

Algal Type Material and Historical Phycological Collections in the Herbarium of the Museum of New Zealand Te Papa Tongarewa

W.A. Nelson¹, L.E. Phillips^{1,2} and N.M. Adams¹

¹Museum of New Zealand Te Papa Tongarewa, PO Box 467, Wellington, New Zealand

²present address: School of Botany, University of Melbourne, Melbourne, Australia

ABSTRACT: The phycological collection housed in the herbarium of the Museum of New Zealand Te Papa Tongarewa (WELT) contains scientifically and historically significant material including type specimens, primarily of New Zealand species of macroalgae; a set of W.H. Harvey's Australian Algae; and algal specimens from the Thompson/J.G. Baker herbarium. The holdings of type material and Harvey duplicates are listed in full. There are 197 type specimens listed, of which nine are foreign taxa (holotype: 16, isotype: 105, lectotype: 2, isolectotype: 37, syntype: 30, isoneotype: 2, paratype: 5). Lectotype specimens for New Zealand taxa housed in the Agardh herbarium, Lund, are designated for eight taxa. The extent and nature of material within the Thompson/Baker collection is outlined.

KEYWORDS: WELT, type specimens, W.H. Harvey, Australian Exsiccatae, New Zealand

Introduction

The herbarium (WELT) of the Museum of New Zealand Te Papa Tongarewa (Te Papa) was initiated in 1865 with the establishment of the Colonial Museum¹. Algal material was received into the collections in the 1860s and 1870s, from the inception of the herbarium. For example, during the Colonial Museum period, a collection of algae was presented from the British Museum of more than 200 specimens from throughout the British Isles dating from 1806-1860. It was not until a century later, however, when Nancy Adams began working in the herbarium in 1969, that the algal collections received any expert attention.

After an initial period of research on New Zealand algae by overseas research workers in the mid-19th century, particularly W.H. Harvey (Trinity College, Dublin), J.D. Hooker (Kew, London) and J.G. Agardh (Botanical Museum, Lund), there was very little activity for many years on the description or study of New Zealand algae. Adams (1994) presents a summary of the history of marine botany in New Zealand.

The purpose of documenting the significant algal collections housed at WELT is to enable improved access to and use of the collections. In this paper, three areas of the algal collections are documented: Type specimens, W.H. Harvey Australian Algae, and the Thompson/Baker herbarium.

¹The museum has been variously named the Colonial Museum 1865-1906, Dominion Museum 1906-1973, National Museum of New Zealand 1973-1992, Museum of New Zealand Te Papa Tongarewa 1992-.

Type Specimens

Type specimens within WELT are predominantly modern specimens, many of which are isotypes or syntypes distributed as part of Victor Lindauer's *Algae Novae-Zelandiae Exsiccatae* (ANZE) between 1939-1953 (Cassie 1971, Cassie-Cooper 1995, Nelson & Phillips 1996). There are also specimens collected by Dr Sven Berggren of the University of Lund, who visited New Zealand between 1874 and 1875. Berggren's year-long exploration and collecting trip in New Zealand (1874-75) was supported by the Royal Academy of Sweden, and also with funds supplied by the New Zealand Government, on the urging of the Colonial Museum's director, Dr James Hector. The museum's first botanist, John Buchanan, assisted Berggren in the field. One of the conditions of the New Zealand support was that duplicate material would be returned to New Zealand collections. Berggren's algal collections were given to J.G. Agardh in Lund to study, and they formed the basis of much of Agardh's work on New Zealand algae. Agardh also received New Zealand material from other sources, particularly collections from the Chatham Islands made by H.H. Travers and sent to Sweden via Ferdinand von Mueller, Government Botanist in Melbourne. A number of these specimens in WELT have either isotype or syntype status. In this paper, lectotype specimens are selected from the Agardh herbarium in Lund for eight New Zealand species.

Species are organised alphabetically within divisions. Each species name is followed by the authority and page citation of the original description; type locality listed in the description; type status; and WELT registration number. Collection site, collector and date are listed for specimens other than the holotype or where the information given with the type description differs from the data on the specimen. When the records are accompanied by reference to a sighting, this is indicated by "!". When the holotype of the taxon is located at another institution, and the location of the holotype has been verified, the acronym for that herbarium follows the letter H within brackets at the end of the entry. (Herbarium abbreviations follow Holmgren *et al.* 1990.)

In some instances, additional notes follow entries where there is need for further comment or clarification.

There are 197 type specimens listed (holotype: 16, isotype: 105, lectotype: 2, isolectotype: 37, syntype: 30, isoneotype: 2, paratype: 5). Nine of the specimens are types of foreign taxa (isotype: 7, syntype: 1, lectotype: 1).

CHLOROPHYTA

Bryopsis derbesioides V.J.Chapm., 1956: 481-2.

"Moto Arohia", V.W.Lindauer, 5 Nov 1939.

ISOTYPES: (ANZE No. 106) WELT A906, A20549.

[H: AK]

Bryopsis otagensis V.J.Chapm., 1956: 477.

"Muddy bay in Otago Harbour, 1917", W.A.Scarfe, Feb 1917.

ISOTYPE: WELT A2345.

[H: CHR]

Bryopsis scarfei V.J.Chapm., 1956: 479-480.

"Lyall Bay in a pool of discoloured water near H.W.M.; Island Bay?", Lyall Bay, W.A.Scarfe, Aug 1925.

ISOTYPE: WELT A2344.

[H: CHR]

Bryopsis vestita J.Agardh, 1877: 3.

"ad Bluff et Warrington: Berggren", Warrington, Otago, Berggren, 1874-5.

ISOLECTOTYPE: WELT A3.

[LECTOTYPE: LD]

Capsosiphon aurea V.J.Chapm., 1952: 54-55.

"Russell (Bay of Islands)", Orongo Bay, Russell, V.W.Lindauer, 2 Jan 1948.

ISOTYPES: (ANZE No. 330) WELT A1130, A20774.

[H: AK]

Lybaete longarticulata J.Agardh, 1877: 2.

"Banks Peninsula: Berggren", Berggren, 1874-5.

ISOLECTOTYPE: WELT A10.
[LECTOTYPE: LD 7541-2; W.A.Nelson, Nov. 1997]

Lychaete novae-zelandiae J.Agardh, 1877: 2.
"Warrington and Bay of Islands: Berggren",
Warrington, *Berggren*, 1874-5.
ISOLECTOTYPE: WELT A1569.
[LECTOTYPE: LD 7546; W.A.Nelson, Nov. 1997]

Microdictyon mutabile U.V.Dellow, 1950: 3-4.
"Locally abundant in dense or scattered clumps
on *Corallina officinalis* (L.) De Toni: Leigh.",
U.V.Dellow No. 618, 7 Sept 1949.
ISOTYPE: WELT A2435.
[H: AK]

Palmophyllum umbricola W.A.Nelson et
K.G.Ryan, 1986: 169-170.
"L'Esperance Rock, Kermadec Islands, *W.A.Nelson*,
28 Mar 1982." HOLOTYPE: WELT A12678.
ISOTYPES: WELT A12677, WELT A12679.

Prasiola delicatula V.J.Chapm., 1951: 85.
"Ditch, Russell", Russell, Bay of Islands, 4 Nov
1938.
ISOTYPE: (ANZE No. 227) WELT A1027, A
20670.

Sporocladopsis novae-zelandiae V.J.Chapm., 1949:
496.
"Epiphytic on *Pachymenia* and *Carpophyllum*, Bay
of Islands", Long Beach, Russell, Bay of Islands,
V.W.Lindauer, 12 Jan 1948.
ISOTYPES: (ANZE No. 308) WELT A1108,
A20752.
[H: AK]

Ulva parva V.J.Chapm., 1956: 396.
"Russell (Long Beach)", 18 Jul 1938.
ISOTYPE: (ANZE No. 228) WELT A1028, A20671.
[H: AK]

CHAROPHYTA

Nitella translucens ssp. *tricellularis* Nordst.,
1880: 15-16.

"In Lake Pearson, altitud. circ 2500', in alpinus prov.
Canterbury febr. 1874", *Berggren* (O. Nordstedt Col-
lection), Feb 1874.
LECTOTYPE : WELT A9071.
Notes: Wood & Mason (1977).

Nitella hyalina var. *novaezeelandiae* Braun in
Nordst. 1880: 17-18.
"In lacu Tarawera prov. Auckland febr. 1875",
Berggren, Feb 1875.
ISOTYPES: WELT A9028, WELT A9072.
Notes: Wood & Mason (1977).

Nitella conformis Nordst., 1880: 18.
"In lacu Lake Pearson circ. 2500' in alpinus prov.
Canterbury febr. 1874" *Berggren*, Feb. 1874.
ISOTYPE: WELT A9069.
Notes: Wood & Mason (1977).

Nitella leptosoma Nordst., 1880: 17.
"In palude montis (altitudine cir. 2000-3000') prope
Omatangi ad Taupo jan. 1875", Omatangi, Taupo,
2000ft, *Berggren*, Jan 1875.
ISOTYPES: WELT A9067, A9068.
Notes: Wood & Mason (1977).

PHAEOPHYTA

Colpomenia ecuticulata M.J.Parsons, 1982: 297.
"Takatu (Tawharanui) Peninsula, south side of Omaha
Bay, epiphytic on *Carpophyllum flexuosum* (Esper)
Greville", Northwest Bay, Great Is, Three Kings Is,
Choat, 23 Oct 1978.
PARATYPES: WELT A10429a,b,d.
[H: CHR]

Dictyota papenfussii Lindauer, 1949b: 390.
"Pihama, Taranaki", *V.W.Lindauer*, Feb 1944
ISOTYPES: (ANZE No. 187) WELT A987, A20630.
[H: AKU]

Ectocarpus warnockii Kuehne, 1946: 43.
"Oneroa near Russell", *I.Warnock*, 25 Jan 1935. (South
Pacific Plants II No. 485).
ISOTYPE: WELT A11139.

Elachista infestans J.Agardh, 1877: 3-4.
"In Gracilaria confervoide ad Hokianga legit Berggren",
Hokianga, *Berggren*, 1874-5.
SYNTYPE: WELT A1555.

Elachista lindaueri V.J.Chapm., 1961: 16-17.
"Bay of Islands", *V.W.Lindauer*, 6 Nov 1937.
ISOTYPES: (ANZE No. 29 as *Elachista australis*)
WELT A829, A20471.
[H: AKU]

Hapalospongidion durvilleae Lindauer, 1949a:
346-7.
"Stewart Island", *V.W.Lindauer*, 12 June 1945.
ISOTYPES: (ANZE No. 230) WELT A1030,
A20673.
[H: AKU]
Notes: South (1974).

Herponema bormosirae Lindauer et V.J.Chapm.
in Chapman, 1961: 24-27.
"On *Hormosira banksii*, mid-tide, Waitangi, Bay of
Islands", *V.W.Lindauer*, 19 Aug 1950.
SYNTYPES: (ANZE No. 334) WELT A1134,
A20778.

Leathesia novae-zelandiae Lindauer, 1949a: 348.
"Epiphytic on *Gigartina lanceata*, Stewart Island",
V.W.Lindauer, 7 Jan 1947.
ISOTYPES: (ANZE No. 256) WELT A1056,
A20699.
[H: AKU]

Lessonia adamsiae C.H.Hay, 1987: 296-297.
"Cod Cavern, Seal Point, Snares Island, *C.H.Hay*, Dec
1985."
HOLOTYPE: WELT A17070 (36 sheets).
ISOTYPES: WELT A17067-69, A17071.

Lessonia tholiformis C.H.Hay, 1989: 461-469.
Southern end of Hanson Bay, west of Manukau
Point, Owenga, Chatham Islands, *C.H.Hay*, Nov 1986.
HOLOTYPE: WELT A18257a-g.
ISOTYPES: WELT A18258-60.

Lessonia vadosa Searles, 1978: 375.
"Punta Conway, Isla de los Estados", Punta Conway,
Argentina, *Searles, Leister & Brauner*, 4 May 1975.
ISOTYPE: WELT A17042.
[H: US]

Macrocystis laevis C.H.Hay, 1986: 241-252.
"Transvaal Cove, Marion Island, southern Indian
Ocean, *C.H.Hay*, 18 Sept 1979."
ISOTYPE: WELT A16905 (7 sheets).
[H: BOL]

Myriocladia chorda J.Agardh, 1877: 4.
"On rocks: Tory Channel, Lyall; Parimahau:
Colenso' Auckland: Berggren"
SYNTYPE: WELT A1209.
Auckland, *Berggren*, 1874-5.
Notes: Nelson & Adams (1983).

Myriogloia lindauerii Kylin, 1940: 12.
"Neu-Seeland, Bay of Islands", *V.W.Lindauer*, 9 Oct
1937.
ISOTYPES: (ANZE No. 6 as *Myriogloia sciurus*)
WELT A806, A20448.
[H: LD]

Papenfussiella lutea Kylin, 1940: 19-20.
"Bay of Islands, Neu-Seeland", *V.W.Lindauer*, Nov
1937.
ISOTYPES: (ANZE No. 86 as *Myriogloia lutea*)
WELT A886, A18948, A20529.
[H: LD]

Perithalia capillaris J.Agardh, 1890: 5.
"ad oras Novae Zelandiae; Barriere Island, Thames,
Rev. W.Colenso (in Hb. Kewensi!)"
ISOTYPES: WELT A9655a & b, A9771, A 10224.
Notes: Type material is present in both LD and BM
collections.

Spatoglossum chapmanii Lindauer, 1949a: 341-3.
"Stewart Island"
ISOTYPES: (ANZE No. 209) WELT A1009, A2471,
A20652.
Pegasus Harbour, Stewart Island, 17 Oct 1945.
[H: AKU]

Sphacelaria stewartensis Lindauer, 1949a: 340-1.
 "Epiphytic on *Xiphophora chondrophylla* at Twilight Bay, Pegasus, Stewart Island", *E.Willa*, 20 Mar 1948.
 ISOTYPES: (ANZE No. 311) WELT A1111, A6633, A20755.
 [H: AKU]

Streblonema macrocystis A.F.Peters, 1991: 366-367.
 "Los Molinos, Valdivia", *Peters*, 5 Apr 1989.
 ISOTYPE: WELT A19496.
 [H: SGO]

Zonaria aureomarginata J.A.Phillips et W.A.Nelson, 1998: 81
 "Island Bay, Cook Strait, Wellington, *W.A.Nelson*, 12 Feb 1997"
 HOLOTYPE: WELT A21837.
 ISOTYPES: WELT A21838-41.

RHODOPHYTA

Abroteia orbicularis J.Agardh, 1876: 694.
 "in *Carpophyllo maschalocarpo* parasitica ad oras Novae Zelandiae (Berggren!)"
 SYNTYPE: WELT A1519.
 Tauranga, *Berggren*, 1874-5.
 Notes: Collections labelled as *Abroteia orbicularis* frequently include material of two taxa and need further examination and resolution.

Acrosymphyton firmum M.W.Hawkes, 1982a: 447-454, figs 3-19
 "'Table Top Rock', Leigh Marine Reserve, North Island", *M.W.Hawkes* & *D.R.Bonin*, 19 Dec 1979.
 ISOTYPE: WELT A11848.
 [H: CHR]

Aeodes nitidissima J.Agardh, 1876: 680.
 "ad oras Novae Zealandiae, Tauranga: Berggren", 1874-5.
 ISOLECTOTYPE: WELT A1268.
 [LECTOTYPE: LD 22363; W.A.Nelson, Nov. 1997]

Antithamnion lindaueri Feldman.-Maz., 1950: 134.
 "ad oras Novae-Zelandiae"
 ISOTYPES: (ANZE No. 249 as *Warrena comosa* Harvey) WELT A1049, A20692.
 Pihama, Taranaki, *V.W.Lindauer*, 30 Jan 1946.
 [H: PC]

Branchioglossum epiphyticum A.Millar et M.J.Wynne, 1992a: 232.
 "southwest side of Split Solitary Island, New South Wales, Australia, Millar, *Millar* & *Richards*, 31.viii.1990"
 ISOTYPE: WELT A21975.
 [H: NSW]

Callithamnion adnatum J.Agardh, 1877: 12.
 "ad Bay of Islands: Berggren", 1874-5.
 ISOTYPE: WELT A1528.
 [H: LD]

Callithamnion levringii Lindauer, 1949a: 350-1, fig.8a-d.
 "Pihama, Taranaki", *V.W.Lindauer*, 10 Feb 1946.
 ISOTYPES: (ANZE No. 325) WELT A1125, A20769.
 [H: AKU]
 Notes: Huisman & Kraft (1982).

Callophyllis calliblepharoides J.Agardh, 1976: 231.
 "ad Novam Zelandiam et Ins. Chatam"
 SYNTYPE: WELT A1261.
 Warrington, *Berggren*, 1874-75.

Callophyllis centrifuga J.Agardh, 1876: 688
 "ad oras Novae Zelandiae: Berggren!"
 ISOTYPE: WELT A1263.
 Bay of Islands, *Berggren*, 1874-5.
 [H: LD]
 Notes: Millar (1993).

Callophyllis decumbens J.Agardh, 1876: 688-9.
 "ad Novam Zelandiam: Berggren"
 SYNTYPE: WELT A1264.
 Bay of Islands, *Berggren*, 1874-5.

Carpococcus? linearis J.Agardh, 1876: 586.

"ad Insulas Chatam, legit Travers", 1871.

ISOTYPE: WELT A2067(3 sheets) (H.H.T. No. 30).

[H: LD]

Catenella oligarthra J.Agardh, 1876: 587.

"ad lapides in Bay of Islands Novae Zelandiae Berggren", 1874-5.

ISOTYPE: WELT A1294.

[H: LD]

Ceramium apiculatum J.Agardh, 1876: 105.

"ad Novam Zelandiam"

ISOLECTOTYPE: WELT A1535.

Tauranga, *Berggren*, 1874-5.

[LECTOTYPE: LD]

Champia laingii Lindauer, 1938: 411-413.

"northern end, Long Beach, Russell, Bay of Islands"

ISOTYPE: (ANZE No. 25) WELT A825.

NB: not all specimens distributed as ANZE 25 share the same collection details as the type and, hence, not all are isotypes.

Flat Rock, Bay of Islands, *V.W.Lindauer*, 17 Sept 1936.

[H: AK]

Conferva tetrica Dillwyn, 1806: pl.81.

"Common about the Mumbles and in other parts of the Peninsula of Gower"

LECTOTYPE: WELT A4502.

Swansea, *Dillwyn*, 1806.

Notes: Dixon & Price (1981).

Crouania willae R.E.Norris, 1986: 135.

"epiphytic on *Cystophora* in drift at Ringaringa, Stewart Island", *E.A.Willa*, 24 Jan 1960.

ISOTYPE: WELT A7596.

[H: CHR]

Cryptonemia latissima J.Agardh, 1876: 682.

"oras Novae Zelandiae: Berggren", 1874-5.

ISOLECTOTYPE: WELT A1292.

[LECTOTYPE: LD]

Dasya subtilis Lindauer, 1949a: 351-2.

"Long Beach, Russell, Bay of Islands", *V.W.Lindauer*, Feb 1938.

ISOTYPES: (ANZE No. 300 as *Heterosiphonia subtilis*) WELT A1100, A20744.

[H: AKU]

Delesseria aemula A.Millar et M.J.Wynne, 1992b: 112.

"east of Honeysuckle Point, Twofold Bay, Eden, New South Wales, Australia, *Millar & Richards*, 7.vii.1991"

ISOTYPE: WELT A21974.

[H: NSW]

Delesseria montagneana J.Agardh, 1876: 492-3.

"ad oras Novae Zelandiae (Berggren)"

ISOTYPE: WELT A1518.

Tauranga, *Berggren*, 1874-5.

[H: LD]

Delisea compressa Levring, 1955: 429-430.

"Bay of Islands, Russel (sic), Long Beach", *V.W.Lindauer*, 4 Feb 1938.

SYNTYPES: (ANZE No. 45 as *Phacelocarpus alatus*) WELT A845, A20488.

Notes: Bonin & Hawkes (1988a).

Delisea plumosa Levring, 1955: 427-428.

"Stewart Island", *V.W.Lindauer*, 7 Jan 1946

ISOTYPES: (ANZE No. 192 as *Delisea pulchra*) WELT A992, A20635.

[H: GC]

Notes: Bonin & Hawkes (1988a).

Dicranema aciculare J.Agardh, 1876: 436.

"ad oras Novae Zelandiae, Berggren"

ISOLECTOTYPE: WELT A1289.

Warrington, *Berggren*, 1874-5.

[LECTOTYPE: LD 30002; W.A.Nelson, Nov 1997]

Ectophora depressa J.Agardh, 1876: 690-691.

"ad oras Novae Zelandiae: Berggren"

ISOLECTOTYPE: WELT A1164.

Bay of Islands, *Berggren*, 1874-75.

[LECTOTYPE: LD]

Notes: Millar (1993).

Euptilota mooreana Lindauer, 1949b: 391-392.

"Pihama, Taranaki, 13 Apr 1946", *V.W.Lindauer*, 22 Feb 1946.

PARATYPES: (ANZE No. 273) WELT A1073, A20717.

[H: AKU]

Notes: Nelson & Phillips (1996).

Gelidium allanii V.J.Chapm., 1969: 98-99.

"Russell, Waitata Rocks", *V.W.Lindauer*, 20 Nov 1937.

ISOTYPES: (ANZE No. 137) WELT A937, A20580.

[H: AKU]

Notes: Nelson *et al.* (1994), Nelson & Phillips (1996).

Gelidium longipes J.Agardh, 1876: 547.

"ad oras Novae Zelandiae (Berggren)"

ISOTYPE: WELT A1251.

Bay of Islands, *Berggren*, 1874-5.

[H: LD]

Gigartina angulata J.Agardh, 1876: 197.

"ad insul. Chatam et Nov. Zelandiam"

ISOLECTOTYPES: WELT A2041, A2050, A2053, A2054.

Chatham Islands, *H.H.Travers*, 1871.

[LECTOTYPE: LD]

Gigartina clavifera J.Agardh, 1876: 194.

"ad novam Zelandiam"

ISOLECTOTYPE: WELT A1277.

Bluff, *Berggren*, 1874-5.

[LECTOTYPE:LD]

Gigartina grandifida J.Agardh, 1876: 199-200, 684-5.

"Ad Insulas Chatam legit Travers (n:o 7 et n:o 96)", 1871.

SYNTYPES: WELT A2043-A2049.

Gigartina laingii Lindauer, 1947.

"Bay of Islands", *V.W. Lindauer*, 20 Nov 1937.

ISOLECTOTYPES: (ANZE No. 49) WELT A849, A20492.

[LECTOTYPE: AKU]

Gigartina macrocarpa J.Agardh, 1876: 683.

"ad oras Novae Zelandiae, Berggren!", 1874-5.

ISOLECTOTYPE: WELT A1281.

[LECTOTYPE:LD]

Gigartina marginifera J.Agardh, 1876: 196, 683-4.

"ad Novam Zelandiam"

SYNTYPES: WELT A1279, A1280.

Bay of Islands (A1280), Warrington (A1279), *Berggren*, 1874-5.

Gigartina pachymenioides Lindauer, 1949a: 350.

"Stewart Island", *V.W.Lindauer*, 6 Mar 1946.

ISOTYPE: (ANZE No. 321) WELT A1121.

[H: AKU]

Gloiodermatopsis setchellii Lindauer, 1949b: 391.

"Long Beach, Bay of Islands", *V.W.Lindauer*, 15 May 1937.

ISOTYPES: (ANZE No. 121) WELT A921, A20564.

[H: AKU]

Gracilaria pygmaea V.J.Chapm., 1979: 296-7.

Ringdove Bay, Antipodes Island, *A.N.Baker*, 20 Nov 1972.

HOLOTYPE: WELT A7814.

Notes: Nelson (1987).

Gracilaria sordida W.A.Nelson, 1987: 87-98.

Pauatahanui Inlet, near Whitby Road, *W.A.Nelson*, 28 Aug 1984.

HOLOTYPE: WELT A14824a.

ISOTYPES: WELT A14824d-e.

Notes: Bird *et al.* (1986), Bird *et al.* (1990).

Grateloupia prolifera J.Agardh, 1876: 150.

"ad Tasmanicum (Dna Meredith!), ad insulas Chatham (Travers!)"

ISOLECTOTYPES: WELT A2066a-d.
Chatham Islands, *H.H.Travers* (No.19), 1871, as *G. caudata*.
[LECTOTYPE: LD]

Gymnogongrus humilis Lindauer, 1947.
"Ngacre Bay, Northland", *V.W.Lindauer*, 25 Feb 1940.
ISOLECTOTYPE: (ANZE No. 145) WELT A945.
[LECTOTYPE: AKU]

Gymnogongrus nodiferus J.Agardh, 1877: 17.
"Bluff, Lyalls Bay, Bay of Islands: Berggren"
SYNTYPES: WELT A1286, A1287, A1288.
Bay of Islands (A1286), Bluff (A1287), Lyalls Bay (A1288), *Berggren*, 1874-5.

Haraldiophyllum infossum A.Millar, 1994: 126.
"Honey suckle Point, Twofold Bay, New South Wales, Australia, *Millar & Richards*, 19 Oct 1992."
ISOTYPE: WELT A20944.
[H:NSW]

Helminthora lindaueri Desikachary, 1955: 131, fig 1-29.
"Pihama, Taranaki", *V.W.Lindauer*, 30 Jan 1945.
ISOTYPE: (ANZE No. 284 as *Nemalion* sp. nov.?) WELT A1084.
[H: UC]

Kallymenia berggrenii J.Agardh, 1876: 221, 686-7.
"ad Novam Zelandiam (Berggren)"
SYNTYPE: WELT A1516.
Bay of Islands, *Berggren*, 1874-5.

Laurencia thyrifera J.Agardh, 1876: 654.
"in oceano antarctico ad insulas Chatam (Travers)"
ISOLECTOTYPES: WELT A2074a-e,g.
Chatham Islands, *H.H.Travers* (No.4), 1872.
[LECTOTYPE: LD 36976 - Chatham Islands]

Lenormandia allanii Lindauer, 1949b: 392-393.
"The Bluff, Ninety Mile Beach", *V.W.Lindauer*, 21 Jan 1940.

ISOTYPES: (ANZE No. 97) WELT A897, A20540.
[H: AKU]

Lenormandia coronata Lindauer et Setch., 1946: 66-67.
"Bay of Islands", *V.W.Lindauer*, 8 July 1935.
ISOTYPES: (ANZE No. 74) WELT A874, A20517.
[H: UC]

Lomentaria saxigena V.J.Chapm. et Dromgoole, 1970: 142.
"Aurere Bay, Doubtless Bay", *V.W.Lindauer*, 6 Jan 1943.
SYNTYPES: (ANZE No. 194), WELT A994, A20637.

Medeiothamnion norrisii Gordon-Mills, 1977: 79-81, figs 1,3-7.
"Leask's Bay, near Halfmoon Bay, Stewart Island, *R.Norris*, 20 Nov. 1958".
HOLOTYPE: WELT A9195 (= ex WTU 248108).
ISOTYPE: WELT A21957.

Melobesia patena Hook.f. et Harv. in Harv., 1847: 111, tab.XL.
"New Zealand, on Ballia: Rev. Colenso No. 1331"
ISOTYPE: WELT A9595.
Te Unuunu, near Castle Point, East Coast, *W.Colenso* No. 1331.
[H: TCD]
Notes: Townsend (1979).

Nesophila boggardii W.A.Nelson et N.M.Adams, 1993: 2.
Poor Knights Islands, *D.R.Schiel*, 17 May 1988.
HOLOTYPE: WELT A20022e.
ISOTYPE: WELT A20022a.

Nitophyllum berggreniana J.Agardh, 1876: 449.
"ad oras Novae Zelandiae (Berggren!)"
SYNTYPE: WELT A1524.
Tauranga, *Berggren*, 1874-5.

Nitophyllum decumbens J.Agardh var. *fucicola* J.Agardh, 1876: 458-9.
"ad oras Novae Zelandiae Berggren! var. in stipite Fuci

chondrophylli”

ISOLECTOTYPE: WELT A1526.

Banks Peninsula, *Berggren*, 1874-5.

[LECTOTYPE: LD]

Notbocladus lindaueri Skuja, 1944: 20.

“Waitangi Falls, Bay of Islands”, *V.W.Lindauer*, 1 Dec 1937.

SYNTYPE: (ANZE No. 89) WELT A889, A20532.

Notes: Necchi & Entwisle (1990).

Pachymenia crassa Lindauer, 1947.

“Cape Brett, Bay of Islands”, *V.W.Lindauer*, 12 Oct 1938.

SYNTYPES: (ANZE No. 140) WELT A940, A20583.

Pachymenia dichotoma J.Agardh, 1876: 146.

“ad Novam Zelandiam (Berggren!)”

ISOLECTOTYPE: WELT A1271.

Bluff, *Berggren*, 1874-5.

[LECTOTYPE: LD 22468; W.A.Nelson, Nov. 1997]

Pachymenia himantophora J.Agardh, 1876: 680-1.

“ad Novam Zelandiam: Berggren”

ISOLECTOTYPE: WELT A1272.

Bay of Islands, *Berggren*, 1874-5.

[LECTOTYPE: LD 22479; W.A.Nelson, Nov. 1997]

Patulophycus eclipses A.Millar et M.J.Wynne, 1992c: 414.

“north side of Bowen Island, Jervis Bay, New South Wales, Australia, *Millar & Richards*, Feb 1991”

ISOTYPE: WELT A20209.

[H:NSW]

Plocamium microcladioides South et N.M.Adams, 1979: 128-132.

“Jackson’s Bay, South Westland, *R.K. Dell*, July 1969”

HOLOTYPE: WELT A3627.

Polysiphonia pernacola N.M.Adams, 1991: 416-7.

“Orui, Wairarapa East Coast, *N.M.Adams*, 17 Mar 1973”

HOLOTYPE: WELT A8018.

Porphyra adamsiae W.A.Nelson, 1993: 526-527.

“Anchorage Bay, Antopides Islands, *Yaldwyn*, 2 March 1985”

HOLOTYPE: WELT A16435a.

ISOTYPE: WELT A16436a.

Porphyra cameronii W.A.Nelson, 1993: 527-8.

“Mangere Island, Chatham Island, *Foster*, 11 March 1987”

HOLOTYPE: WELT A19438a.

Porphyra kaspar W.A.Nelson et N.M.Adams, 1990: 4-5.

“Farmer Rock, Great Island, Three Kings Islands, *M.Francis*, Dec 1983”

HOLOTYPE: WELT A13913.

Porphyra lilliputiana W.A.Nelson, G.A.Knight et M.W.Hawkes, 1998: 57-58

“Wellington Harbour, seawall at Frank Kitts Park, North Island, New Zealand; Knight & Broom, May 1997”

HOLOTYPE: WELT A21902.

Porphyra perforata J.Agardh, 1883: 69-70.

“in oceano pacifico superiore ad Californiam (Herb. Petrop.! Lyall! Berggren! Mrs Bingham!)”

SYNTYPE: WELT A2843.

Golden Gate, California, USA, *Berggren*.

Pseudogloiophloea berggrenii Levring, 1955: 420-421, fig. 7.

“Bay of Islands”, *Berggren*, Oct.-Dec. 1874.

ISOTYPE: WELT A1257.

[H: “Herb. Farlow” - Setchell (1914)]

Ptilonia willana Lindauer, 1947.

“Stewart Island”, *E.A.Willa*, 16 Oct 1945.

ISOLECTOTYPES: (ANZE No. 218 as *Ptilonia*

magellanica (Mont.) J. Ag. WELT A1018, A20661.
[LECTOTYPE: AKU]

Notes: Bonin & Hawkes (1988b).

Ptilothamnion rupicolum Gordon-Mills, 1977: 81-83, figs 2, 8-13.

"Ringa Ringa, Stewart Island, *E.A. Willa*, 12 June 1960, no. 128"

HOLOTYPE: WELT A9194 (ex WTU).

Rbodomela traversiana J. Agardh, 1877: 28.

"ad insulas Chatam Travers; ad Bluff Berggren"

ISOLECTOTYPES: WELT A2033a-c.

Chatham Islands, *H.H. Travers*, No. 29, 1871.

[LECTOTYPE: LD]

Rbodymenia leptophylla J. Agardh, 1877: 20.

"Chatam Islands: Travers. Tauranga et Bay of Islands: Berggren"

ISOLECTOTYPE: WELT A1511.

Bay of Islands, *Berggren*, 1874-5.

[LECTOTYPE: LD 26961-3; W.A. Nelson, Nov 1997]

Schizymenia novae-zelandiae J. Agardh, 1876: 677-8.

"ad oras Novae Zelandiae, Bay of Islands: Berggren"

ISOLECTOTYPE: WELT A1293.

Bay of Islands, *Berggren*, 1874-5.

[LECTOTYPE: LD 22045; W.A. Nelson, Nov 1997]

Schmitzia evanescens M.W. Hawkes, 1982b: 369-370.

"Waterfall Reef, Leigh Marine Reserve, North I.", *M.W. Hawkes* & *D.R. Bonin*, 26 Oct 1978.

ISOTYPE: WELT A11847.

[H: CHR]

Schmitziella cladophorae V.J. Chapm., 1951: 84.

(no details of type locality or specimen given with description)

ISONEOTYPE: (ANZE No. 202 on *Cladophora*) WELT A1002, A20645.

Stewart Island, 15 Jan 1946.

[NEOTYPE: AKU]

Notes: Woelkerling & Irvine (1982).

Synarthrophyton schielianum Woelk. et M.S. Foster, 1989: 40-4.

Waihere Bay, Pitt Island, Chatham Islands, *M.S. Foster*, 5 Mar 1987.

HOLOTYPE: WELT A17854b.

ISOTYPE: WELT A17854a.

Valeriemaya geminata A. Millar et M.J. Wynne, 1992d: 132-3.

"west side of northern Tollgate Island, Batemans Bay, New South Wales, Australia, 6.vii.1991, *A.J.K. Millar* & *P.G. Richards*"

ISOTYPE: WELT A21973.

W.H. Harvey's Australian Algae

W.H. Harvey collected approximately 10,000 specimens during travels in Australia from 1854 to 1855, with a small number of collections also made in Auckland, New Zealand. Harvey compiled a complete collection of 600 specimens, and duplicates prepared as "sets" were distributed or sold (Womersley 1984). At least 23 herbaria are known to hold duplicates of the Harvey Australian Algae (Parkes & Scannell 1981). Many of the specimens within the Harvey exsiccatae are likely to have isotype status, with the type specimens considered to be those in TCD, particularly material within Harvey's personal "travelling set".

Within the fascicles, the specimens were coded from "A" to "O" with the letters corresponding to a collecting locality, starting with Western Australia at "A" and ending with Auckland, New Zealand, at "O". On the Harvey specimens in WELT, the sheets have a number and code in pencil, usually on a lower corner. Later a printed label, distributed by Harvey to accompany the exsiccatae, was glued on, often over the pencil number and letter, and a locality has been written out in full in ink, or the name and locality are both written in ink. In a number of the examples in WELT, specimens with the letter "A" (the Harvey abbreviation for Rottneest Island and Fremantle, Western Australia) have been incorrectly ascribed to Auckland (abbreviation "O"). In many cases it is obvious that a mistake has been made in labelling as the species

clearly are not part of the New Zealand flora (53 sheets), but in a few cases (4 sheets) the specimens could have been collected in either location.

Within the WELT algal herbarium there are 379 Harvey numbers represented, with a total of 429 specimen sheets. The table below gives the Harvey number; species name at time of distribution following the notation used by Harvey; the location code when distributed; and the WELT registration number. If the location code appears to be incorrect, it is marked with an asterisk; pencil corrections marked on the sheets are given in brackets. The list is presented in facsimile form as prepared by Harvey rather than risking the introduction of inaccuracies by transcribing.

Key to the location codes used by Harvey:

- A - Rottnest Island and Fremantle, Western Australia
- B - King George's Sound
- C - Cape Riche, Western Australia
- D - Port Fairy, Victoria
- E - Port Phillip Heads, Victoria
- F - Brighton Beach, Port Phillip
- G - Geelong, Port Phillip
- H - Western Port, Victoria
- J - Georgetown, Van Dieman's Land
- K - Port Arthur, Van Dieman's Land
- L - Port Jackson, New South Wales
- M - Newcastle, New South Wales
- N - Kiama, New South Wales
- O - Auckland, New Zealand

Melanospermeae

Harvey No.	Name of species when distributed	Location code	WELT No.
1.	CYSTOPHORA polycystidea, <i>Aresch.</i>	D	A90
2.	CYSTOPHORA subfarinata, <i>Mert.</i>	D	A91
10.	CYSTOPHORA playlobium, <i>Mert. (C. Lyalli, Harv. in Fl. N. Zeal. t. 108)</i>	D	A89
14.	CYSTOPHORA botryocystis, <i>Sond.</i>	F	A92
23.	SARGASSUM carpophyllum? <i>J. Ag.</i>	C	A135
25.	SARGASSUM sp.	N	A136
27.	SEIROCOCCLUS axillaris, <i>R. Br.</i>	E	A141
28.	SCYTOTHALIA dorycarpa, <i>Turn.</i>	B	A138
			A139
30.	PHYLLOSPORA comosa, <i>Lab.</i>	H	A133
31.	SCABERIA Agardhii, <i>Grev.</i>	B	A137
32.	CYSTOPHYLLUM muricatum, <i>Turn.</i>	B	A93
33.	FUCODIUM gladiatum, <i>Lab.</i>	K	A111
35.	HORMOSIRA Banksii, <i>Turn.</i>	No	A115
		location	
36.	HORMOSIRA Banksii, <i>var. Sieberi.</i>	No	A115
		location	
37.	HORMOSIRA Banksii, <i>var. Billiardieri.</i>	No	A116
		location	
40.	CARPOGLOSSUM confluens, <i>R. Br.</i>	H	A98
42.	MYRIODESMA latifolium, <i>n. sp.</i>	O* (A?)	A127
43.	MYRIODESMA integrifolium, <i>n. sp.</i>	G	A128
45.	SPLACHNIDIUM rugosum, <i>L.</i>	E	A146
46.	NOTHEIA anomala, <i>Bail. & Harv.</i>	J	A129
48.	BELLOTIA eriophorum, <i>nov. g. & sp.</i>	E	A58
49.	SPOROCHNUS pedunculatus, <i>Huds.</i>	F	A151
50.	SPOROCHNUS comosus, <i>Ag.</i>	B	A148
51.	SPOROCHNUS, <i>Moorei, n. sp.</i>	L	A153
			A147
52.	SPOROCHNUS radiceformis, <i>R. Br.</i>	J	A150
53.	SPOROCHNUS scoparius, <i>n. sp.</i>	C	A149
			A154
55.	CARPOMITRA inermis, <i>R. Br.</i>	H	A99
56.	MACROCYSTIS pyriferia, <i>Turn.</i>	K	A121
59.	ADENOCYSTIS Lessonii, <i>H. & H.</i>	K	A87
60.	CHORDA Lomentaria, <i>Lyngb.</i>	B	A97
61.	ASPEROCOCCLUS Turneri, <i>Hook.</i>	J	A85
62.	ASPEROCOCCLUS sinuosus, <i>Rotb.</i>	J	A86
63.	HYDROCLATHRUS cancellatus, <i>Bory.</i>	C	A117
64.	PUNCTARIA latifolia, <i>Grev.</i>	F	A134
65.	STILOPHORA Lyngbyaei, <i>J. Ag.</i>	O* (A?)	A156
66.	STILOPHORA australis, <i>Harv.</i>	J	A155
67.	DICTYOTA furcellata, <i>Ag.</i>	O* (A)	A103
68.	DICTYOTA ciliata, <i>J. Ag.</i>	O*	A107
69.	DICTYOTA radicans, <i>n. sp.</i>	O* (A)	A108
70.	DICTYOTA dichotoma, <i>Huds.</i>	D	A104
71.	DICTYOTA fastigiata, <i>Sond.</i>	C	A102
72.	DICTYOTA paniculata, <i>Ag.</i>	D	A101
			A105
73.	DICTYOTA Kunthii, <i>Ag.</i>	O* (A)	A106
			- not labelled
		C	<i>kunthii</i>
			A109
75.	METACHROMA thuyoides, <i>n. g.</i>	B	A125
76.	CUTLERIA multifida, <i>Grev.</i>	G	A100
77.	ZONARIA flava? <i>Ag.</i>	O*	A161
78.	ZONARIA variegata? <i>Lx.</i>	B	A162
79.	ZONARIA nigrescens, <i>Sond.</i>	C	A163
80.	ZONARIA interrupta, <i>Lx.</i>	C	A163
81.	ZONARIA microphylla, <i>n. sp.</i>	D	A158
82.	ZONARIA Sinclairii, <i>H. & H.</i>	M	A159
			A157
84.	PADINA Frazeri, <i>Grev.</i>	L	A131
			A130
85.	PADINA Pavonia, <i>L.</i>	M	A130
86.	HALISERIS pardalis, <i>n. sp.</i>	O*	A132
87.	HALISERIS Muelleri, <i>Sond.</i>	O* (A?)	A113
		E	A112
90.	MYRIOCLADIA Sciuirus, <i>n. sp.</i>	D	A114
91.	MESOGLOIA sp.	D	A126
			A122

92.	MESOGLOIA virescens, <i>Carm.</i>	D	A123
93.	MESOGLOIA filum, <i>n. sp.</i>	B	A124
95.	CLADOSIPHON Chordaria, <i>n. sp.</i>	F	A94
97.	CLADOSIPHON Dictyosiphon, <i>n. sp.</i>	D	A95
98.	CLADOSIPHON zostericolus, <i>n. sp.</i>	B	A96
99.	SCYTOTHAMNUS australis, <i>H. & H.</i>	O	A140
100.	LEATHESIA tuberculiformis, <i>Sm.</i>	J	A118

101.	LEATHESIA sp. nov.?	E	A119
102.	LEATHESIA sp. nov.?	E	A120
105.	SPHACELARIA paniculata, <i>Subr.</i>	K	A143
		D	A142
106.	SPHACELARIA cirrhosa, <i>Ag.</i>	A	A144
107.	SPHACELARIA Novae Hollandiae, <i>Sond.</i>	C	A145
108.	ECTOCARPUS siliculosus, <i>Ag.</i>	B	A110

Rhodospiraeae

Harvey No.	Name of species when distributed	Location code	WELT No.
109.	CLAUDEA elegans, <i>Lx.</i>	J	A238
			A239
110.	MARTENSIA elegans, <i>Her.</i>	M	A361
112.	MARTENSIA denticulata, <i>n. sp.</i>	O* (A)	A362
113.	THURETIA quercifolia, <i>Dnc.</i>	B	A474
		C	A475
			A476
114.	THURETIA teres, <i>Harv.</i>	E	A477
115.	HANOWIA australis, <i>Sond.</i>	O*	A323
118.	AMANSIA linearis, <i>Harv.</i>	D	A168
119.	AMANSIA? pinnatifida, <i>n. sp.</i>	B	A169
120.	DICTYMENIA spiralis, <i>Lx.</i>	B	A292
121.	DICTYMENIA Harveyana, <i>Sond.</i> (<i>D. tridens</i> , <i>Harv. non. Turn.</i>)	H	A293

125.	JEANNERETTIA lobata, <i>H. & H.</i> (<i>J. frondosa</i> , <i>Harv. is included.</i>)	H	A341
126.	POLLEXFENIA pedicellata, <i>Harv.</i>	F	A402
		B	A401
127.	LENORMANDIA spectabilis, <i>Sond.</i>	O* (A)	A357
128.	LENORMANDIA Muelleri, <i>Sond.</i>	D	A356
129.	LENORMANDIA marginata, <i>Harv.</i>	J	A355
130.	KUETZINGIA canaliculata, <i>Grev.</i>	B	A342
134.	RYTIPHLEA? Australasica, <i>Mont.</i>	F	A460
136.	RHODOMELA simpliciuscula, <i>n. sp.</i>	F	A446
138.	ALSIDIUM spinulosum, <i>n. sp.</i>	O*	A167
139.	ACANTHOPHORA dendroides, <i>n. sp.</i>	O* (A)	A165
140.	ACANTHOPHORA Tasmanica, <i>Sond.</i>	J	A164
141.	SARCOMENIA delesserioides, <i>Sond.</i>	O*	A465
142.	SARCOMENIA hypnacooides, <i>n. sp.</i>	O* (A)	A463
143.	SARCOMENIA dasyoides, <i>n. sp.</i>	E	A462
			A464
144.	POLYZONIA incisa, <i>J. Ag.</i>	D	A437
145.	POLYZONIA Sonderi, <i>Harv.</i>	O*	A436
150.	POLYPHACUM proliferum, <i>Ag.</i>	B	A403
151.	POLYPHACUM Smithiae, <i>Harv.</i>	E	A404

155.	THAMNOCLONIUM hirsutum, Kg.	J	A473	201.	DASYA hapalathrix, n. sp.	J	A267
156.	CHONDRIA lanceolata, n. sp.	A	A230	202.	DASYA elongata, Sond.	O* (A)	A248
157.	CHONDRIA sedifolia, Harv.	B	A231			B	A263
158.	CHONDRIA dasyphylla, Woodw.	J	A233	203.	DASYA naccarioides, Harv.	F	A268
159.	CHONDRIA corynephora, n. sp.	O* (A)	A232			J	A262
161.	CHONDRIA umbellula, n. sp.	A	A235	205.	DASYA Gunniana, Harv.	F	A269
163.	CHONDRIA opuntioides, Harv.	B	A234			F	A260
	(<i>Chylocladia</i> ? <i>opuntioides</i> , Harv. in <i>West. Austr. Alg.</i> - <i>Catenella major</i> , Sond. - <i>Chylocladia Tasmanica</i> , <i>Harv.!</i> <i>olim.</i>)			206.	DASYA capillaris, Harv.	J	A272
168.	POLYSIPHONIA mollis, Harv.	G	A427	207.	DASYA wrangelioides, n. sp.	B	A273
169.	POLYSIPHONIA Roana, n. sp.	H (A)	A429	208.	DASYA plumigera, Harv.	B	A253
170.	POLYSIPHONIA Blandi, n. sp.	F	A430			B	A255
171.	POLYSIPHONIA forcipata, n. sp.	O* (A)	A431	209.	DASYA tenera, n. sp.	O* (A)	A271
172.	POLYSIPHONIA frutex, Harv.	D	A418			O*	A251
173.	POLYSIPHONIA spinosissima, n. sp.	D	A420	213.	DASYA crassipes, n. sp.	O* (A)	A252
174.	POLYSIPHONIA nigrita, Sond.	O*	A419	214.	DASYA Callithamnion, Sond.	O	A254
175.	POLYSIPHONIA cancellata, Harv.	B	A421	215.	DASYA multiceps, n. sp.	O*	A250
		B	A433	216.	DASYA Lallemandi, Mont.	O* (A)	A249
176.	POLYSIPHONIA fuscens, Harv.	J	A406	218.	DASYA villosa, Harv.	F	A264
179.	POLYSIPHONIA implexa, H. & H.	B	A408			O* (A)	A270
180.	POLYSIPHONIA infestans, n. sp.	B	A407	219.	DASYA frutescens, n. sp.	J	A265
183.	POLYSIPHONIA vagabunda, n. sp.	K	A409	221.	DASYA Feredayae, var. B.	H	A258
184.	POLYSIPHONIA rufolanosa, n. sp.	B	A422	222.	DASYA Haffiae, n. sp.	J	A266
185.	POLYSIPHONIA breviarticulata, Ag.	O*	A424	224.	DASYA bulbochaete, Harv.	J	A257
		(Rottneest Is. WA)		225.	DASYA hormocladus, J. Ag. (including <i>D. cenamioides</i> , Harv.)	J	A256
186.	POLYSIPHONIA scopulorum, n. sp.	O* (A)	A423	226.	LAURENCIA elata, Harv.	O*	A346
187.	POLYSIPHONIA Havanesis? Mont.	O* (A)	A425	227.	LAURENCIA Grevilliana, n. sp.	O*	A350
188.	POLYSIPHONIA Victoriae, n. sp.	F	A410	229.	LAURENCIA Forsteri, Turn.	B	A352
190.	POLYSIPHONIA, n. sp.?	F	A411	230.	LAURENCIA obrusa, Huds.	J	A351
192.	POLYSIPHONIA mutabilis, n. sp.	O*	A412	231.	LAURENCIA cruciata, n. sp.	O* (locality WA)	
		(Fremantle WA)		A353			
194.	POLYSIPHONIA pectinata, n. sp.	B	A413	234.	LAURENCIA heteroclada, n. sp.	C	A344
195.	POLYSIPHONIA pennata, Ag.	B	A415	235.	LAURENCIA heteroclada? var.	B	A345
196.	POLYSIPHONIA rostrata, Sond.	O*	A414	236.	LAURENCIA sp.	O* (A)	A347
198.	POLYSIPHONIA versicolor, Harv.	B	A416	237.	LAURENCIA regia, n. sp. (<i>L. Tasmanica</i> , <i>H. West. Austr., No.131</i>)	B	A348
199.	POLYSIPHONIA cladostephus, Mont.	F	A417	238.	LAURENCIA Tasmanica, Harv.	D	A354
200.	DASYA Cliftoni, n. sp.	J	A405	239.	LAURENCIA botryooides, Turn.	J	A349
		B	A261				

240.	LAURENCIA papillosa, ? var.	D	A343	NITOPHYLLUM multipartitum, H.	J	A384
241.	ASPARAGOPSIS Sanfordiana, n. sp.	O* (Rottnest Is WA)	A181	NITOPHYLLUM Curdeanum, n. sp.	D	A386
242.	ASPARAGOPSIS armata, n. sp.	O	A182	NITOPHYLLUM pristoideum, Harv.	D	A379
	(A. Delilei, Harv. Alg. Tasm.)	K	A183	NITOPHYLLUM cartilagineum, Harv.	O*	A380
245.	CLADHYMENIA conferta, R. Br.	D	A237	NITOPHYLLUM pulchellum, Harv.	O*	A387
	(Dictyonema conferta Ner. Austr.)			NITOPHYLLUM minus, Sond.	O* (A)	A385
246.	DELISIA pulchra, Grev.	N	A285	NITOPHYLLUM ciliatum, n. sp.	O*	A378
247.	DELISIA elegans, Lx	E	A286	NITOPHYLLUM uncinatum, J. Ag.	D	A381
248.	DELISIA hypneoides, n. sp.	H	A287	NITOPHYLLUM uncinatum, J. Ag.	D	A376
249.	LOMENTARIA zostericola, n. sp.	O*	A360	RHODOPHYLLIS blepharicarpa, n. sp.	A	A377
251.	CHAMPIA Tasmanica, Harv.	J	A251	(Calliblepharis Preissiana, Harv. Swan. R., No. 192, non. Sond.)		A447
252.	CHAMPIA obsoleta, H. & H.	D	A226	CALLIBLEPHARIS Preissiana, Sond.	B	A188
253.	CHAMPIA affinis, Harv.	B	A228	(Calliblepharis pennosa, Harv.)		
254.	CHAMPIA parvula, Ag.	B	A227	CURDIEA laciniata, nov. gen.	D	A247
	(Chylocladia parvula, Grev.)			PHACELOCARPUS Labillardieri, Turm.	D	A392
255.	WRANGELIA penicillata, Ag.	O* (A)	A480	PHACELOCARPUS complanatus, Harv.	D	A393
256.	WRANGELIA plumosa, Harv.	J	A481	THYSANOCLODIA coriacea, Sond.	A	A478
257.	WRANGELIA princeps, n. sp.	F	A486	THYSANOCLODIA oppositifolia, Ag.	A	A479
262.	WRANGELIA Halurus, n. sp.	D	A488	DICRANEMA pusillum, n. sp.	B	A289
263.	WRANGELIA protensa, n. sp.	F	A487	DICRANEMA revolutum, J. Ag.	C	A290
264.	WRANGELIA setigera, Harv.	F	A485	DICRANEMA Grevillii, Sond.	B	A291
	(Spyridia Tasmanica, Kütz.)			DICRANEMA filiforme, Sond.	O*	A288
265.	WRANGELIA velutina, H. (Daya velutina, Sond.)	O* (A)	A483	MELANTHALIA intermedia H.	L	A365
268.	WRANGELIA clavigera, n. sp. (an W. nobilis var.?)	E	A484	MELANTHALIA obtusata, (Labill.) J. Ag.	E	A366
269.	WRANGELIA nobilis, Harv.	J	A482	GRACILARIA dactyloides, Sond.	A	A314
271.	DELESSERIA Lyallii, H. & H.	J	A275	GRACILARIA confervooides, Auct	A	A315
272.	DELESSERIA Tasmanica, F. Muell.	J	A276	GRACILARIA sp.	B	A313
275.	DELESSERIA endiviaefolia, H. & H.	H	A277	GRACILARIA sp.	M	A312
281.	DELESSERIA spathulata, Sond.	O* (A)	A281	SARCOCLADIA obesa, nov. gen.	A	A461
282.	DELESSERIA hypoglossoides, n. sp.	L	A284	ACROTYLUS australis, J. Ag. (Cardiea australis, Harv. M.S. in Herb. T.C.D.)	D	A166
283.	DELESSERIA Leprieurii, Mont.	D	A283	HENNEDYA crispa, nov. gen.	A	A325
284.	DELESSERIA frondosa, Harv.	D	A278	PTEROCLADIA lucida, R. Br.	B	A439
	(Hemineura frondosa, Ner. Austr.)	J	A280	GELIDIUM asperum, Ag.	H	A300
286.	NITOPHYLLUM crispum, Kütz.	E	A279	GELIDIUM glandulaefolium, Harv.	J	A301
287.	NITOPHYLLUM Gunnianum, Harv.	J	A383			
289.	NITOPHYLLUM affine, var. lobatum.	J	A389			

437.	HOREA Halymenioides, <i>nov. sp.</i>	A	A328
		B	A327
		H	A329
439.	HOREA speciosa, <i>n. sp.</i>	C	A326
441.	MASTOPHORA Lamourouxii, <i>Dne.</i>	A	A364
442.	MASTOPHORA plana, <i>Sond.</i>	J	A363
445.	CHEILOSPORUM elegans, <i>Harv.</i>	C	A225
447.	JANIA micrarthrodia, <i>Lx.</i>	B	A339
450.	JANIA Cuvieri, <i>Lx.</i>	C	A338
451.	JANIA Cuvieri, <i>var. crispata.</i>	L	A340
453.	AMPHIROA Wardii, <i>Harv.</i>	A	A170
456.	AMPHIROA sp.	M	A175
458.	AMPHIROA ephedra, <i>Lx.</i>	A	A171
459.	AMPHIROA gracilis, <i>n. sp.</i>	C	A172
460.	AMPHIROA granifera, <i>n. sp.</i>	B	A173
461.	AMPHIROA stelligera, <i>Dne.</i>	B	A176
462.	AMPHIROA charoides, <i>Lx.</i>	B	A174
463.	SPYRIDIA filamentosa, <i>Ag.</i>	B	A469
		H	A470
465.	CENTOCERAS clavulatum, <i>Ag.</i>	H	A220
467.	CERAMIUM rubrum, <i>Auct.</i>	F	A221
		J	A224
		H	A223
472.	CERAMIUM gracillimum, <i>Kütz.</i>	H	A222
475.	CERAMIUM puberulum, <i>Sond.</i>	A	A441
	(<i>C. monile</i> , <i>Hook. & Harv.</i>)	A	A442
477.	PTILOTA striata, <i>n. sp.</i>	E	A440
480.	PTILOTA coralloidea, <i>J. Ag.</i>	A	A472
481.	PTILOTA articulata, <i>J. Ag.</i>	H	A274
482.	THAMNOCARPUS Gunnianus, <i>Harv.</i>	B	A244
483.	DASYPHILA Preissii, <i>Sond.</i>	E	A245
485.	CROUANIA attenuata, <i>var. australis</i>	D	A241
486.	CROUANIA vestita, <i>n. sp.</i>	D	A242
487.	CROUANIA? Agardhiana, <i>Harv.</i>	B	A243
	(<i>Wrangelia? Agardhiana</i> <i>H. Sw. R.</i>)	E	A240
488.	CROUANIA insignis, <i>n. sp.</i>	B	A320
489.	HALOPHLEGMA Preissii, <i>Sond.</i>		
		A	A319
		J	A318
		H	A307
		B	A310
		A	A309
		A	A306
		F	A308
		F	A305
		H	A186
		D	A184
		D	A187
		D	A185
501.	BALLIA callitricha, <i>Ag. (B. Brunonis, Harv.)</i>	A	A193
502.	BALLIA scoparia, <i>Harv.</i>	A	A192
	(<i>Callithamnion scoparium</i> , <i>H. & H.</i>)	E	A194
510.	CALLITHAMNION laricinum, <i>n. sp.</i>	D	A198
511.	CALLITHAMNION Brounianum, <i>n. sp.</i>	J	A197
511. bis	CALLITHAMNION Brounianum?	J	A195
	(<i>var. majus</i> , <i>vel. sp. nov. ?</i>)	B	A206
512.	CALLITHAMNION latissimum, <i>Harv.</i>	B	A208
517.	CALLITHAMNION sp.	D	A207
523.	CALLITHAMNION botryocarpum, <i>n. sp.</i>	D	A205
524.	CALLITHAMNION cymosum, <i>n. sp.</i>	A	A204
525.	CALLITHAMNION minimum, <i>n. sp.</i>	B	A190
526.	CALLITHAMNION Muelleri, <i>Sond.</i>	E	A189
527.	CALLITHAMNION multifidum, <i>n. sp.</i>	H	A209
533.	CALLITHAMNION thyrsigerum, <i>Tbw.</i>	A	A202
534.	CALLITHAMNION elongatum, <i>n. sp.</i>	J	A203
536.	CALLITHAMNION lcnophorum, <i>n. sp.</i>	D	A210
537.	CALLITHAMNION flabelligerum, <i>n. sp.</i>	A	A201
538.	CALLITHAMNION comosum, <i>Harv.</i>	A	A200
539.	CALLITHAMNION pulchellum,	A	A199
	<i>Harv. (an C. australe, Ag. ?)</i>	H	A211
540.	CALLITHAMNION spinescens, <i>Kütz.</i>		
542.	CALLITHAMNION horizontale, <i>n. sp.</i>		
543.	CALLITHAMNION simile, <i>H. & H.</i>		
546.	CALLITHAMNION mucronatum, <i>J. Ag.</i>		
	(<i>Spyridia pellucida</i> , <i>Harv. Tasm.</i>)		

Chlorospermeae

Harvey No.	Name of species when distributed	Location code	WELT No.
548.	CAULERPA parvifolia, <i>n. sp.</i>	N	A3565
549.	CAULERPA scalpelliformis, <i>R. Br.</i>	A	A3566
550.	CAULERPA hypnoides, <i>R. Br.</i>	A	A3567
551.	CAULERPA Muell. <i>Sond.</i>	D	A3568
552.	CAULERPA obscura, <i>Sond.</i>	A	A67
554.	CAULERPA, Harveyi, <i>F. Muell. (C. filifolia, Harv. in Herb.)</i>		D
A69			
555.	CAULERPA furcifolia, <i>H. & H.</i>	D	A3569
556.	CAULERPA corynephora, <i>Mont. (an C. cactoides, R. Br.?)</i>		O*
A3572			
559.	CAULERPA sedoides, <i>Lx (C. geminata, Harv., Swan R.)</i>		O* (A)
A3571			
561.	CAULERPA simpliciuscula, <i>R. Br.</i>	E	A3570
563.	DYCTYOSPHAERIA sericea, <i>n. sp.</i>		A68
564.	PENICILLUS arbuscula, <i>Mont.</i>	O*	A80
565.	POLYPHYSA peniculus, <i>R. Br.</i>	B	A390 A82

566.	APIHORNIA lacteivirens, <i>Nov. Gen.</i>	H	A177
568.	MICRODICTYON <i>sp. nov.?</i>	J	A81
569.	BRYOPSIS <i>sp.</i>	A	A60 A64 A59 A61 A63 A62
570.	BRYOPSIS <i>sp.</i>	F	A64
571.	BRYOPSIS <i>sp.</i>	O	A59 A61 A63
572.	BRYOPSIS <i>sp.</i>	A	A62
573.	CODIUM tomentosum, <i>Stack.</i>	B	A76
578.	CODIUM mammosum, <i>n. sp.</i>	O*	A77
579.	CLADOPHORA Bainesii, <i>H. & Muell.</i>	N	A70
580.	CLADOPHORA <i>sp.</i>	A	A71
585.	CLADOPHORA <i>sp.</i>	B	A73
586.	CLADOPHORA <i>sp.</i>	B	A74
587.	CLADOPHORA valonioides, <i>Sond.</i>	A	A72
		B	A75
589.	CONFERRA Darwinii, <i>Kütz.</i>	H	A78
590.	CONFERRA valida, <i>H. & H.</i>	J	A79
592.	RIVULARIA australis, <i>n. sp.</i>	C	A84
593.	RIVULARIA nitida, <i>Ag.</i>	J	A83
595.	CALOTHRIX caespitula? <i>Harv.</i>	D	A65
598.	CALOTHRIX <i>sp.</i>	C	A66
599.	PORPHYRA laciniata, <i>Ag.</i>	J	A438

Thompson/J.G. Baker Collection

Dr James Hector, the first director of the Colonial Museum, recognised the need for the museum to have representative material from other parts of the world, given the rapidly growing number of foreign plants arriving in New Zealand introduced both deliberately and accidentally with immigrants of the late 19th century. Hector approached J.D. Hooker at Kew expressing his interest in purchasing a collection of European herbarium specimens. The arrival of the Thompson/Baker collection was recorded in the Annual Report of the museum in 1877, but for lack of space remained in its three zinc-lined packing cases until the late 1940s.

The collection has been so-named because of the connections of Mr and Mrs Thompson and J.G. Baker, Quaker botanists of Yorkshire. Silvanus Thompson, a school teacher at the Friends' School in York, had an extensive herbarium, in part inherited from John Tatham, a well-known Yorkshire botanist. Tatham's second daughter, also a keen botanist with an extensive herbarium, married Thompson. Their combined herbaria were given to the botanist J.G. Baker (one of Thompson's pupils) when Baker's house and collections were destroyed by fire. Shortly after this, Baker was appointed to a position at Kew and, as he no longer required a personal herbarium, the Thompson/Baker collection was purchased by the New Zealand Colonial Museum after a selection of specimens was first given to the British Museum collections at South Kensington (Whitwell 1893).

There are said to be approximately 28,000 Thompson/Baker specimens in WELT, with collection dates ranging from ca. 1760 to 1860. There are 1,742 algal specimens, collected between 1798 and 1834, including both freshwater and marine taxa. Many of the labels are difficult to decipher as there are a wide range of writing styles and languages.

Within the Thompson/Baker collection there are specimens that have come from the collections of well-known phycologists, presumably distributed as duplicates. We have found specimens which may have type status, and one of these is included in the preceding Type list (*Conferva tetrica*). Other material needs closer study and reference to other collections. How-

ever, in cases where type material has been lost or destroyed, it is clear that there are specimens within the Thompson/Baker herbarium that have both historical and scientific importance.

The list below is indicative of the people and localities associated with the collections:

1. Examples of people associated with the material, either as collectors, donors or identifiers of the specimens:

Albers, Aschoff, Beck, Bertoloni, Binder, Bouchet, Deschamps, Desfontaines, Draparnaud, Dupetit-Thouars, Floerke, Forchhammer, Frölich, Grateloup, Hofman Bang, Hornbeck, Hornemann, Lamouroux, Link, Lyngbye, Mertens, Mohr, Roth, Rohde, Schrader, Suhr, Thunberg, Trentepohl, Turner, Vahl, Viviani, Weber

2. Examples of geographic locations from which the material is drawn, by region as given on the labels:

Adriatic - Mari Adriatico; Atlantic North America - Quebec, Mari Atlantic, Nord Amerika; Baltic Sea - Mari Baltico, Helgoland, Jena, Ostsee, Flensburg; Britain - Brighton, Devonshire, Lerwick, Lancaster, Holnis, Cornwall, Yarmouth, Swansea, Sidmouth, Teignmouth, Ilfracombe, Cromer, Weymouth; Canary Islands - Teneriffe; Denmark - Jutland, Westerhoven, Hofmansgave; Faeroe Islands; France - Marseille, Montpellier, Brest, Cette, Bayonne, Havre, Bretagne, Biarritz, Royan, Toulon; Germany - Bremen, Hamburg; Greenland; Holland - Sylt, Loland; Italy - Venetia, Spezia, Genoa; Iceland; Japan - Matsumaz; Mediterranean - Corse, Sardinia; North Africa - Tangiers, Egypt; Norway; Pacific Ocean - Mari Pacifico, Isles Fortunates Tahiti, Ind. Orientalis; Pacific North America - Nootka Sound, Kamtschatka; Portugal - Oporto; Shetland Islands; Spain - Cadiz, Barcelona, Malaga; South Africa - Cap de bonne esperance; South America - Sinu Mexicano, Kiliae; West Indies - St Croix, St Thomas, Jamaica

The following are some examples from the Thompson/Baker collection:

WELT A4686 - *Ceramium sertularioides* Grateloup; à Cette; Bouchet 1812

WELT A4687 - *Cer. sertularioides* Gratel., *Conf. intricata*
Drap.; Cette; Sept 1801

WELT A4888 - *Conferva aerea* Dillw.; Cromer; d. Mertens
1809

WELT A4887 - *Conferva melagonium* ex Weber & Mohr,
itin

WELT A4903 - *Conferva riparia*; Norderney (East Fri-
sian Islands, Germany)

WELT A5128 - *Valonia aegagropila*; Venetia; Bertoloni-
Nacchari; d. Frölich

WELT A5481 - *Ulva miniata*; Grönlandia; d. Müller
1832

WELT A5475 - *Ulva miniata*; Grönlandia; d. Hornemann
1832

WELT A5525 - *Fucus sluggii* M. *Thamnophora conallorbiza*
Ag.; Cap. de b. esp.; Dupetit-Thouars 1806

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