Oct 2000, WELT A025575.

Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A022492.

Breaksea Sound, Vancouver Arm, *Mundy*, Feb 2000, WELT A025359.

Phycodrys quercifolia (Bory) Skottsdb.

Thompson Sound, Richards Point, *Stuart & McDonald*, Oct 2000, WELT A025833.

Phycodrys sp.

Milford Sound, Dale Point, Jul 1982, WELT A013189.

Bligh Sound, *SCUBA team*, Jul 1982, WELT A013140.

Schizoseris dichotoma (Hook.f et Harv.) Kylin

(Chalky Bay – as *Delesseria dichotoma*, *Ljall*, Fl.NZ 239)

Caswell Sound, *Aaron*, Apr 1984, WELT A016804, A016805.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025617.

Breaksea Sound, *Williams*, Feb 2000, WELT A025362, A025743.

Dusky Sound, *Villouta*, Nov 1994, WELT A020996.

Dusky Sound, *Ostrow*, Dec 2000, WELT A025978.

Chalky Inlet, Edwardson Sound, *SCUBA team*, Jul 1983, WELT A013161.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022547.

Preservation Inlet, Cavern Head, *Wing*, Nov 2000, WELT A025961, A025969.

Schizoseris griffithsia (Suhr) M.J.Wynne

(Preservation Harbour and Chalky Bay – as *Delesseria davisi*, *Ljall*, Fl.NZ p.239)

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025288.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010691.

Preservation Inlet, Long Sound, *Bolton*, May 1986, WELT A018280.

Rhodomelaceae*Aphanocladia delicatula* (Hook.f. et Harv.) Falkenberg

Dagg Sound, *Hay*, Dec 1977, WELT A010022.

Dusky Sound, Fixed Head Point, *Bettjeman*, Nov 1994, WELT A020991.

Bostrychia harveyi Mont.

Milford Sound, *Sutherland*, Dec 1972, WELT A025201.

Doubtful Sound, Hall Arm, *Chapman*, Feb 1987, WELT A022473, A022474.

Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025666.

Dagg Sound, Seventy Fathom Bank, *Williams*, Feb 2000, WELT A025333, A025387.

Dagg Sound, *Hay*, Dec 1978, WELT A010027/A, A010027/B.
Breaksea Sound, Wet Jacket Arm, *Williams*, Feb 2000, WELT A025752.

Dusky Sound, Goose Cove, *Johnson*, Nov 1984, WELT A015963.

Brongniartella australis (C.Agardh) Schmitz

George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016217/A, A016217/B.

Dusky Sound, Frozen Bird, *Slivsgaard*, Mar 1995, WELT A022559.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025377.

Chondria arcuata Hollenberg

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025827.

Chondria macrocarpa Harv.

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025552.

Dagg Sound, *Hay*, Dec 1977, WELT A010028.

Dusky Sound, Fiblister Bay, *Slivsgaard*, Mar 1995, WELT A022562.

Chondria sp.

Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A022477.

Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A022540.

Dusky Sound, Fiblister Bay, *Slivsgaard*, Nov 1994, WELT A021009.

Cladhymenia coronata (Lindauer et Setchell) Saenger

Dusky Sound, Anchor Island Harbour, *Villouta*, Nov 1994, WELT A021012.

Dusky Sound, *Williams*, Feb 2000, WELT A025367.

Preservation Inlet, *Williams*, Feb 2000, WELT A025371.

Cladhymenia oblongifolia Harv.

Doubtful Sound, Bauza Island, *Wing*, Oct 2000, WELT A025907.

Dagg Sound, Seventy Fathom Point, *Bolton*, May 1986, WELT A022480.

Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A022494.

Dusky Sound, Lama Island, *Hay*, Feb 1993, WELT A020963.
Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013087, A013094.

Dasyclonium adiantiformis

(Port Preservation – as *Polyzonia cuneifolia*, *Lyll*, FLNZ p.226)
Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010247.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016300.

Dipterosiphonia heteroclada (J.Agardh) Falkenberg

George Sound, Jul 1982, WELT A013145.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016299.

Echinothamnion hystrix (Hook.f. et Harv.) Kylin

Breaksea Sound, *Williams*, Feb 2000, WELT A025756.

Echinothamnion lyallii (Hook.f. et Harv.) Kylin

(Preservation Harbour – as *Polysiphonia lyallii*, *Lyll*, FLNZ 230)
Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025613.

Echinothamnion spp.

Doubtful Sound, Bauza Island, *Duffy*, Jan 2000, WELT A026097.

Dagg Sound, Four Fathom Bank, *Smith*, Feb 2000, WELT A025729.

Dusky Sound, *Williams*, Feb 2000, WELT A025324.

Chalky Inlet, Edwardson Sound, *Williams*, Feb 2000, WELT A025298.

Herposiphonia sp.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016298.

Laurencia sp.

Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A022551.

Adamsiella angustifolia (Harv.) L.E. Phillips & W.A. Nelson
(previously *angustifolia* (Harv.) J.Agardh)

Bligh Sound, *Duffy & Shears*, Jan 2000, WELT A025603.

Doubtful Sound, Hall Arm, *Hepburn & Phillips*, Oct 2000, WELT A025669.

Preservation Inlet, Welcome Bay, *Hay*, Dec 1977, WELT A009937.

Adamsiella chauvini (Harv.) L.E Phillips & W.A. Nelson (previously *chauvini* Harv.)

George Sound, Southwest Arm, Jul 1982, WELT A013053, A013057.

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025702.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025645.

Breaksea Sound, Wet Jacket Arm, *Main*, Nov 1978, WELT A010248.

Dusky Sound, Duck Cove, *Black*, Feb 1977, WELT A010285.

Dusky Sound, Cooper Island, *Bolton*, May 1986, WELT A018209, A018210.

Dusky Sound, *Williams*, Feb 2000, WELT A025318.

Lophurella hookeriana (J.Agardh) Falkenberg

George Sound, *Francis*, Feb 1987, WELT A018232.

Charles Sound, *Hay*, Dec 1977, WELT A009979, A010003.

Doubtful Sound, Bauza Island, *Miller & Harder*, Oct 2000, WELT A025557.

Dagg Sound, *Bolton*, May 1986, WELT A018235.

Dusky Sound, Five Fingers Peninsula, *Shaw*, Nov 1984, WELT A015969.

Dusky Sound, Five Fingers Peninsula, *Bolton*, May 1986, WELT A018234.

Dusky Sound, Lama Island, *Hay*, Feb 1993, WELT A020945.

Chalky Inlet, Edwardson Sound, Feb 1980, WELT A014750.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013169.

Chalky Inlet, Edwardson Sound, *Hill*, Feb 1987, WELT A022519.

Chalky Inlet, Chalky island, *Davison*, May 1986, WELT A018233.

Preservation Inlet, Gulches Head, *Scrimgeour*, May 1986, WELT A018231.

Preservation Inlet, Coal Island, *Bolton*, May 1986, WELT A022505.

Metamorphe colensoi (Hook.f. et Harv.) R.E.Norris

Bligh Sound, *Hay*, Dec 1977, WELT A010080.

George Sound, *Francis*, Feb 1987, WELT A025918.

Doubtful Sound, Bauza Island, *Neill, Stuart*, Oct 2000, WELT A025570, A025579.

Dusky Sound, Pickersgill Harbour, *Slivsgaard*, Mar 1995, WELT A025934.

Polysiphonia abscissoides Womersley

Milford Sound, Dale Point, Feb 1980, WELT A014749.

Thompson Sound, Secretary Island, *Wing & Goebel*, Oct 2000, WELT A025700.

Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025612.

Polysiphonia brodiaei (Dillwyn) Sprengel

Doubtful Sound, Joseph Point, *Duffy*, Jan 2000, WELT A026055.

Dusky Sound, Nine Fathom Passage, *Bolton*, May 1986, WELT A018104.

Polysiphonia constricta Womersley

Doubtful Sound, Bauza Island, *Neill*, Oct 2000, WELT A025549.

Polysiphonia decipiens Mont.

George Sound, Southwest Arm, Jul 1982, WELT A013068.

George Sound, Southwest Arm, *Aaron*, Apr 1984, WELT A016218.

Nancy Sound, *Aaron*, Apr 1984, WELT A016223.

Dusky Sound, *Williams*, Feb 2000, WELT A025398, A025715, A025824, A025825.

Preservation Inlet, Long Sound, *Main*, Nov 1978, WELT A010693, A010694.

Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025738.

Polysiphonia muelleriana J.Agardh

Milford Sound, Sterling Basin, Feb 1980, WELT A014748.

George Sound, Southwest Arm, Jul 1982, WELT A013066, A013067.

Caswell Sound, *Aaron*, Apr 1984, WELT A016681, A016682.

Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010301/A, A010301/B.

Thompson Sound, Deas Cove, *Wing & Goebel*, Oct 2000, WELT A025650.

Breaksea Sound, Sunday Cove, *Bolton*, May 1986, WELT A022490.

Dusky Sound, Long Island, *Baker*, Feb 1985, WELT A016274.

Chalky Inlet, Edwardson Sound, Jul 1982, WELT A013086, A013159.

Preservation Inlet, Long Sound, *Williams*, Feb 2000, WELT A025402.

Polysiphonia rhododactyla Harv.

- Nancy Sound, Foot Arm, Feb 1980, WELT A014745.
Breaksea Sound, Chatham Point, *Bolton*, May 1986, WELT A022493.
Dusky Sound, Cormorant Cove, *Shaw*, Nov 1984, WELT A015965.
Dusky Sound, Parrot Island, *Hay*, Feb 1993, WELT A020969.
Dusky Sound, *Williams*, Feb 2000, WELT A025399.
Chalky Inlet, South Port, *Davison*, May 1986, WELT A022154.
Preservation Inlet, Useless Rock, *Williams*, Feb 2000, WELT A025401, A025823.
Preservation Inlet, Kisbee Bay, Feb 1980, WELT A014746/A.

Polysiphonia rudis Hook.f. et Harv.

- Dusky Sound, Pickersgill Harbour, *Slivsgaard*, Mar 1995, WELT A022569.

Polysiphonia scopulorum Harv.

- Doubtful Sound, Bauza Island, *Heesch*, Oct 2000, WELT A025564.

Polysiphonia sertularioides (Grateloup) J.Agardh

- Doubtful Sound, Bauza Island, *Heesch*, Oct 2000, WELT A025563.

Polysiphonia strictissima Hook.f. et Harv.

- Caswell Sound, *Aaron*, Apr 1984, WELT A016683.
Caswell Sound, Walker Point, *Main*, Nov 1978, WELT A010245.
Doubtful Sound, *Hepburn & Phillips*, Oct 2000, WELT A025675.
Doubtful Sound, Bauza Island, *Neill, Russell*, Oct 2000, WELT A025536, A025537, A025567.
Doubtful Sound, Secretary Island, *Duffy*, Jan 2000, WELT A025616.
Dagg Sound, *Hay*, Dec 1977, WELT A010032, A010033.
Breaksea Sound, Broughton Arm, *Miller*, Feb 2000, WELT A025400.
Dusky Sound, *Williams*, Feb 2000, WELT A025710.
Dusky Sound, Lama Island, *Hay*, Mar 1993, WELT A020958.
Preservation Inlet, *Williams*, Feb 2000, WELT A025403.
Preservation Inlet, Kisbee Bay, *RV Tangaroa*, Feb 1980, WELT A014747/A, A014747/B.

Polysiphonia aff. *subtilissima* Mont.

- Breaksea Sound, Wet Jacket Arm, *Smith*, Feb 2000, WELT A025404.

Stictosiphonia arbuscula (Harv.) King et Puttock

- Doubtful Sound, Bauza Island, *Russell*, Oct 2000, WELT A025808.
Dusky Sound, *Slivsgaard*, Nov 1994, WELT A021010.
Chalky Inlet, South Port, *Davison*, May 1986, WELT A018201.
Preservation Inlet, Centre Cording Island, *Chapman*, Feb 1987, WELT A025923.
Preservation Inlet, Weka Island, *Bolton*, May 1986, WELT A018200.

Stictosiphonia vaga (Hook.f. et Harv.) Hook.f. et Harv.

- Doubtful Sound, *Williams*, Feb 2000, WELT A025747.

Stictosiphonia sp.

- Doubtful Sound, Bauza Island, *Heesch*, Oct 2000, WELT A025565.

Streblocladia glomerulata (Mont.) Papenf.

- Dusky Sound, Parrot Island, *Slivsgaard*, Mar 1995, WELT A022563.
Dusky Sound, Lama Island, *Hay*, Feb 1993, WELT A020962.

Symphyclocladia marchantioides (Harv.) Falkenberg

- Doubtful Sound, Bauza Island, *Stuart*, Oct 2000, WELT A025535.