



Bibliographic Catalogue of the Marine Benthic Algae in the Papahānaumokuākea Marine National Monument (Northwestern Hawaiian Islands)

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Abstract

The algal bibliographic catalogue of the Papahānaumokuākea Marine National Monument (PMNM) is based on previously published records for the 10 northwestern islands, atolls and shoals in the Hawaiian Archipelago, and includes, aligned from northwest to southeast, Kure Atoll (90 species), Midway Atoll (123 species), Pearl & Hermes Atoll (74 species), Lisianski Island including Neva Shoals (52 species), Laysan Island (131 species), Maro Reef (79 species), Gardner Pinnacles (75 species), French Frigate Shoals including La Pérouse Pinnacle (173 species), Necker Island (118 species) and Nihoa Island (33 species). The first section (I. Classification) provides a listing of classes, orders, and families of the 148 genera reported from the PMNM. The second section (II. Species-Reference Index) provides an alphabetized listing of the 335 algal species under the four Phyla, i.e., Cyanobacteria (18 species), Rhodophyta (198 species), Ochrophyta (45 species) and Chlorophyta (74 species) with the applicable reference citations for each island, atoll or shoal. Brief notes are provided, when appropriate, for selected species. The third section (III. Island-Reference Index) provides a chronological listing of all published algal references for each respective island, atoll or shoal. The Reference section contains the complete citation for each reference.

Introduction

The need for an updated bibliographic catalogue of the marine benthic algae for the Papahānaumokuākea Marine National Monument (PMNM) based on current species names associated with each of the 10 northwestern islands, atolls or shoals in the Hawaiian Archipelago seemed warranted with the increase in algal collections over the past decade. The recent algal collections were obtained during the annual Reef Assessment and Monitoring Program (RAMP) cruises to the PMNM by the U.S. National Oceanic and Atmospheric Administration (NOAA) PMNM and by NOAA Pacific Island Fisheries Science Center's Coral Reef Ecosystem Division (PIFSC-CRED) in alternating years. Many algal collections from the PMNM were made which resulted in publications (see Reference section) after the release of the comprehensive Hawaiian algal floras by Abbott (1999) and Abbott & Huisman (2004).

The PMNM algal bibliographic catalogue is patterned after the recently published Central Polynesia algal bibliographic checklist (Tsuda & Walsh 2013) which excluded the Hawaiian Islands and the French Polynesian Islands. The 10 islands, atoll and shoals which are aligned northwest to southeast in the Hawaiian Archipelago encompass an area of 360,000 km² and include Kure Atoll, Midway Atoll, Pearl & Hermes Atoll, Lisianski Island including Neva Shoals, Laysan Island, Maro Reef, Gardner Pinnacles, French Frigate Shoals including La Pérouse Pinnacle, Necker Island and Nihoa Island (Figure 1).

The objectives of this bibliographic catalogue were (1) to provide a listing of marine benthic algae based on past references, thus far, reported from the PMNM utilizing their currently accepted species names, (2) to incorporate all applicable references which reported marine algae from the PMNM in one source, and (3) to identify the specific islands, atolls or shoals where the algae were found. The bibliographic catalogue mainly serves as a convenient tool to access information on what is presently known of marine benthic algae documented from an array of islands, atolls and shoals in the isolated Hawaiian Archipelago in the northern Pacific Ocean. It was not the intent to locate, re-examine and personally verify the identity of the originally cited specimens. Some re-examinations of specimens were conducted in Abbott (1999), Abbott & Huisman (2004) and by the present author when specimens were available in *Herbarium Pacificum* (BISH). A few species names, unless relegated as synonyms or corrected in subsequent publication(s) or here as misapplied names, remain listed as originally cited by the author(s).

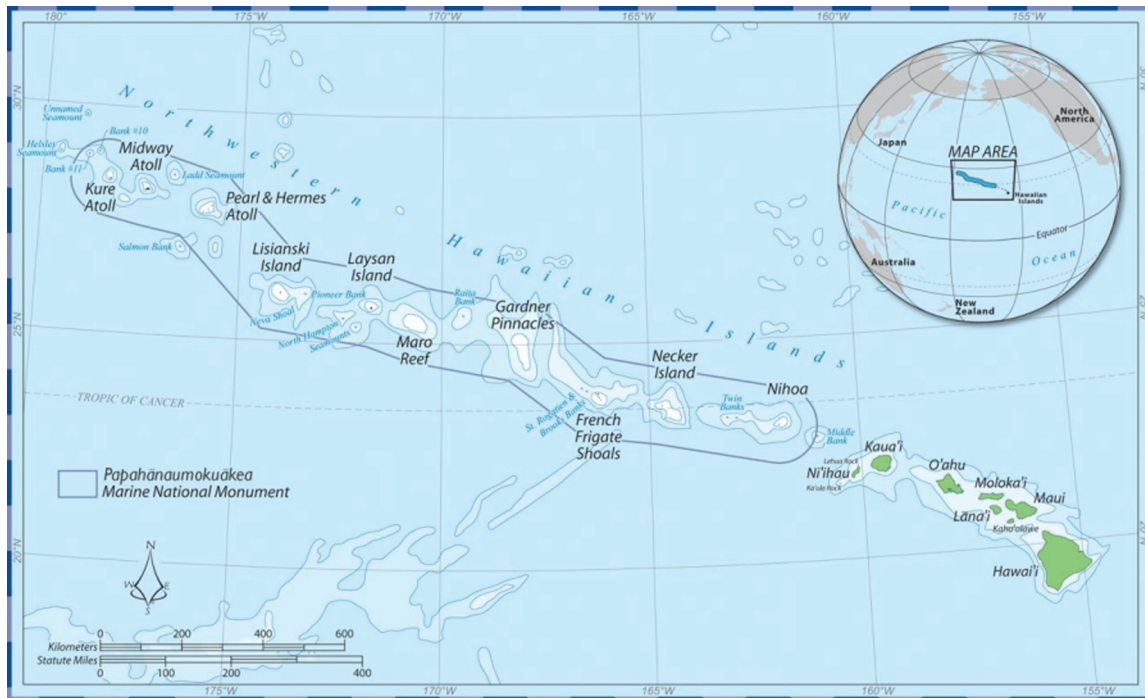


FIGURE 1. Map of the Papahānaumokuākea Marine National Monument (PMNM) within the Hawaiian Archipelago. The 10 islands, atolls and shoals of the PMNM span from Kure Atoll to Nihoa Island. Map provided by NOAA-PMNM Office.

Methods

The bibliographic checklist consists of three sections and the Reference section. The first section (I. Classification) provides a listing of the classes, orders (phylogenetic), families (alphabetized) and genera (alphabetized) of those marine benthic algae reported in published works under the Phyla Cyanobacteria (blue-green algae), Rhodophyta (red algae), Ochrophyta (brown algae) and Chlorophyta (green algae).

The second section (II. Species-Reference Index) provides an alphabetized listing of the current algal species names cited in the published references. Synonyms used by the original authors are enclosed in brackets. Intraspecific taxa and species cited by only their generic names are not cited in this listing. AlgaeBase (Guiry & Guiry 2014) was consulted for current names and classification. Citations of author, with or without initials, follow Brummitt & Powell (1992). Species that were newly described on the basis of specimens from the Northwestern Hawaiian Islands are cited in boldface and the specific island where the collections were made is designated as “Type.” Annotations, if deemed necessary, are included under “Note.” The islands, atolls and shoals are arranged from northwest to southeast. Pearl & Hermes Atoll and French Frigate Shoals are abbreviated in this section as P&H and FFS, respectively. In one case where no specific island was designated (see *Halimeda velasquesii*), the reference was cited under the Northwestern Hawaiian Islands (NWHI).

The third section (III. Island-Reference Index) provides a chronological listing of all published citations under the respective island, atoll or shoal. The complete references of all citations in the text are provided in the Reference section.

Bibliographic Catalogue

I. Classification

Phylum CYANOBACTERIA

Class Cyanophyceae

Order Chroococcales

Family Dermocarpellaceae (*Dermocarpa*), Gomphosphaeriaceae

(*Gomphosphaeria*), Microcystaceae (*Microcystis*), Spirulinaceae (*Spirulina*).
 Order Oscillatoriales
 Family Oscillatoriaceae (*Lyngbya*, *Oscillatoria*), Phormidiaceae
 (*Coleofasciculus*, *Phormidium*), Schizotrichaceae (*Schizothrix*).
 Order Pseudanabaenales
 Family Pseudanabaenaceae (*Leptolyngbya*).
 Order Nostocales
 Family Microchaetaceae (*Microchaete*), Nostocaceae (*Aulosira*), Rivulariaceae (*Calothrix*).

Phylum RHODOPHYTA

Class Bangiophyceae
 Order Bangiales
 Family Bangiaceae (*Bangia*, *Pyropia*).
 Class Stylonematophyceae
 Order Stylonematales
 Family Stylonemataceae (*Stylonema*).
 Class Compsopogonophyceae
 Order Erythropeltidales
 Family Erythrotrichiaceae (*Erythrotrichia*).
 Class Florideophyceae
 Order Acrochaetiales
 Family Acrochaetiaceae (*Acrochaetium*).
 Order Nemaliales
 Family Galaxauraceae (*Galaxaura*, *Tricleocarpa*), Liagoraceae (*Ganonema*, *Izziella*,
Liagora, *Titanophycus*, *Trichogloea*, *Trichogloeopsis*), Scinaiaceae (*Scinaia*).
 Order Bonnemaisoniales
 Family Bonnemaisoniaceae (*Asparagopsis*).
 Order Gelidiales
 Family Gelidiaceae (*Gelidium*), Gelidiellaceae (*Gelidiella*),
 Pterocladaceae (*Pterocladia*).
 Order Corallinales
 Family Corallinaceae (*Amphiroa*, *Hydrolithon*, *Jania*, *Mastophora*, *Neogoniolithon*),
 Hapalidiaceae (*Choreonema*).
 Order Peyssonneliales
 Family Peyssonneliaceae (*Peyssonnelia*).
 Order Gigartinales
 Family Caulacanthaceae (*Caulacanthus*), Cystocloniaceae (*Hypnea*), Dumontiaceae
 (*Dudresnaya*, *Gibsmithia*), Kallymeniaceae (*Kallymenia*), Phylloporaceae (*Ahnfeltiopsis*), Rhizophyllidaceae
 (*Portieria*).
 Order Acrosymphytales
 Family Acrosymphytaceae (*Acrosymphyton*).
 Order Plocamiales
 Family Plocamiaceae (*Plocamium*).
 Order Gracilariales
 Family Gracilariaceae (*Gracilaria*).
 Order Nemastomatales
 Family Nemastomataceae (*Predaea*).
 Order Rhodymeniales
 Family Champiaceae (*Champia*), Faucheaceae (*Gloiocladia*), Lomentariaceae
 (*Ceratodictyon*, *Lomentaria*), Rhodymeniaceae (*Botryocladia*, *Chamaeobotrys*, *Chrysymenia*, *Coelarthrum*,
Drouetia, *Halichrysis*).
 Order Ceramiales
 Family Callithamniaceae (*Aglaothamnion*, *Crouania*, *Ptilocladia*), Ceramiaceae
 (*Antithamnion*, *Antithamnionella*, *Centroceras*, *Ceramium*, *Corallophila*, *Gayliella*), Dasyaceae (*Dasya*,
Heterosiphonia), Delesseriaceae (*Branchioglossum*, *Hypoglossum*, *Martensia*, *Nitophyllum*, *Schizoseris*,
Taenioma, *Vanvoorstia*), Rhodomelaceae (*Amansia*, *Chondria*, *Chondrophycus*, *Ditria*, *Herposiphonia*,
Laurencia, *Lophocladia*, *Lophosiphonia*, *Neosiphonia*, *Palisada*, *Polysiphonia*, *Spirocladia*, *Tolypiocladia*,

Womersleyella), Sarcmeniaceae (*Dotyella*, *Malaconema*), Spyridiaceae (*Spyridia*), Wrangeliaceae (*Anotrichium*, *Diplothamnion*, *Griffithsia*, *Haloplegma*, *Lejolisia*, *Ptilothamnion*, *Tiffaniella*, *Wrangelia*).

Phylum OCROPHYTA

Class Phaeophyceae

Order Ectocarpales

Family Acinetosporaceae (*Feldmannia*, *Hincksia*, *Kuetzingiella*), Chordariaceae (*Nemacystus*), Scytosiphonaceae (*Chnoospora*, *Colpomenia*, *Hydroclathrus*).

Order Scytothamnales

Family Asteronemataceae (*Asteronema*).

Order Sphacelariales

Family Sphacelariaceae (*Sphacelaria*).

Order Dictyotales

Family Dictyotaceae (*Dictyopteris*, *Dictyota*, *Distromium*, *Lobophora*, *Padina*, *Styopodium*).

Order Desmarestiales

Family Desmarestiaceae (*Desmarestia*).

Order Sporochnales

Family Sporochnaceae (*Nereia*, *Sporochmus*).

Order Fucales

Family Sargassaceae (*Sargassum*, *Turbinaria*).

Phylum CHLOROPHYTA

Class Chlorophyceae

Order Palmophyllales

Family Palmophyllaceae (*Palmophyllum*).

Order Chaetophorales

Family Chaetophoraceae (*Uronema*).

Class Ulvophyceae

Order Ulotrichales

Family Gayraliaceae (*Gayralia*), Ulotrichaceae (*Ulothrix*).

Order Ulvales

Family Ulvaceae (*Ulva*), Ulvellaceae (*Ulvella*).

Order Bryopsidales

Family Bryopsidaceae (*Bryopsis*, *Pseudobryopsis*), Caulerpaceae (*Caulerpa*, *Caulerpella*), Codiaceae (*Codium*), Derbesiaceae (*Derbesia*), Halimedaceae (*Halimeda*), Udoteaceae (*Chlorodesmis*, *Rhipidosiphon*).

Order Cladophorales

Family Anadyomenaceae (*Microdictyon*), Boodleaceae (*Boodlea*, *Phyllodictyon*), Cladophoraceae (*Chaetomorpha*, *Cladophora*), Pithophoraceae (*Dictyosphaeria*), Siphonocladaceae (*Siphonocladus*), Valoniaceae (*Valonia*).

Order Dasycladales

Family Dasycladaceae (*Bornetella*, *Neomeris*), Polyphysaceae (*Parvocaulis*).

II. Species-Reference Index

Phylum Cyanobacteria

***Aulosira schauinslandii* Lemmermann**

Laysan: Lemmermann 1905 (Type).

***Calothrix confervicola* C. Agardh ex Bornet & Flahault**

Laysan: Lemmermann 1905.

***Coleofasciculus chthonoplastes* (Gomont) M. Siegesmund, J.R. Johansen & T. Friedl**

[= *Microcoleus chthonoplastes* Gomont]

Laysan: Tsuda 1965 as *Microcoleus chthonoplastes*.

***Dermocarpa laysanensis* (Lemmermann) P.C. Silva [= *Xenococcus laysanensis* Lemmermann]**

Laysan: Lemmermann 1905 as *Xenococcus laysanensis* (Type).

- Gomphosphaeria aponina* Kützing
Laysan: Lemmermann 1905.
- Leptolyngbya perelegans* (Lemmermann) Anagnostidis & Komárek [= *Lyngbya perelegans* Lemmermann]
Laysan: Lemmermann 1905 as *Lyngbya perelegans*.
- Lyngbya aestuarii* Liebman ex Gomont
Laysan: Tsuda 1965. FFS: Tsuda 1966.
- Lyngbya majuscula* Harvey ex Gomont
Kure: Tsuda 1966. Midway: Buggeln 1965. P&H: Tsuda 1966.
- Lyngbya meneghiniana* Gomont
Laysan: Lemmermann 1905.
- Lyngbya semiplena* J. Agardh ex Gomont
Laysan: Lemmermann 1905.
- Microchaete vitiensis* Askenasy ex Bornet & Flahault
Laysan: Reinbold 1899 and Lemmermann 1905.
- Microcystis dimidiata* (Kützing) P.C. Silva [= *Anacystis dimidiata* (Kützing) Drouet & W.A. Daily]
Laysan: Tsuda 1965 as *Anacystis dimidiata*.
- Oscillatoria bonnemaisonii* (P. Crouan & H. Crouan) P. Crouan & H. Crouan ex Gomont
Laysan: Lemmermann 1905.
- Phormidium chalybeum* (Mertens ex Gomont) Anagnostidis & Komárek [= *Oscillatoria chalybea* Mertens]
Necker: Tsuda 1966 as *Oscillatoria chalybea*.
- Phormidium corallinae* (Gomont ex Gomont) Anagnostidis & Komárek [= *Oscillatoria corallinae* Gomont]
Laysan: Lemmermann 1905 as *Oscillatoria corallinae*.
- Phormidium laysanense* Lemmermann**
Laysan: Lemmermann 1905 (Type).
- Schizothrix mascarenica* Gomont
Kure: Tsuda 1966.
- Spirulina subtilissima* Kützing ex Gomont
Laysan: Lemmermann 1905.

Phylum Rhodophyta

- Acrochaetium microscopicum* (Nägeli ex Kützing) Nägeli
Maro: Abbott 1999.
- Acrosymphyton brainardii* Vroom & I.A. Abbott**
FFS: Vroom & Abbott 2004a (Type), Vroom *et al.* 2006.
- Aglaothamnion boergesenii* (Aponte & D.L. Ballantine) L'Hardy-Halos & Rueness
Maro: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Aglaothamnion cordatum* (Børgesen) Feldmann-Mazoyer [= *Callithamnion cordatum* Børgesen]
Midway: Abbott 1989, 1999. Maro: Abbott 1989. Necker: Abbott 1989, 1999. Abbott (1989) as *Callithamnion cordatum*.
- Ahnfeltiopsis concinna* (J. Agardh) P.C. Silva & DeCew
P&H: Page-Albins *et al.* 2012. FFS: Abbott 1999, Vroom *et al.* 2006. Nihoa: Abbott 1999.
- Amansia fimbriifolia* (R.E. Norris) L.E. Phillips [= *Melanamansia fimbriifolia* R.E. Norris]
P&H: Abbott 1999, Page-Albins *et al.* 2012. Maro: Sherwood *et al.* 2011. Necker: Abbott 1999, Sherwood *et al.* 2011. Abbott (1999) and Page-Albins *et al.* (2012) as *Melanamansia fimbriifolia*.
- Amansia glomerata* C. Agardh [= *Melanamansia glomerata* (C. Agardh) R.E. Norris]
Laysan: Reinbold 1899, Tsuda 1965. Maro: Abbott 1989. FFS: Vroom *et al.* 2006, Sherwood *et al.* 2010, Sherwood *et al.* 2011. Necker: Abbott 1989, 1999 as *Melanamansia daemelii* (Sonder) R.E. Norris, Schopmeyer *et al.* 2011, Sherwood *et al.* 2011. Nihoa: Abbott 1989, Sherwood *et al.* 2011.
- Amphiroa beauvoisii* J.V. Lamouroux
Laysan: Abbott 1999. FFS: Vroom *et al.* 2006.
- Amphiroa fragilissima* (Linnaeus) J.V. Lamouroux
Lisianski: Tsuda 1966, Abbott 1989. Laysan: Reinbold 1899 and Lemmermann 1905, Tsuda 1965, Abbott 1989.
- Amphiroa rigida* J.V. Lamouroux
FFS: Vroom *et al.* 2006.

- Amphiroa valonioides* Yendo
Lisianski: Abbott 1999. Laysan: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Anotrichium secundum* (Harvey ex J. Agardh) G. Furnari
Midway: Abbott 1999. FFS: Vroom *et al.* 2006.
- Anotrichium tenue* (C. Agardh) Nägeli [= *Anotrichium celiana* I.A. Abbott & R.E. Norris]
Lisianski: Abbott & Norris 1993, Abbott 1999 (includes Neva Shoals). Maro: Abbott & Norris 1993, Abbott 1999. Gardner: Abbott & Norris 1993, Abbott 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. All Abbott & Norris (1993) as *Anotrichium celiana*.
- Antithamnion antillanum* Børgesen [= *Antithamnion lherminieri* (P. Crouan & H. Crouan) Bornet ex Nasr]
Kure: Walsh *et al.* 2002. Midway: Abbott 1999. Lisianski: Abbott 1999 (Neva Shoals). Gardner: Abbott 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Antithamnion decipiens* (J. Agardh) Athanasiadis [= *Antithamnion ogdeniae* I.A. Abbott]
Maro: Abbott 1999. Gardner: Abbott 1989, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1989, Abbott 1999. Abbott (1989) as *Antithamnion ogdeniae*.
- Antithamnionella brevirostrata* (E.Y. Dawson) E.M. Wollaston
Kure: Walsh *et al.* 2002. Midway: Abbott 1989, 1999. Necker: Abbott 1999. Nihoa: Abbott 1989.
- Antithamnionella graeffei* (Grunow) Athanasiadis
Midway: Abbott 1999. Maro: Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009. Necker: Abbott 1999.
- Asparagopsis taxiformis* (Delile) Trevisan [= *Falkenbergia hillebrandii* (Bornet) Falkenberg, sporophyte]
Kure: Balazs 1979, Abbott 1989 as *A. taxiformis* and *F. hillebrandii*, Abbott 1999, Walsh *et al.* 2002, Sherwood 2008, Sherwood *et al.* 2010. Midway: Buggeln 1965 and Abbott 1989 as *A. taxiformis* and *F. hillebrandii*, Abbott 1999, Sherwood 2008. P&H: Tsuda 1966 and Abbott 1989 as *F. hillebrandii*. Lisianski: Sherwood 2008, Sherwood *et al.* 2010. Laysan: Tsuda 1965 as *A. taxiformis*, Abbott 1989 as *F. hillebrandii*, Abbott 1999, Sherwood 2008. Gardner: Abbott 1989 as *F. hillebrandii*, Vroom & Timmers 2009. FFS: Abbott 1989 as *F. hillebrandii*, Abbott 1999 (includes La Pérouse Pinnacle), Vroom *et al.* 2005, 2006, Sherwood 2008 (La Pérouse Pinnacle), Sherwood *et al.* 2010. Necker: Schopmeyer *et al.* 2011, Sherwood 2008, Sherwood *et al.* 2010. Nihoa: Abbott 1989 as *F. hillebrandii*, Sherwood 2008, Sherwood *et al.* 2010.
- Bangia fuscopurpurea* (Dillwyn) Lyngbye [= *Bangia atropurpurea* (Mertens ex Roth) C. Agardh]
FFS: Tsuda 1966, Abbott 1989, Abbott 1999 (La Pérouse Pinnacle) as *B. atropurpurea*, Vroom *et al.* 2006 as *B. atropurpurea*.
- Botryocladia skottsbergii* (Børgesen) Levring
FFS: Vroom *et al.* 2006.
- Botryocladia tenuissima* W.R. Taylor
Gardner: Abbott 1999, Vroom & Timmers 2009.
- Brachioglossum prostratum* C.W. Schneider
Maro: Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009.
- Caulacanthus ustulatus* (Turner) Kützing
FFS: Abbott 1999, Vroom *et al.* 2006.
- Centroceras clavulatum* (C. Agardh) Montagne
Kure: Tsuda 1966, Abbott 1989. Midway: Buggeln 1965, Abbott 1989. Laysan: Tsuda 1965. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Tsuda 1966. Nihoa: Abbott 1999.
- Centroceras corallophilloides* R.E. Norris
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006.
- Centroceras minutum* Yamada
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Ceramium aduncum* Y. Nakamura
P&H: Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009.
- Ceramium affine* Setchell & N.L. Gardner
Maro: Abbott 1989. Necker: Abbott 1989.
- Ceramium borneense* Weber-van Bosse
Gardner: Abbott 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Ceramium cingulum* Meneses
Laysan: Abbott 1999. Maro: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.

- Ceramium clarionense* Setchell & N.L. Gardner
Kure: Walsh *et al.* 2002. Laysan: Abbott 1999. Maro: Abbott 1999. Gardner: Abbott 1989, 1999, Vroom & Timmers 2009. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Abbott 1989.
- Ceramium codii* (H. Richards) G. Mazoyer [= *Ceramium serpens* Setchell & N.L. Gardner]
Kure: Walsh *et al.* 2002. Midway: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006 as *C. codii* and *C. serpens*. Necker: Abbott 1999. Nihoa: Abbott 1999 as *C. serpens*.
- Ceramium diaphanum* (Lightfoot) Roth [= *Ceramium tenuissimum* (Roth) Areschoug]
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006. All as *Ceramium tenuissimum*.
- Ceramium dumosertum* R.E. Norris & I.A. Abbott
Kure: Walsh *et al.* 2002. Maro: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Ceramium hamatispinum* E.Y. Dawson
Kure: Balazs 1979.
- Ceramium macilentum* J. Agardh [= *Ceramium mazatlanense* E.Y. Dawson]
Lisianski: Tsuda 1966 and Abbott 1999 as *C. mazatlanense*. Laysan: Abbott 1999 as *C. mazatlanense*. FFS: Vroom *et al.* 2006.
- Ceramium vagans* P.C. Silva
P&H: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Ceramium womersleyi* R.E. Norris & I.A. Abbott
Necker: Abbott 1999.
- Ceratodictyon intricatum* (C. Agardh) R.E. Norris [= *Gelidiopsis intricata* (C. Agardh) Vickers]
Kure: Balazs 1979. Midway: Abbott 1999. Necker: Schopmeyer *et al.* 2011. All as *Gelidiopsis intricata*.
- Ceratodictyon variable* (J. Agardh) R.E. Norris [= *Gelidiopsis variabilis* (J. Agardh) Schmitz]
FFS: Vroom *et al.* 2006 as *Gelidiopsis variabilis*.
- Chamaeobotrys boergesenii* (Weber-van Bosse) Huisman [= *Coelarthrum boergesenii* Weber-van Bosse]
Laysan: Tsuda 1965 as *Coelarthrum boergesenii*, Abbott 1999.
- Champia parvula* (C. Agardh) Harvey
Midway: Abbott 1989. Laysan: Tsuda 1965, Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009. Necker: Schopmeyer *et al.* 2011.
- Chondria arcuata* Hollenberg
Kure: Walsh *et al.* 2002. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Chondria dangeardii* E.Y. Dawson
FFS: Vroom *et al.* 2006.
- Chondria minutula* Weber-van Bosse
Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Chondria polyrhiza* Collins & Hervey
Kure: Walsh *et al.* 2002. Midway: Buggeln 1965 as *Chondria repens* Børgesen. Maro: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Nihoa: Abbott 1999.
- Chondria simpliciuscula* Weber-van Bosse
Midway: Abbott 1999. Lisianski: Abbott 1999. Maro: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Chondrophyucus cartilagineus* (Yamada) Garbary & J.T. Harper
FFS: Vroom *et al.* 2006.
- Chondrophyucus dotyi* (Y. Saito) K.W. Nam [= *Laurencia dotyi* Y. Saito]
Lisianski: Abbott 1989 as *Laurencia dotyi*. Laysan: McDermid 1988 as *L. dotyi*, Tsuda 1965 as *Laurencia corymbosa* J. Agardh.
- Choreonema thuretii* (Bornet) F. Schmitz
Gardner: Vroom & Timmers 2009.
- Chrysiomenia glebosa* I.A. Abbott & M. Littler
Maro: Abbott 1999. FFS: Vroom *et al.* 2006.
- Chrysiomenia okamurae* Yamada & Segawa
P&H: Page-Albins *et al.* 2012. FFS: Abbott 1999, Vroom *et al.* 2006.
- Coelarthrum cliftonii* (Harvey) Kylin [= *Coelarthrum albertisii* (Piccone) Børgesen]
Necker: Abbott 1989 as *C. albertisii*.
- Corallophila huysmansii* (Weber-van Bosse) R.E. Norris
Kure: Walsh *et al.* 2002.

- Corallophila kleiwegii* Weber-van Bosse [= *Centroceras apiculatum* Yamada, *Corallophila apiculata* (Yamada) R.E. Norris]
Kure: Walsh *et al.* 2002 as *Corallophila apiculata*. Midway: Abbott 1989 as *Centroceras apiculatum*. P&H: Tsuda 1966 as *Centroceras apiculatum*. Laysan: Abbott 1999 as *Corallophila apiculata*. Gardner: Vroom & Timmers 2009 as *Corallophila apiculata*. FFS: Vroom *et al.* 2006 as *Corallophila apiculata*.
- Crouania attenuata* (C. Agardh) J. Agardh [= *Crouania minutissima* Yamada]
Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. All as *C. minutissima*.
- Crouania mageshimensis* Itono
Midway: Abbott 1989 as *Crouania minutissima* Yamada. P&H: Abbott 1999. Lisianski: Abbott 1999.
Laysan: Abbott 1999. Maro: Abbott 1989 as *C. minutissima*, Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009. Necker: Abbott 1989, 1999.
- Dasya anastomosans* (Weber-van Bosse) M.J. Wynne [= *Dasya pilosa* (Weber-van Bosse) A. Millar]
Kure: Walsh *et al.* 2002 as *Dasya pilosa*.
- Dasya atropurpurea* Vroom**
Kure: Vroom 2005. P&H: Vroom 2005 (Type). Maro: Vroom 2005. Necker: Vroom 2005.
- Dasya baillouviana* (S.G. Gmelin) Montagne [= *Dasya pedicellata* (C. Agardh) C. Agardh]
Midway: Buggeln 1965 as *D. pedicellata*, Schlech & Abbott 1989, Abbott 1989. Maro: Schlech & Abbott 1989, Abbott 1989.
- Dasya corymbifera* J. Agardh
Midway: Buggeln 1965, Schlech & Abbott 1989, Abbott 1989, 1999. Maro: Abbott 1999. FFS: Abbott 1989 (La Pérouse Pinnacle), Vroom *et al.* 2006. Necker: Abbott 1989. Nihoa: Abbott 1989.
- Dasya iridescens* (Schlech) A. Millar & I.A. Abbott [= *Eupogodon iridescens* Schlech]
Kure: Walsh *et al.* 2002. Midway: Schlech & Abbott 1989, Schlech 1990. P&H: Schlech & Abbott 1989, Schlech 1990, Sherwood *et al.* 2010, Page-Albins *et al.* 2012. Lisianski: Sherwood *et al.* 2010. Maro: Sherwood *et al.* 2010. Gardner: Vroom & Timmers 2009. FFS: Schlech & Abbott 1989, Schlech 1990 (includes La Pérouse Pinnacle), Vroom *et al.* 2006, Sherwood *et al.* 2010. Necker: Schlech & Abbott 1989, Schlech 1990, Sherwood *et al.* 2010, Schopmeyer *et al.* 2011.
Note. Schlech (1990) cited NWHI distribution, not specimens, under *Eupogodon iridescens* Schlech sp. nov.
- Dasya kristeniae* I.A. Abbott
P&H: Abbott 1999. Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Dasya villosa* Harvey
Kure: Balazs 1979.
Note. *Dasya villosa* is not recognized as part of the Hawaiian marine flora by Abbott 1999: 319.
- Diplothamnion jolyi* C. Hoek
Kure: Walsh *et al.* 2002.
- Ditria reptans* Hollenberg
Midway: Hollenberg 1967, Abbott 1999. P&H: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1999.
Gardner: Vroom & Timmers 2009.
- Dotyella hawaiiensis* (Doty & Wainwright) Womersley & Shepley
P&H: Abbott 1999. Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1989, 1999. Necker: Abbott 1999.
- Dotyella irregularis* I.A. Abbott
Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1999.
- Drouetia coalescens* (Farlow) G. De Toni [= *Halichrysis coalescens* (Farlow) R.E. Norris & A. Millar]
P&H: Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2006. Both as *Halichrysis coalescens*.
- Dudresnaya babittiana* I.A. Abbott & K.J. McDermid**
Midway: Abbott & McDermid 2001 (Type).
- Dudresnaya hawaiiensis* R.K.S. Lee
Midway: Abbott 1999.
- Erythrotrichia carnea* (Dillwyn) J. Agardh
FFS: Vroom *et al.* 2006.
- Galaxaura rugosa* (J. Ellis & Solander) J.V. Lamouroux
Kure: Walsh *et al.* 2002. Midway: Abbott 1989 as *Galaxaura pacifica* Tak. Tanaka and *G. rugosa*, Abbott 1999. FFS: Abbott 1999. Necker: Schopmeyer *et al.* 2011.

- Ganonema farinosum* (J.V. Lamouroux) K.C. Fan & Yung C. Wang [= *Liagora farinosa* J.V. Lamouroux]
Midway: Abbott 1989, 1999, Huisman *et al.* 2004. Laysan: Tsuda 1965 as *Liagora kahukuana* I.A. Abbott, Tsuda 1966 as *Liagora farinosa*, Abbott 1989, 1999. FFS: Vroom *et al.* 2005, 2006.
- Ganonema papenfussii* (I.A. Abbott) Huisman, I.A. Abbott & A.R. Sherwood [= *Liagora papenfussii* I.A. Abbott]
Midway: Abbott 1989, 1999 as *Liagora papenfussii*, Huisman *et al.* 2004. Gardner: Vroom & Timmers 2009.
- Ganonema pinnatum* (Harvey) Huisman [= *Liagora pinnata* Harvey]
P&H: Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2005, 2006 as *Liagora pinnata*.
- Gayliella fimbriata* (Setchell & N.L. Gardner) T.O. Cho & S.M. Boo [= *Ceramium fimbriatum* Setchell & N.L. Gardner]
Kure: Walsh *et al.* 2002. Midway: Abbott 1989 and 1999. P&H: Abbott 1999. Laysan: Tsuda 1965. Maro: Abbott 1999. Gardner: Abbott 1999 and Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. All as *Ceramium fimbriatum*.
- Gayliella flaccida* (Kützing) T.O. Cho & L. McIvor [= *Ceramium flaccidum* (Harvey ex Kützing) Ardissonne, *Ceramium gracillimum* (Kützing) Zanardini]
Kure: Abbott 1989. Midway: Abbott 1989. Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Tsuda 1966 as *C. gracillimum*, Abbott 1999. Vroom *et al.* 2006. All, except Tsuda (1966), as *Ceramium flaccidum*.
- Gelidiella acerosa* (Forsskål) Feldmann & Hamel
Laysan: Abbott 1999.
- Gelidiella myrioclada* (Børgesen) Feldmann & Hamel
Nihoa: Abbott 1999.
- Gelidium pusillum* (Stackhouse) Le Jolis
Midway: Abbott 1989. P&H: Tsuda 1966, Abbott 1999. Lisianski: Tsuda 1966, Abbott 1999. Laysan: Tsuda 1965, Abbott 1999. Necker: Tsuda 1966, Abbott 1999. Nihoa: Tsuda 1966.
Note: Millar & Freshwater (2005) suggested that this alga is most likely *Gelidium isabelae* W.R. Taylor because *Gelidium pusillum* is not a Pacific species based on molecular evidence.
- Gibsmithia dotyi* Kraft & R.W. Ricker
FFS: Vroom *et al.* 2006.
- Gibsmithia hawaiiensis* Doty
Laysan: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Schopmeyer *et al.* 2011.
- Gloiocladia iyoensis* (Okamura) R.E. Norris
P&H: Abbott 1999. Lisianski: Abbott 1999 (includes Neva Shoals). FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Gracilaria coronopifolia* J. Agardh
Maro: Abbott 1989.
- Gracilaria millardetii* (Montagne) J. Agardh
FFS: Vroom *et al.* 2006.
- Griffithsia heteromorpha* Kützing
Kure: Walsh *et al.* 2002. Laysan: Abbott 1999. FFS: Vroom *et al.* 2006.
- Griffithsia schousboei* Montagne
P&H: Tsuda 1996 as *Griffithsia ovalis* Harvey. Lisianski: Abbott 1999. Laysan: Abbott 1999. Nihoa: Abbott 1999.
- Halichrysis irregularis* (Kützing) A. Millar
Gardner: Vroom & Timmers 2009. Necker: Schopmeyer *et al.* 2011.
- Haloplegma duperreyi* Montagne
Kure: Abbott 1999, Walsh *et al.* 2002. Midway: Abbott 1989, 1999. P&H: Abbott 1999, Page-Albins *et al.* 2012. Lisianski: Abbott 1999. Laysan: Tsuda 1965, Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Herposiphonia delicatula* Hollenberg
Kure: Walsh *et al.* 2002. Midway: Abbott 1989. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1989.
- Herposiphonia dendroidea* Hollenberg
Lisianski: Abbott 1989. Necker: Abbott 1989.
- Herposiphonia dubia* Hollenberg
Necker: Abbott 1989.

- Herposiphonia nuda* Hollenberg
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006. Necker: Abbott 1989, 1999.
- Herposiphonia obscura* Hollenberg
Kure: Walsh *et al.* 2002. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Herposiphonia pacifica* Hollenberg
Kure: Walsh *et al.* 2002. Lisianski: Abbott 1999 (Neva Shoals). Laysan: Hollenberg 1968c. FFS: Hollenberg 1968c, Vroom *et al.* 2006.
- Herposiphonia parca* Setchell
Midway: Abbott 1989. Laysan: Abbott 1989. Maro: Abbott 1989. Gardner: Vroom & Timmers 2009.
- Herposiphonia secunda* (C. Agardh) Ambronn [= *Herposiphonia tenella* f. *secunda* (C. Agardh) Hollenberg]
Lisianski: Abbott 1999 (Neva Shoals). Maro: Abbott 1999. FFS: Hollenberg 1968c as *H. tenella* f. *secunda*, Vroom *et al.* 2006. Necker: Abbott 1999.
- Herposiphonia tenella* (C. Agardh) Ambronn
Midway: Buggeln 1965. Laysan: Abbott 1989.
Note. Although Abbott (1989) lists the Midway specimens (Buggeln 1965) and the Laysan specimens as *H. tenella*, she (Abbott 1999) later considered *H. tenella* a synonym of *Herposiphonia secunda*. Guiry & Guiry (2014), however, lists both *H. secunda* and *H. tenella* as currently recognized species.
- Herposiphonia variabilis* Hollenberg
FFS: Vroom *et al.* 2006.
- Heterosiphonia crispella* (C. Agardh) M.J. Wynne
Kure: Walsh *et al.* 2002. Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1989, 1999. Gardner: Schlech & Abbott 1989, Abbott 1989, 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Schlech & Abbott 1989, Abbott 1989, Abbott 1999.
- Hydrolithon farinosum* (J.V. Lamouroux) Penrose & Y.M. Chamberlain
FFS: Vroom *et al.* 2006.
- Hydrolithon reinboldii* (Weber-van Bosse & Foslie) Foslie
Midway: Buggeln 1965, Abbott 1989.
- Hypnea esperi* Bory
Midway: Abbott 1989. Laysan: Tsuda 1965.
- Hypnea pannosa* J. Agardh
Kure: Walsh *et al.* 2002. Laysan: Tsuda 1965, Abbott 1999. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Tsuda 1966, Abbott 1989.
- Hypnea spinella* (C. Agardh) Kützing [= *Hypnea cervicornis* J. Agardh]
Kure: Walsh *et al.* 2002. Midway: Buggeln 1965, Abbott 1999. Laysan: Tsuda 1965 as *Hypnea cervicornis*, Abbott 1989, 1999 as *H. cervicornis*. FFS: Vroom *et al.* 2006. Necker: Abbott 1989.
- Hypnea valentiae* (Turner) Montagne
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006.
- Hypoglossum barbatum* Okamura
FFS: Vroom *et al.* 2006.
- Hypoglossum caloglossoides* M.J. Wynne & Kraft
Maro: Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009.
- Hypoglossum minimum* Yamada
Laysan: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
Nihoa: Abbott 1999.
- Hypoglossum rhizophorum* D.L. Ballantine & M.J. Wynne
Necker: Abbott 1999.
- Hypoglossum simulans* M.J. Wynne, I.R. Price & D.L. Ballantine
Maro: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Izziella orientalis* (J. Agardh) Huisman & Schils [= *Liagora orientalis* J. Agardh]
P&H: Abbott 1989, 1999 as *Liagora orientalis*.
- Jania adhaerens* J.V. Lamouroux [= *Jania decussatodichotoma* (Yendo) Yendo]
Kure: Walsh *et al.* 2002. P&H: Page-Albins *et al.* 2012. Laysan: Tsuda 1965 misidentified as *Jania mexicana* W.R. Taylor and listed as *J. decussatodichotoma*, Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Tsuda 1966 as *Jania capillacea* Harvey, Abbott 1999.
- Jania micrarthrodia* J.V. Lamouroux
Kure: Walsh *et al.* 2002. Laysan: Tsuda 1965 as *J. micrarthrodia* and *Jania natalensis* Harvey, Abbott 1999.

- Jania pumila* J.V. Lamouroux
 Kure: Tsuda 1966 and Walsh *et al.* 2002 as *Jania capillacea* Harvey, Abbott 1999. Midway: Buggeln 1965 and Abbott 1989 as *J. capillacea*. P&H: Tsuda 1966 as *J. capillacea* and *Jania ungulata* Yendo. Lisianski: Tsuda 1966 as *J. capillacea*. Laysan: Tsuda 1965 as *J. capillacea* and *J. ungulata*, Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Tsuda 1966 as *J. capillacea*. Nihoa: Abbott 1999.
 Note. Johansen (1999) did not recognize *Jania capillacea* and *Jania ungulata* as components of the Hawaiian marine flora. Therefore, both species were considered as misidentifications by the respective authors.
- Jania subulata* (J. Ellis & Solander) Sonder [= *Corallina sandwicensis* Reinbold, *Halitilon subulatum* (J. Ellis & Solander) H.W. Johansen]
 Laysan: Reinbold 1899, Lemmermann 1905 and Tsuda 1965 as *Corallina sandwicensis*, Abbott 1999 as *Halitilon subulatum*.
- Jania verrucosa* J.V. Lamouroux
 Laysan: Abbott 1999. FFS: Vroom *et al.* 2006.
- Kallymenia sessilis* Okamura
 Kure: Abbott 1999, Abbott & McDermid 2002. FFS: Abbott 1999, Abbott & McDermid 2002, Vroom *et al.* 2006. Nihoa: Abbott 1999, Abbott & McDermid 2002.
- Kallymenia thompsonii* I.A. Abbott & K.J. McDermid**
 Midway: Abbott & McDermid 2002 (Type). FFS: Vroom *et al.* 2006.
- Laurencia brachyclados* Pilger
 Midway: Abbott 1999. FFS: Vroom *et al.* 2006.
- Laurencia crustiformans* K.J. McDermid
 P&H: Page-Albins *et al.* 2012.
- Laurencia decumbens* Kützing
 P&H: Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2006.
- Laurencia dendroidea* J. Agardh [= *Laurencia majuscula* (Harvey) A.H.S. Lucas]
 Kure: Tsuda 1966 as *Laurencia obtusa* (Hudson) J.V. Lamouroux. Midway: Saito 1969, Abbott 1989, 1999. P&H: Tsuda 1966 as *L. obtusa*. Lisianski: Abbott 1989, 1999. Laysan: Tsuda 1965 as *L. obtusa* J.V. Lamouroux, Saito 1969, McDermid 1988, Abbott 1989, 1999, Vroom & Braun 2010, Sherwood *et al.* 2010. Maro: Balazs 1979, Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Tsuda 1966 as *L. obtusa*, Vroom *et al.* 2005, 2006, Sherwood *et al.* 2010. Necker: Tsuda 1966 as *L. obtusa*, Abbott 1989, Schopmeyer *et al.* 2011. All others as *Laurencia majuscula*.
- Laurencia galtsoffii* M. Howe
 Kure: Walsh *et al.* 2002, Vroom & Page 2006, Vroom & Braun 2010. Midway: Abbott 1989, 1999, Vroom & Braun 2010. P&H: Howe 1934, McDermid 1988, Abbott 1999, Vroom & Page 2006, Page-Albins *et al.* 2012. Lisianski: Abbott 1989, 1999. Laysan: Saito 1969, Abbott 1989, 1999, Vroom & Page 2006. Maro: Vroom & Page 2006. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Abbott 1989, 1999, Schopmeyer *et al.* 2011. Nihoa: Abbott 1999.
- Laurencia mariannensis* Yamada
 P&H: Tsuda 1966 as *L. obtusa*, Page-Albins *et al.* 2012. Laysan: Saito 1969, Abbott 1999.
- Laurencia nidifica* J. Agardh
 P&H: Page-Albins *et al.* 2012. Lisianski: Abbott 1989. Laysan: Tsuda 1965 as *Laurencia obtusa* (Hudson) J.V. Lamouroux, Abbott 1989. Gardner: Abbott 1989, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Laurencia subsimplex* C.K. Tseng
 Midway: Saito 1969.
- Lejolisea pacifica* Itono
 FFS: Vroom *et al.* 2006.
- Liagora albicans* J.V. Lamouroux [*Liagora kahukuana* I.A. Abbott]
 Laysan: Tsuda 1965 as *Liagora* sp. 2, see Tsuda 1966.
- Liagora ceranoides* J.V. Lamouroux
 Kure: Abbott 1989. Midway: Abbott 1989. P&H: Tsuda 1966, Abbott 1999.
- Liagora hawaiiiana* Butters
 FFS: Abbott 1989 (La Pérouse Pinnacle), Vroom *et al.* 2006.
- Liagora robusta* Yamada
 FFS: Abbott 1989 (La Pérouse Pinnacle), Vroom *et al.* 2006.

- Liagora turneri* Zanardini [= *Liagora coarctata* Zanardini]
Laysan: Reinbold 1899 and Lemmermann 1905 as *Liagora coarctata*.
- Lomentaria hakodatensis* Yendo
Gardner: Abbott 1999, Vroom & Timmers 2009. FFS: Abbott 1999, Vroom *et al.* 2006.
- Lophocladia kuesteri* I.A. Abbott, D.L. Ballantine & O'Doherty
Necker: Abbott *et al.* 2010.
- Lophocladia trichocladus* (C. Agardh) F. Schmitz
Midway: Abbott 1989 as *Lophocladus trichocladus*.
- Lophosiphonia cristata* Falkenberg
Midway: Hollenberg 1968d.
- Lophosiphonia prostrata* (Harvey) Falkenberg
FFS: Vroom *et al.* 2006.
- Malaconema minimum* Hollenberg
Laysan: Abbott 1999.
- Martensia flabelliformis* Harvey ex J. Agardh
FFS: Vroom *et al.* 2006.
- Martensia fragilis* Harvey
Midway: Abbott 1999. Laysan: Abbott 1989, 1999. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Schopmeyer *et al.* 2011.
- Mastophora rosea* (C. Agardh) Setchell
FFS: Vroom *et al.* 2006.
- Neogoniolithon brassica-florida* (Harvey) Setchell & L.R. Mason [= *Goniolithon frutescens* Foslie]
P&H: Tsuda 1966 as *G. frutescens*.
- Neosiphonia apiculata* (Hollenberg) Masuda & Kogame [= *Polysiphonia apiculata* Hollenberg]
P&H: Abbott 1999 as *Polysiphonia apiculata*.
- Neosiphonia beaudettei* (Hollenberg) M.S. Kim & I.A. Abbott [= *Polysiphonia beaudettei* Hollenberg]
Kure: Walsh *et al.* 2002. Midway: Abbott 1999 as *Polysiphonia beaudettei*. Maro: Abbott 1999 as *P. beaudettei*.
- Neosiphonia poko* (Hollenberg) I.A. Abbott
Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Neosiphonia polyphysa* (Kützing) Skelton & South [= *Polysiphonia polyphysa* Kützing, *Polysiphonia pentamera* Hollenberg]
Laysan: Reinbold 1899 and Lemmermann 1905 as *Polysiphonia polyphysa*. FFS: Vroom *et al.* 2006 as *Polysiphonia pentamera*.
- Neosiphonia rubrorhiza* (Hollenberg) M.S. Kim & I.A. Abbott [= *Polysiphonia rubrorhiza* Hollenberg]**
Midway: Hollenberg 1968a (Type) and Abbott 1999 as *Polysiphonia rubrorhiza*. Maro: Abbott 1989 and 1999 as *P. rubrorhiza*. Gardner: Vroom & Timmers 2009. Necker: Abbott 1989 as *P. rubrorhiza*.
- Neosiphonia saccorhiza*. (Collins & Hervey) J.M.C. Nunes & S.M. Guimarães [= *Polysiphonia saccorhiza* (Collins & Hervey) Hollenberg]
Midway: Hollenberg 1968a as *Polysiphonia saccorhiza*. Maro: Abbott 1999 as *P. saccorhiza*. FFS: Vroom *et al.* 2006.
- Neosiphonia savatieri* (Hariot) M.S. Kim & I.K. Lee [= *Polysiphonia savatieri* Hariot]
Midway: Hollenberg 1968a as *Polysiphonia savatieri*. Gardner: Vroom & Timmers 2009. Necker: Abbott 1999.
- Neosiphonia sertularioides* (Grateloup) K.W. Nam & P.J. Kang [= *Polysiphonia flaccidissima* Hollenberg, *Polysiphonia sertularioides* (Grateloup) J. Agardh,]
Maro: Abbott 1999 as *Polysiphonia flaccidissima*. FFS: Vroom *et al.* 2006 as *Polysiphonia sertularioides*.
- Neosiphonia simplex* (Hollenberg) Y.-P. Lee [= *Polysiphonia simplex* Hollenberg]
FFS: Tsuda 1966, Abbott 1989, 1999, Vroom *et al.* 2006. All as *Polysiphonia simplex*.
- Neosiphonia sparsa* (Setchell) I.A. Abbott [= *Polysiphonia sparsa* (Setchell) Hollenberg]
Kure: Walsh *et al.* 2002 as *Polysiphonia sparsa*. Midway: Abbott 1999 as *P. sparsa*.
- Neosiphonia sphaerocarpa* (Børgesen) M.S. Kim & I.K. Lee [= *Polysiphonia sphaerocarpa* Børgesen]
Midway: Abbott 1989 as *Polysiphonia sphaerocarpa*. P&H: Abbott 1999 as *P. sphaerocarpa*. Laysan: Tsuda 1965 and Abbott 1999 as *P. sphaerocarpa*. FFS: Vroom *et al.* 2006. Necker: Abbott 1999 as *P. sphaerocarpa*.

- Neosiphonia upolensis* (Grunow) M.S. Kim & S.M. Boo [= *Polysiphonia upolensis* (Grunow) Hollenberg]
Kure: Hollenberg 1968a, Abbott 1989, Walsh *et al.* 2002. P&H: Hollenberg 1968a. Laysan: Hollenberg 1968a, Abbott 1999. All as *Polysiphonia upolensis*.
- Nitophyllum adhaerens* M.J. Wynne
Laysan: Abbott 1999. Necker: Abbott 1999.
- Palisada parvipapillata* (C.K. Tseng) K.W. Nam [= *Laurencia parvipapillata* C.K. Tseng, *Chondrophyucus parvipapillatus* (C.K. Tseng) Garbary & J.T. Harper]
Kure: Walsh *et al.* 2002 as *Laurencia parvipapillata*. Midway: Buggeln 1965, Saito 1969 and Abbott 1989 as *L. parvipapillata*. P&H: Page-Albins *et al.* 2012 as *Chondrophyucus parvipapillatus*. FFS: Vroom *et al.* 2006 as *C. parvipapillatus*.
- Palisada perforata* (Bory) K.W. Nam [= *Laurencia vaga* Kützing, *Laurencia perforata* (Bory) Montagne]
Laysan: Reinbold 1899 and Lemmermann 1905 as *Laurencia vaga*.
- Palisada surculigera* (C.K. Tseng) K.W. Nam [= *Laurencia surculigera* C.K. Tseng]
Laysan: Saito 1969 as *L. surculigera*.
- Palisada yamadana* (M. Howe) K.W. Nam [= *Chondrophyucus yamadanus* (M. Howe) K.W. Nam]
FFS: Vroom *et al.* 2006 as *Chondrophyucus yamadanus*.
- Peyssonnelia inamoena* Pilger
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006.
- Peyssonnelia rubra* (Greville) J. Agardh
FFS: Vroom *et al.* 2006.
- Plocamium sandvicense* J. Agardh
Midway: Abbott 1989, 1999. Laysan: Abbott 1989, 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1989, Schopmeyer *et al.* 2011.
- Polysiphonia delicatula* Hollenberg
Laysan: Abbott 1999. FFS: Vroom *et al.* 2006. Necker: Abbott 1999.
- Polysiphonia exilis* Harvey**
Midway: Hollenberg 1968b (Type), Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Polysiphonia foetidissima* Cocks ex Bornet [= *Polysiphonia tepida* Hollenberg, *Neosiphonia tepida* (Hollenberg) S.M. Guimarães & M.T. Fujii]
FFS: Vroom *et al.* 2006 as *Neosiphonia tepida*.
- Polysiphonia herpa* Hollenberg
Lisianski: Abbott 1999. Maro: Abbott 1999.
- Polysiphonia pseudovillum* Hollenberg
Gardner: Vroom & Timmers 2009.
- Polysiphonia scopulorum* Harvey [= *Polysiphonia villum* J. Agardh]
Midway: Abbott 1989, 1999. P&H: Tsuda 1966 as *Polysiphonia villum*, Hollenberg 1968a, Abbott 1999. Lisianski: Abbott 1999. FFS: Abbott 1999, Vroom *et al.* 2006. Necker: Balazs 1979. Abbott 1989.
- Polysiphonia tsudana* Hollenberg**
Laysan: Hollenberg 1968b (Type), Abbott 1999. FFS: Vroom *et al.* 2006.
- Polysiphonia tuberosa* Hollenberg
FFS: Vroom *et al.* 2006.
- Portieria hornemannii* (Lyngbye) P.C. Silva [= *Chondrococcus hornemannii* (Mertens) F. Schmitz]
Kure: Walsh *et al.* 2002. Lisianski: Abbott 1989, 1999. Laysan: Tsuda 1965 as *Chondrococcus hornemannii*, Abbott 1989, 1999. Gardner: Vroom & Timmers 2009. Necker: Schopmeyer *et al.* 2011.
- Predaea laciniosa* Kraft
Laysan: Abbott 1999. Gardner: Vroom & Timmers 2009. FFS: Abbott 1999, Vroom *et al.* 2006.
- Predaea weldii* Kraft & I.A. Abbott
Laysan: Abbott 1999. FFS: Vroom *et al.* 2006.
- Pterocladia caloglossoides* (M. Howe) Santelices [= *Pterocladia parva* E.Y. Dawson]
Midway: Abbott 1989. Laysan: Tsuda 1965 as *Pterocladia parva*. FFS: Abbott 1999, Vroom *et al.* 2006.
- Ptilocladia yuenii* I.A. Abbott**
Laysan: Abbott & Norris 1993, Abbott 1999. Necker: Abbott & Norris 1993 (Type), Abbott 1999.
- Ptilothamnion cladophorae* (Yamada & Tak. Tanaka) Feldmann-Mazoyer
FFS: Vroom *et al.* 2006. Nihoa: Abbott 1999.

- Pyropia vietnamensis* (Tak. Tanaka & Pham-Hoàng Ho) J.E. Sutherland & Monotilla [= *Porphyra vietnamensis* Tak. Tanaka & Pham-Hoàng Ho]
FFS: Abbott 1999 (La Pérouse) and Vroom *et al.* 2006 as *Porphyra vietnamensis*.
- Schizoseris bombayensis* (Børgesen) S.-M. Lin
Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Scinaia huismanii* Vroom & I.A. Abbott**
FFS (La Pérouse Pinnacle): Vroom & Abbott 2004b (Type), Vroom *et al.* 2006.
- Spirocladia hodgsoniae* I.A. Abbott
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006.
- Spyridia filamentosa* (Wulfen) Harvey
Kure: Balazs 1979, Abbott 1989, Walsh *et al.* 2002. Midway: Buggeln 1965, Abbott 1989. P&H: Tsuda 1966. Lisianski: Tsuda 1966. Laysan: Abbott 1989. Gardner: Abbott 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Stylonema alsidii* (Zanardini) K.M. Drew
Midway: Abbott 1999. Gardner: Vroom & Timmers 2009.
- Stylonema cornu-cervi* Reinsch
FFS: Vroom *et al.* 2006.
- Taenioma perpusillum* (J. Agardh) J. Agardh
Kure: Walsh *et al.* 2002. Midway: Buggeln 1965, Abbott 1999.
- Tiffaniella saccorhiza* (Setchell & N.L. Gardner) Doty & Meñez [= *Tiffaniella codicola* (Yamada & Tak Tanaka) Doty & Meñez]
Kure: Walsh *et al.* 2002. Midway: Abbott 1999. P&H: Abbott 1999. Maro: Abbott 1989 as *T. codicola* and *T. saccorhiza*, Abbott 1999. Necker: Abbott 1989, 1999.
- Titanophycus setchellii* (Yamada) S.-M. Lin, S.-Y. Yang & Huisman [= *Liagora setchellii* Yamada]
Midway: Abbott 1989 as *Liagora setchellii*.
- Titanophycus validus* (Harvey) Huisman, G.W. Saunders & A.R. Sherwood [= *Liagora valida* Harvey]
Midway: Abbott 1989 and 1999 as *Liagora valida*. Laysan: Reinbold 1899, Lemmermann 1905 and Abbott 1989 as *L. valida*. Gardner: Vroom & Timmers 2009.
- Tolypiocladia glomerulata* (C. Agardh) F. Schmitz
Necker: Schopmeyer *et al.* 2011.
- Trichogloea requienii* (Montagne) Kützing
Midway: Abbott 1989, Abbott & Huisman 2005.
- Trichogloeopsis hawaiiiana* I.A. Abbott & Doty
P&H: Abbott 1989.
- Tricleocarpa cylindrica* (J. Ellis & Solander) Huisman & Borowitzka [= *Galaxaura cylindrica* (Solander) Kjellman]
Midway: Buggeln 1965 as *Galaxaura cylindrica*, Abbott 1999.
- Tricleocarpa fragilis* (Linnaeus) Huisman & R.A. Townsend [= *Galaxaura oblongata* (J. Ellis & Solander) J.V. Lamouroux]
Midway: Abbott 1989 as *Galaxaura oblongata*, 1999.
- Vanvoorstia coccinea* Harvey ex J. Agardh
Kure: Walsh *et al.* 2002. FFS: Vroom *et al.* 2006.
- Vanvoorstia spectabilis* Harvey
P&H: Abbott 1999. FFS: Abbott 1999, Vroom *et al.* 2006.
- Womersleyella pacifica* Hollenberg
Kure: Walsh *et al.* 2002. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Wrangelia dumontii* (E.Y. Dawson) I.A. Abbott
Lisianski: Abbott 1999. Laysan: Abbott 1999. Maro: Abbott 1999. Gardner: Abbott 1999, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Wrangelia elegantissima* R.E. Norris
Midway: Abbott 1999. Necker: Abbott 1989 as *Wrangelia tenuis* Noda, see Abbott 1999: 318.

Phylum Ochrophyta
Class Phaeophyceae

Asteronema breviarticulatum (J. Agardh) L.C. Ouriques & Z.L. Bouzon [= *Ectocarpus breviarticulatus* J. Agardh, *Hincksia breviarticulata* (J. Agardh) P.C. Silva]

- Midway: Abbott 1989 as *Hincksia breviarticulata*. Laysan: Tsuda 1965 as *Ectocarpus breviarticulatus*.
FFS: Abbott & Huisman 2004, Vroom *et al.* 2006. Nihoa: Abbott 1989.
- Chnoospora minima* (Hering) Papenfuss
Midway: Abbott 1989. Laysan: Tsuda 1965. Gardner: Abbott 1989, Vroom & Timmers 2009. FFS: Abbott 1989 (includes La Pérouse Pinnacle), Vroom *et al.* 2006. Necker: Tsuda 1966. Nihoa: Abbott 1989.
- Colpomenia sinuosa* (Mertens ex Roth) Derbès & Solier
P&H: Howe 1934. Maro: Abbott & Huisman 2004.
- Colpomenia tuberculata* D.A. Saunders
Nihoa: Abbott & Huisman 2004.
- Desmarestia ligulata* (Stackhouse) J.V. Lamouroux
Necker: Abbott & Huisman 2003, 2004.
- Dictyopteris australis* (Sonder) Askenasy
Midway: Abbott & Huisman 2004. Maro: Balazs 1979, Abbott & Huisman 2004.
- Dictyopteris plagiogramma* (Montagne) Vickers
Midway: Abbott 1989, Abbott & Huisman 2004. Laysan: Abbott & Huisman 2004. Maro: Abbott & Huisman 2004. Necker: Abbott 1989.
- Dictyopteris repens* (Okamura) Børgesen
Midway: Abbott 1989. Necker: Abbott 1989, Abbott & Huisman 2004.
- Dictyota acutiloba* J. Agardh
Kure: Balazs 1979, Abbott 1989, Walsh *et al.* 2002. Midway: Abbott 1989. Laysan: Reinbold 1899, Abbott 1989. Maro: Balazs 1979, Abbott & Huisman 2004.
- Dictyota bartayresiana* J.V. Lamouroux
Midway: Abbott & Huisman 2004. FFS: Vroom *et al.* 2006.
- Dictyota ceylanica* Kützting
Kure: Walsh *et al.* 2002 as *Dictyota divaricata*, Abbott & Huisman 2004. Midway: Buggeln 1965 as *D. divaricata* J.V. Lamouroux, Abbott & Huisman 2004, Vroom & Braun 2010. Laysan: Tsuda 1965 and Abbott 1989 as *D. divaricata*, Abbott & Huisman 2004. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott & Huisman 2004, Schopmeyer *et al.* 2011.
- Dictyota ciliolata* Sonder ex Kützting
Kure: Abbott & Huisman 2004. Midway: Abbott & Huisman 2004.
- Dictyota friabilis* Setchell
Kure: Walsh *et al.* 2002. P&H: Tsuda 1966, Abbott & Huisman 2004. Laysan: Tsuda 1965, Abbott & Huisman 2004. Necker: Tsuda 1966, Abbott & Huisman 2004.
- Dictyota sandvicensis* Sonder
Midway: Buggeln 1965 as *Dictyota crenulata* J. Agardh. Laysan: Abbott & Huisman 2004. Gardner: Vroom & Timmers 2009.
- Dictyota stolonifera* E.Y. Dawson
Kure: Abbott & Huisman 2003, 2004. Midway: Abbott & Huisman 2003, 2004. P&H: Abbott & Huisman 2003, 2004. Laysan: Abbott & Huisman 2003, 2004. Gardner: Abbott & Huisman 2003, 2004, Vroom & Timmers 2009. FFS: Abbott & Huisman 2003, 2004, Vroom *et al.* 2006. Necker: Abbott & Huisman 2003, 2004.
- Distromium flabellatum* Womersley
Midway: Abbott & Huisman 2003, 2004. Laysan: Abbott & Huisman 2004. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott & Huisman 2003.
- Feldmannia indica* (Sonder) Womersley & A. Bailey [= *Ectocarpus indicus* Sonder, *Hincksia indica* (Sonder) J. Tanaka]
Midway: Buggeln 1965 as *Ectocarpus indicus*. Laysan: Lemmermann 1905 as *Ectocarpus simpliciuscula* var. *vitiensis* Askenasy, Abbott & Huisman 2004 as *Hincksia indica*. Gardner: Vroom & Timmers 2009.
- Feldmannia irregularis* (Kützting) Hamel
Laysan: Abbott & Huisman 2004. FFS: Abbott & Huisman 2004, Vroom *et al.* 2006.
- Feldmannia lebelii* (P. Crouan & H. Crouan) Hamel
Necker: Abbott & Huisman 2003, 2004.
- Feldmannia mitchelliae* (Harvey) H.S. Kim [= *Hincksia mitchelliae* (Harvey) P.C. Silva]
Kure: Walsh *et al.* 2002. Lisianski: Abbott & Huisman 2004. FFS: Abbott & Huisman 2004, Vroom *et al.* 2006. Necker: Abbott 1989, Abbott & Huisman 2004. Nihoa: Abbott & Huisman 2004. All as *Hincksia mitchelliae*.

- Hincksia conifera* (Børgesen) I.A. Abbott
Midway: Abbott 1989.
- Hydroclathrus clathratus* (C. Agardh) M. Howe [= *Hydroclathrus cancellatus* Bory]
Kure: Walsh *et al.* 2002. Midway: Abbott 1989. P&H: Howe 1934. Laysan: Reinbold 1899 and Lemmermann 1905 as *Hydroclathrus cancellatus*, Tsuda 1965, Abbott & Huisman 2004. Maro: Balazs 1979, Abbott & Huisman 2004. FFS: Abbott 1989, Vroom *et al.* 2006, Abbott 1989 (La Perouse).
- Hydroclathrus tumulis* Kraft & I.A. Abbott**
Maro: Abbott & Huisman 2004. Necker: Kraft & Abbott 2003 (Type), Abbott & Huisman 2004.
- Kuetzingiella elachistaeformis* (Heydrich) M.S. Balakrishnan & Kinkar
Necker: Abbott & Huisman 2004
- Lobophora variegata* (J.V. Lamouroux) Womersley ex E.C. Oliveira [= *Pocockiella variegata* (J.V. Lamouroux) Papenfuss]
Kure: Tsuda 1966 as *Pocockiella variegata*, Abbott 1989, Walsh *et al.* 2002, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Midway: Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. P&H: Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010, Page-Albins *et al.* 2012. Lisianski: Tsuda 1966 as *P. variegata*, Vroom & Page 2006. Laysan: Tsuda 1965 as *P. variegata*, Abbott 1989, Abbott & Huisman 2004. Maro: Abbott & Huisman 2004, Vroom & Page 2006. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Abbott 1989 (La Pérouse Pinnacle), Vroom *et al.* 2006, Vroom & Page 2006, Vroom & Braun 2010. Necker: Abbott 1989, Abbott & Huisman 2004, Schopmeyer *et al.* 2011.
- Nemacystus decipiens* (Suringar) Kuckuck
Midway: Abbott 1989, Abbott & Huisman 2004. Maro: Abbott & Huisman 2004. Necker: Abbott 1989.
- Nereia intricata* Yamada
Maro: Abbott & Huisman 2003, 2004
- Padina australis* Hauck
Midway: Abbott & Huisman 2004. Laysan: Abbott & Huisman 2004. Maro: Abbott & Huisman 2004.
Necker: Abbott & Huisman 2004.
- Padina boergesenii* Allender & Kraft
Necker: Abbott 1989.
Note. Abbott & Huisman (2004) did not recognize this 3-cell layered species as a component of the Hawaiian marine flora.
- Padina boryana* Thivy
Midway: Abbott & Huisman 2003, 2004. P&H: Page-Albins *et al.* 2012.
- Padina gymnospora* (Kützing) Sonder [= *Padina crassa* Yamada]
Midway: Abbott 1989. P&H: Abbott & Huisman 2004. Laysan: Tsuda 1965, Abbott 1989, Abbott & Huisman 2004. Maro: Balazs 1979. Necker: Balazs 1979, Abbott 1989.
- Padina melemele* I.A. Abbott & Magruder
Maro: Abbott & Huisman 2004.
- Padina moffittiana* I.A. Abbott & Huisman**
Maro: Abbott & Huisman 2003 (Type), 2004. Necker: Abbott & Huisman 2003, 2004.
- Padina sanctae-crucis* Børgesen [= *Padina japonica* Yamada]
Kure: Walsh *et al.* 2002 as *Padina japonica*. Laysan: Tsuda 1965 as *P. japonica*. FFS: Vroom *et al.* 2006.
Necker: Abbott 1989 (vaughaniella stage), Abbott & Huisman 2004.
- Sargassum aquifolium* (Turner) C. Agardh [= *Sargassum echinocarpum* J. Agardh]
Midway: Abbott 1989. P&H: Tsuda 1966. Laysan: Tsuda 1965. Necker: Tsuda 1966. Nihoa: Tsuda 1966, Abbott 1989. All as *Sargassum echinocarpum*.
- Sargassum obtusifolium* J. Agardh [= *Sargassum hawaiiensis* Doty & Newhouse]
Kure: Balazs 1979 as *Sargassum hawaiiensis*, Abbott 1989, Abbott & Huisman 2004 as *S. hawaiiensis*.
Midway: Abbott 1989. P&H: Howe 1934 as *Sargassum vulgare* var. *linearifolium* J. Agardh, Magruder 1988. Laysan: Tsuda 1965, Magruder 1988, Abbott 1989. Maro: Abbott & Huisman as *S. hawaiiensis*. FFS: Vroom *et al.* 2006. Necker: Magruder 1988, Abbott & Huisman 2004 as *S. hawaiiensis*. Nihoa: Magruder 1988.
Note. Magruder (1988) stated that *Sargassum hawaiiensis* from Kure Atoll reported by Balazs (1979) “is not documented by a specimen.”

- Sargassum piluliferum* (Turner) J. Agardh
P&H: Howe 1934 and Tsuda 1966 as *Sargassum piluliferum* (Turner) J. Agardh.
Note. Magruder (1988) stated that the specimens are fragmentary and lack holdfast, and, therefore, cannot be identified with certainty to species.
- Sargassum polyphyllum* J. Agardh
Kure: Abbott 1989, Abbott & Huisman 2004. Midway: Magruder 1988, Abbott 1989, Abbott & Huisman 2004. Laysan: Reinbold 1899, Lemmermann 1905, Magruder 1988. Maro: Magruder 1988, Abbott 1989, Abbott & Huisman 2004. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Balazs 1979, Magruder 1988, Abbott & Huisman 2004.
- Sphacelaria novaehollandiae* Sonder
Midway: Abbott 1989. Laysan: Abbott & Huisman 2004. FFS: Abbott & Huisman 2004, Vroom *et al.* 2006. Necker: Abbott & Huisman 2004.
- Sphacelaria rigidula* Kützing [= *Sphacelaria furcigera* Kützing]
Midway: Abbott & Huisman 2004. Maro: Abbott 1989. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Sphacelaria tribuloides* Meneghini
Kure: Walsh *et al.* 2002. Midway: Buggeln 1965. P&H: Tsuda 1966. Laysan: Tsuda 1965. FFS: Vroom *et al.* 2006.
- Sporochnus dotyi* Brostoff
P&H: Abbott & Huisman 2004. Maro: Abbott & Huisman 2004. FFS: Brostoff 1984, Vroom *et al.* 2006. Necker: Abbott & Huisman 2004.
- Sporochnus moorei* Harvey
Necker: Abbott & Huisman 2003, 2004.
- Styopodium flabelliforme* Weber-van Bosse [= *Zonaria hawaiiensis* Doty & Newhouse, *Styopodium hawaiiensis* (Doty & Newhouse) I.A. Abbott]
Kure: Tsuda 1966 as *Zonaria* sp., Walsh *et al.* 2002 as *Styopodium hawaiiensis*, Vroom & Page 2006, Vroom & Braun 2010. Midway: Buggeln 1965 as *Zonaria* sp., Abbott 1989 as *S. hawaiiensis*, Vroom & Braun 2010. P&H: Tsuda 1966 as *Zonaria* sp., Vroom & Braun 2010, Page-Albins *et al.* 2012. Laysan: Reinbold 1899 and Lemmermann 1905 as *Styopodium lobatum* (C. Agardh) Kützing, Tsuda 1965 as *Zonaria* sp., Abbott 1989 as *S. hawaiiensis*. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Note. *Styopodium lobatum* (Lemmermann 1905) is now a synonym of *Styopodium zonale* (J.V. Lamouroux) Papenfuss.
- Turbinaria ornata* (Turner) J. Agardh
Kure: Tsuda 1966, Balazs 1979, Abbott 1989, Walsh *et al.* 2002. Midway: Abbott 1989. P&H: Howe 1934, Tsuda 1966, Page-Albins *et al.* 2012. Lisianski: Tsuda 1966, Abbott 1989. Laysan: Reinbold 1899, Lemmermann 1905, Tsuda 1965. Maro: Abbott & Huisman 2004. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Taylor 1964, Tsuda 1966, Abbott 1989, Abbott & Huisman 2004 (La Pérouse Pinnacle), Vroom *et al.* 2006. Necker: Abbott & Huisman 2004, Schopmeyer *et al.* 2011. Nihoa: Abbott 1989.

Phylum Chlorophyta

- Boodlea composita* (Harvey) F. Brand
Kure: Walsh *et al.* 2002, Vroom *et al.* 2009, Vroom & Braun 2010. Midway: Buggeln 1965, Vroom *et al.* 2009. P&H: Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2006. Necker: Abbott 1989. Nihoa: Abbott 1989.
- Boodlea montagnei* (Harvey ex J.E. Gray) Egerod
Necker: Abbott & Huisman 2004.
- Boodlea vanbosseae* Reinbold
Midway: Buggeln 1965.
- Bornetella sphaerica* (Zanardini) Solms-Laubach
Laysan: Tsuda 1965, Abbott & Huisman 2004. Gardner: Vroom & Timmers 2009.
- Bryopsis hypnoides* J.V. Lamouroux
Kure: Abbott 1989, Abbott & Huisman 2004. Midway: Abbott & Huisman 2004. FFS: Vroom *et al.* 2006.
- Bryopsis indica* A. Gepp & E. Gepp
FFS: Vroom *et al.* 2006.

Bryopsis pennata J.V. Lamouroux

Kure: Walsh *et al.* 2002. Lisianski: Tsuda 1966, Abbott 1989, Abbott & Huisman 2004. Laysan: Tsuda 1965 as *Bryopsis pennata* and *Chlorodesmis hildebrandtii* A Gepp & E. Gepp, Abbott & Huisman 2004. FFS: Vroom *et al.* 2006. Necker: Tsuda 1966, Abbott & Huisman 2004. Nihoa: Abbott 1989, Abbott & Huisman 2004.

Note. Re-examination of the Laysan specimen of *Chlorodesmis hildebrandtii* (Tsuda 1965) revealed only the presence of *Bryopsis pennata*.

Caulerpa antoensis Yamada

Gardner: Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom & Timmers 2009. Necker: Hodgson *et al.* 2004, Abbott & Huisman 2004, Schopmeyer *et al.* 2011.

Caulerpa chemnitzia (Esper) J.V. Lamouroux [= *Caulerpa peltata* J.V. Lamouroux]

Kure: Hodgson *et al.* 2004. Midway: Hodgson *et al.* 2004. Laysan: Taylor 1977, Hodgson *et al.* 2004. Necker: Taylor 1977. All identified as *C. peltata*.

Note. Belton *et al.* (2014) reinstated the earlier described *Caulerpa chemnitzia* to accommodate *Caulerpa peltata*, *Caulerpa imbricata* G. Murray and three varieties of *Caulerpa racemosa* which were relegated as synonyms.

Caulerpa cupressoides (H. West in Vahl) C. Agardh

FFS: Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom *et al.* 2006.

Caulerpa elongata Weber-van Bosse

Lisianski: Hodgson *et al.* 2004, Abbott & Huisman 2004.

Caulerpa microphysa (Weber-van Bosse) Feldmann

Midway: Hodgson *et al.* 2004, Abbott & Huisman 2004.

Caulerpa racemosa (Forsskål) J. Agardh

Kure: Abbott 1989, Walsh *et al.* 2002. Midway: Abbott 1989, Hodgson *et al.* 2004. P&H: Abbott 1989, Abbott & Huisman 2004. Lisianski: Abbott & Huisman 2004. Laysan: Reinbold 1899, Lemmermann 1905, Tsuda 1965, Taylor 1977, Hodgson *et al.* 2004. FFS: Hodgson *et al.* 2004 includes La Perouse, Vroom *et al.* 2006. Necker: Tsuda 1966, Taylor 1977, Abbott 1989, Hodgson *et al.* 2004, Schopmeyer *et al.* 2011. Nihoa: Abbott 1989.

Caulerpa serrulata (Forsskål) J. Agardh

Kure: Hodgson *et al.* 2004. Midway: Abbott 1989, Hodgson *et al.* 2004, Abbott & Huisman 2004. P&H: Howe 1934, Hodgson *et al.* 2004, Abbott & Huisman 2004, Page-Albins *et al.* 2012. Laysan: Hodgson *et al.* 2004. Maro: Hodgson *et al.* 2004. FFS: Hodgson *et al.* 2004, Vroom *et al.* 2006. Necker: Abbott 1989.

Caulerpa sertularioides (S.G. Gmelin) M. Howe

Midway: Abbott & Huisman 2004. Laysan: Hodgson *et al.* 2004. Necker: Abbott & Huisman 2004.

Caulerpa taxifolia (H. West in Vahl) C. Agardh

Midway: Abbott 1989. Laysan: Reinbold 1899 and Lemmermann 1905 as *Caulerpa pinnata* (Linnaeus) Weber-van Bosse, Tsuda 1965, Abbott 1989. FFS: Hodgson *et al.* 2004, Vroom *et al.* 2006. Lisianski: Hodgson *et al.* 2004. Maro: Hodgson *et al.* 2004. Necker: Abbott & Huisman 2004, Schopmeyer *et al.* 2011. Nihoa: Tsuda 1966, Abbott 1989, Abbott & Huisman 2004.

Caulerpa webbiana Montagne

Kure: Walsh *et al.* 2002, Hodgson *et al.* 2004. Midway: Abbott 1989. P&H: Abbott & Huisman 2004, Page-Albins *et al.* 2012. Lisianski: Abbott 1989, Abbott & Huisman 2004. Laysan: Tsuda 1965, Taylor 1977, Hodgson *et al.* 2004. Maro: Hodgson *et al.* 2004. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom *et al.* 2006. Necker: Hodgson *et al.* 2004, Abbott & Huisman 2004, Schopmeyer *et al.* 2011.

Caulerpella ambigua (Okamura) Prud'homme & Lokhorst [= *Caulerpa ambigua* Okamura]

Midway: Abbott 1989 as *Caulerpa ambigua*. Laysan: Tsuda 1965 and Taylor 1977 as *Caulerpa ambigua*. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.

Chaetomorpha antennina (Bory) Kützing

Lisianski: Tsuda 1966, Abbott & Huisman 2004. Laysan: Tsuda 1965, Abbott & Huisman 2004. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Abbott 1989, Vroom *et al.* 2006. Necker: Tsuda 1966, Abbott 1989, Abbott & Huisman 2004.

Chaetomorpha capillaris (Kützing) Børgesen

Midway: Abbott & Huisman 2004.

Chlorodesmis caespitosa J. Agardh

FFS: Vroom *et al.* 2006.

- Cladophora dotyana* W.J. Gilbert
Laysan: Abbott & Huisman 2004.
- Cladophora flexuosa* (O.F. Müller) Kützing
Maro: Abbott & Huisman 2004. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. Necker: Abbott & Huisman 2004.
- Cladophora hawaiiiana* Tilden
FFS: Vroom *et al.* 2006.
- Cladophora japonica* Yamada
Maro: Abbott & Huisman 2004. Necker: Abbott & Huisman 2004.
- Cladophora laetevirens* (Dillwyn) Kützing
P&H: Abbott & Huisman 2004. Laysan: Abbott & Huisman 2004.
- Cladophora patentiramea* (Montagne) Kützing [= *Cladophora socialis* Kützing]
Midway: Abbott 1989. Laysan: Abbott & Huisman 2004. Maro: Balazs 1979. Gardner: Abbott & Huisman 2004, Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Nihoa: Abbott 1989, Abbott & Huisman 2004. All as *Cladophora socialis*.
Note. Kraft (2000) chose to designate this complex by its oldest name, *Cladophora patentiramea*, over *Cladophora socialis* and *Cladophora coelothrix* Kützing. Skelton & South (1977) placed *C. socialis* and *C. coelothrix* as synonyms of *C. patentiramea*.
- Cladophora sericea* (Hudson) Kützing
Midway: Abbott & Huisman 2004. Maro: Abbott & Huisman 2004.
- Cladophora vagabunda* (Linnaeus) C. Hoek
Midway: Abbott 1989.
- Codium arabicum* Kützing
Midway: Buggeln 1965. P&H: Howe 1934 as *Codium coronatum* Setchell, Abbott & Huisman 2004, Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2006.
- Codium decorticatum* (Woodward) M. Howe
Maro: Abbott & Huisman 2004. FFS: Abbott & Huisman 2004, Vroom *et al.* 2006.
- Codium edule* P.C. Silva
Kure: Walsh *et al.* 2002. Midway: Buggeln 1965, Abbott & Huisman 2004. Lisianski: Tsuda 1966. FFS: Tsuda 1966, Vroom *et al.* 2006. Necker: Balazs 1979.
- Codium mamillosum* Harvey
Maro: Abbott 1989. Necker: Balazs 1979, Abbott 1989, Abbott & Huisman 2004.
- Codium reediae* P.C. Silva
Kure: Balazs 1979. Midway: Buggeln. 1965.
- Codium saccatum* Okamura
Midway: Gilbert 1965, Abbott & Huisman 2004. Maro: Abbott & Huisman 2004. Necker: Abbott & Huisman 2004.
- Codium spongiosum* Harvey
Maro: Abbott & Huisman 2004.
- Codium subtubulosum* Okamura
P&H: Page-Albins *et al.* 2012. Maro: Abbott & Huisman 2004. Necker: Abbott & Huisman 2004.
- Derbesia fastigiata* W.R. Taylor
FFS: Vroom *et al.* 2006.
- Dictyosphaeria cavernosa* (Forsskål) Børgesen [= *Dictyosphaeria favulosa* Decaisne]
Kure: Tsuda 1966, Abbott 1989, Walsh *et al.* 2002. Midway: Abbott 1989. P&H: Page-Albins *et al.* 2012. Lisianski: Abbott 1989. Laysan: Reinbold 1899 and Lemmermann 1905 as *Dictyosphaeria favulosa*, Tsuda 1965. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006.
- Dictyosphaeria vershuyisii* Weber-van Bosse
Kure: Tsuda 1966, Walsh *et al.* 2002. Midway: Abbott & Huisman 2004. P&H: Tsuda 1966, Page-Albins *et al.* 2012. Lisianski: Tsuda 1966. Laysan: Tsuda 1965, Abbott & Huisman 2004. Gardner: Vroom & Timmers 2009. FFS: Vroom *et al.* 2006. Necker: Abbott 1989. Nihoa: Abbott 1989, Abbott & Huisman 2004.
- Gayralia oxysperma* (Kützing) Vinogradova ex Scagel *et al.*
Nihoa: Abbott & Huisman 2004.
- Halimeda discoidea* Decaisne
Kure: Abbott 1989, Walsh *et al.* 2002. Midway: Buggeln 1965. P&H: Howe 1934 as *Halimeda cuneata* K. Hering, Abbott 1989, Abbott & Huisman 2004, Page-Albins *et al.* 2012. Lisianski: Tsuda 1966, Abbott

1989, Abbott & Huisman 2004. Laysan: Tsuda 1965, Abbott 1989, Abbott & Huisman 2004. Maro: Balazs 1979. FFS: Abbott & Huisman 2004, Vroom *et al.* 2005, 2006. Necker: Balazs 1979. Abbott 1989, Abbott & Huisman 2004.

Halimeda distorta (Yamada) Hillis-Colinvaux

P&H: Abbott & Huisman 2004 as *Halimeda copiosa* Goreau & Graham, Vroom & Braun 2010, Page-Albins *et al.* 2012. Laysan: Tsuda 1965 as *H. copiosa*. Maro: Balazs 1979 as *H. copiosa*. FFS: Vroom *et al.* 2006. Necker: Balazs 1979 and Abbott & Huisman 2004 as *H. copiosa*.

Note. *Halimeda copiosa* is a species restricted to the Atlantic based on molecular evidence (Kooistra & Verbruggen (2005). Previously misidentified specimens of *H. copiosa* in the Pacific are now attributed to the morphologically similar *H. distorta*.

Halimeda gracilis Harvey ex J. Agardh

FFS: Vroom *et al.* 2006.

Halimeda macroloba Decaisne

Midway: Abbott & Huisman 2004.

Halimeda opuntia (Linnaeus) J.V. Lamouroux

Midway: Tsuda 1966. P&H: Howe 1934, Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010, Page-Albins *et al.* 2012. Lisianski: Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Laysan: Reinbold 1899, Lemmermann 1905, Tsuda 1965 as *Halimeda lacunalis* W.R. Taylor and *H. opuntia*, Tsuda 1966, Abbott & Huisman 2004, Vroom & Page 2006. Maro: Vroom & Page 2006. FFS: Vroom *et al.* 2006, Vroom & Page 2006. Necker: Schopmeyer *et al.* 2011.

Halimeda tuna (J. Ellis & Solander) J.V. Lamouroux

Kure: Walsh *et al.* 2002. Necker: Abbott 1989.

Halimeda velasquesii W.R. Taylor

Kure: Vroom & Page 2006. Midway: Buggeln 1965 as *Halimeda incrassata* (J. Ellis) J.V. Lamouroux, Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006. P&H: Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010, Page-Albins *et al.* 2012. Lisianski: Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Laysan: Tsuda 1965 as *Halimeda opuntia*, Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Maro: Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Gardner: Abbott 1989, Vroom & Page 2006, Vroom & Timmers 2009. FFS: Abbott & Huisman 2004, Vroom *et al.* 2005, 2006, Vroom & Page 2006, Vroom & Braun 2010. Necker: Abbott 1989, Abbott & Huisman 2004, Schopmeyer *et al.* 2011. NWHI: Vroom & Smith 2003.

Microdictyon setchellianum M. Howe

Kure: Tsuda 1966, Balazs 1979, Abbott 1989, Walsh *et al.* 2002, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010. Midway: Buggeln 1965, Abbott & Huisman 2004, Vroom & Braun 2010. P&H: Howe 1934, Tsuda 1966, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Braun 2010, Page-Albins *et al.* 2012. Lisianski: Abbott & Huisman 2004, Vroom & Page 2006. Laysan: Reinbold 1899 and Lemmermann 1905 as *Microdictyon umbilicatum*, Tsuda 1965, Abbott 1989, Abbott & Huisman 2004, Vroom & Page 2006. Maro: Balazs 1979, Abbott & Huisman 2004. Gardner: Vroom & Page 2006, Vroom & Timmers 2009. FFS: Tsuda 1966, Abbott 1989, Abbott & Huisman 2004, Vroom *et al.* 2005, 2006, Vroom & Page 2006, Vroom & Braun 2010. Necker: Tsuda 1966, Balazs 1979, Abbott 1989, Abbott & Huisman 2004, Schopmeyer *et al.* 2011.

Microdictyon umbilicatum (Velley) Zanardini [= *Microdictyon japonicum* Setchell]

Kure: Abbott 1989. Midway: Abbott 1989, Abbott & Huisman 2004. P&H: Abbott 1989. Lisianski: Abbott 1989, Abbott & Huisman 2004. Laysan: Abbott 1989. FFS: Vroom *et al.* 2006. Except for Abbott & Huisman (2004) and Vroom *et al.* (2006), all cited as *Microdictyon japonicum*.

Note. Abbott & Huisman (2004) considered *M. japonicum* as a synonym of *M. umbilicatum*, whereas Leliaert *et al.* (2007) recognized *Microdictyon japonicum* as an accepted species. Further studies must be done on Hawaiian species to conclude which of the species are present in Hawaii's waters.

Neomeris annulata Dickie

Kure: Walsh *et al.* 2002. Lisianski: Abbott 1989, Abbott & Huisman 2004. Nihoa: Abbott 1989.

Neomeris vanbosseae M. Howe

P&H: Page-Albins *et al.* 2012. FFS: Vroom *et al.* 2006.

Palmophyllum crassum (Naccari) Rabenhorst

P&H: Abbott & Huisman 2004, Page-Albins *et al.* 2012. Maro: Abbott & Huisman 2004. FFS: Abbott & Huisman 2004, Vroom *et al.* 2006. Necker: Abbott & Huisman 2004.

- Parvocaulis clavatus* (Yamada) S. Berger, U. Fettweiss, S. Gleissberg, L.B. Liddle, U. Richter, H. Sawitsky & G.C. Zuccarello [= *Acetabularia clavata* Yamada]
Kure: Walsh *et al.* 2002 as *Acetabularia clavata*.
- Parvocaulis parvulus* (Solms-Laubach) S. Berger, U. Fettweiss, S. Gleissberg, L.B. Liddle, U. Richter, H. Sawitsky & G.C. Zuccarello. [= *Acetabularia mobii* Solms-Laubach, *Acetabularia parvula* Solms-Laubach]
Kure: Walsh *et al.* 2002. P&H: Abbott & Huisman 2004. Lisianski: Abbott & Huisman 2004. Laysan: Tsuda 1965 as *Acetabularia mobii*. All others as *Acetabularia parvula*.
- Phyllocladon anastomosans* (Harvey) Kraft & M.J. Wynne [= *Struvea anastomosans* (Harvey) Piccone & Grunow ex Piccone]
Midway: Buggeln 1965 as *Struvea anastomosans*, Abbott & Huisman 2004. FFS: Vroom *et al.* 2006.
- Pseudobryopsis oahuensis* Egerod
FFS: Abbott & Huisman 2004, Vroom *et al.* 2006.
- Rhipidosiphon javensis* Montagne [= *Udotea javensis* (Montagne) A. Gepp & E. Gepp]
Midway: Buggeln 1965 as *U. javensis*. FFS: Vroom *et al.* 2006.
- Siphonocladus tropicus* (P. Crouan & H. Crouan in Schramm & Mazé) J. Agardh
Necker: Abbott & Huisman 2004. Nihoa: Abbott & Huisman 2004.
- Ulothrix subflaccida* Wille
FFS: Vroom *et al.* 2006.
- Ulva clathrata* (Roth) C. Agardh [= *Enteromorpha clathrata* (Roth) Greville]
Laysan: Abbott & Huisman 2004 as *E. clathrata*. FFS: Abbott & Huisman 2004 as *E. clathrata*, Vroom *et al.* 2006. Necker: Abbott & Huisman 2004 as *E. clathrata*.
- Ulva expansa* (Setchell) Setchell & N.L. Gardner
Maro: Abbott & Huisman 2004.
- Ulva flexuosa* Wulfen [= *Enteromorpha flexuosa* (Wulfen) J. Agardh, *Enteromorpha tubulosa* Kützing]
Midway: Abbott 1989 as *E. tubulosa*, Abbott & Huisman 2004 as *E. flexuosa*. P&H: Tsuda 1966 as *E. tubulosa*, Abbott & Huisman 2004 as *E. flexuosa*. Lisianski: Tsuda 1966 as *Enteromorpha* sp. 1. Laysan: Tsuda 1965 as *E. tubulosa*, Abbott & Huisman 2004 as *E. flexuosa*. FFS: Abbott & Huisman 2004 as *E. flexuosa*, Vroom *et al.* 2006. Necker: Abbott & Huisman 2004 as *E. flexuosa*. Nihoa: Abbott & Huisman 2004 as *E. flexuosa*.
- Ulva flexuosa* subsp. *paradoxa* (C. Agardh) M.J. Wynne [= *Ulva paradoxa* C. Agardh, *Enteromorpha paradoxa* (C. Agardh) Kützing]
P&H: Abbott & Huisman 2004 as *E. paradoxa*. FFS: Abbott & Huisman 2004 as *E. paradoxa*, Vroom *et al.* 2006 as *Ulva paradoxa*.
- Ulva intestinalis* Linnaeus [= *Enteromorpha intestinalis* (Linnaeus) Link]
Lisianski: Abbott & Huisman 2004 as *Enteromorpha intestinalis*. Laysan: Abbott 1989 and Abbott & Huisman 2004 as *E. intestinalis*.
- Ulva lactuca* Linnaeus
Kure: Abbott 1989. Laysan: Tsuda 1965. Necker: Tsuda 1966. All as *Ulva fasciata* Delile.
Note. O’Kelly *et al.* (2010) conducted molecular assessments of the *Ulva* species in Hawaiian waters and substantiated *Ulva lactuca*, formerly misidentified as *U. fasciata*, as the only species name of 12 names used now for Hawaiian species.
- Ulva prolifera* O.F. Müller [= *Enteromorpha prolifera* (O.F. Müller) J. Agardh]
FFS: Abbott & Huisman 2004 as *E. prolifera*, Vroom *et al.* 2006.
- Ulva reticulata* Forsskål
Midway: Abbott & Huisman 2004.
- Ulva rigida* C. Agardh
Laysan: Reinbold 1899, Lemmermann 1905.
- Ulvella lens* P. Crouan & H. Crouan
FFS: Vroom *et al.* 2006.
- Ulvella scutata* (Reinke) R. Nielsen, C.J. O’Kelly & B. Wysor [= *Pringsheimiella scutata* (Reinke) Marchewianka]
Laysan: Tsuda 1965 as *Pringsheimiella* “*acutata*.”
- Ulvella viridis* (Reinke) R. Nielsen, C.J. O’Kelly & B. Wysor [= *Entocladia viridis* Reinke]
FFS: Vroom *et al.* 2006 as *Entocladia viridis*.
- Uronema marinum* Womersley
FFS: Vroom *et al.* 2006. Necker: Abbott & Huisman 2004.

Valonia aegagropila C. Agardh

Midway: Abbott 1989.

Valonia ventricosa J. Agardh [= *Ventricaria ventricosa* (J. Agardh) Olsen & J.A. West]

Kure: Walsh *et al.* 2002 as *Ventricaria ventricosa*. P&H: Abbott 1989. Necker: Schopmeyer *et al.* 2011.

Excluded Species

Ceramium subverticillatum (Grunow) Weber-ban Bosse [= *Ceramium kuetzingianum* Grunow]

Laysan: Reinbold 1899 and Lemmermann 1905 as *C. kuetzingianum* Grunow.

Note. Abbott (1999) did not recognize this species as a component of the Hawaii marine flora.

Chlorodesmis hildebrandtii A. Gepp & E. Gepp

Lisianski: Tsuda 1966. Laysan: Tsuda 1965.

Note. The Lisianski specimen (Tsuda 1966) was re-examined, however, no algal siphon representing *Chlorodesmis* was observed on the 1 cm diameter piece of limestone substratum. The Laysan collection (Tsuda 1965) consisted only of *Bryopsis pennata*. This finding adds support to Ducker (1967) that *Chlorodesmis hildebrandtii* does not occur in the Pacific.

Laurencia obtusa (Hudson) J.V. Lamouroux

Kure: Walsh *et al.* 2002. Midway: Buggeln 1965. Laysan: Reinbold 1899, Lemmermann 1905, Tsuda 1965. Gardner: Abbott 1989, Vroom & Timmers 2009.

Note. McDermid (1988) and Abbott (1999: 395) did not recognize *Laurencia obtusa* as part of the Hawaiian marine flora. Likewise, *Laurencia corymbosa* J. Agardh and *Laurencia pygmaea* Weber-van Bosse credited to Laysan (Tsuda 1965) were not considered as components of the Hawaiian marine flora.

III. Island-Reference Index.

Kure Atoll: Tsuda 1966, Hollenberg 1968a, Balazs 1979, McDermid 1988, Abbott 1989, Abbott 1999, Walsh *et al.* 2002, Abbott & McDermid 2002, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom 2005, Vroom & Page 2006, Sherwood 2008, Vroom *et al.* 2009, Vroom & Braun 2010, Sherwood *et al.* 2010.

Midway Atoll: Buggeln 1965, Gilbert 1965, Hollenberg 1967, Hollenberg 1968a, Hollenberg 1968b, Hollenberg 1968d, Saito 1969, Magruder 1988, Schlech & Abbott 1989, Abbott 1989, Schlech 1990, Abbott 1999, Abbott & McDermid 2001, Abbott & McDermid 2002, Abbott and Huisman 2003, Huisman *et al.* 2004, Hodgson *et al.* 2004, Abbott & Huisman 2004, Abbott & Huisman 2005, Vroom & Page 2006, Sherwood 2008, Vroom *et al.* 2009, Vroom & Braun 2010.

Pearl & Hermes Atoll: Howe 1934, Tsuda 1966, Hollenberg 1968a, Magruder 1988, McDermid 1988, Schlech & Abbott 1989, Abbott 1989, Schlech 1990, Abbott 1999, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom 2005, Vroom & Page 2006, Vroom & Braun 2010, Sherwood *et al.* 2010, Page-Albins *et al.* 2012.

Lisianski Island including Neva Shoals: Tsuda 1966, Abbott 1989, Abbott & Norris 1993 (includes Neva Shoals), Abbott 1999, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom & Page 2006, Sherwood 2008, Vroom & Braun 2010, Sherwood *et al.* 2010.

Laysan Island: Reinbold 1899, Schauinsland 1899 (algal list taken from Reinbold 1899), Lemmermann 1905, Tsuda 1965, Hollenberg 1968b, 1968c, Saito 1969, Taylor 1977, Magruder 1988, McDermid 1988, Abbott 1989, Abbott & Norris 1993, Abbott 1999, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom & Page 2006, Sherwood 2008, Vroom & Braun 2010, Sherwood *et al.* 2010.

Maro Reef: Balazs 1979, Magruder 1988, Schlech & Abbott 1989, Abbott 1989, Abbott & Norris 1993, Abbott 1999, Kraft & Abbott 2003, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom 2005, Vroom & Page 2006, Vroom & Braun 2010, Sherwood *et al.* 2010, Sherwood *et al.* 2011.

Gardner Pinnacles: Schlech & Abbott 1989, Abbott 1989, Schlech 1990, Abbott & Norris 1993, Abbott 1999, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom & Page 2006, Vroom & Timmers 2009.

French Frigate Shoals including La Pérouse Pinnacle: Taylor 1964, Tsuda 1966, Hollenberg 1968c, Brostoff 1984, McDermid 1988, Schlech & Abbott 1989 and Abbott 1989 (includes La Perouse Pinnacle), Schlech 1990, Abbott 1999, Abbott & McDermid 2002, Abbott & Huisman 2003, Vroom & Abbott 2004a, 2004b, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom *et al.* 2005, Vroom *et al.* 2006, Vroom & Page 2006,

Sherwood 2008, Vroom & Braun 2010, Sherwood *et al.* 2010, Sherwood *et al.* 2011.

Necker Island: Tsuda 1966, Taylor 1977, Balazs 1979, Magruder 1988, McDermid 1988, Schlech & Abbott 1989, Abbott 1989, Schlech 1990, Abbott & Norris 1993, Abbott 1999, Kraft & Abbott 2003, Abbott & Huisman 2003, Hodgson *et al.* 2004, Abbott & Huisman 2004, Vroom 2005, Sherwood 2008, Abbott *et al.* 2010, Sherwood *et al.* 2010, Schopmeyer *et al.* 2011, Sherwood *et al.* 2011.

Nihoa Island: Tsuda 1966, Magruder 1988, Abbott 1989, Abbott 1999, Abbott & McDermid 2002, Abbott & Huisman 2004, Sherwood 2008, Sherwood *et al.* 2010, Sherwood *et al.* 2011.

Discussion

This bibliographic catalogue of marine benthic algae consists of 335 species in 148 genera and includes blue-green algae (13 genera, 18 species), red algae (89 genera, 198 species), brown algae (20 genera, 45 species) and green algae (26 genera, 74 species). Fourteen species, i.e., 3 blue-green algae, 9 red algae and 2 brown algae, which were collected within the PMNM, were described as new species (Types) and remain as currently recognized species.

Table 1 presents the number of species, thus far, recorded from each of the 10 islands, atolls or shoals in the PMNM. The highest number of algal species were reported from French Frigate Shoals (173 species), Laysan Island (131 species) and Midway Atoll (123 species), and the lowest numbers were reported from the southeasternmost island of Nihoa (33 species) and Lisianski Island (52 species). It is not practical at this time to compare the algae flora from the different islands, atolls or shoals because additional collections still await examination. The present listing will, however, simplify the reporting of new islands records.

TABLE 1. Number of algal species reported from each island, atoll or shoal, and total number of algal genera and species in the Papahānaumokuākea Marine National Monument.

NWHI	Cyanobacteria	Rhodophyta	Ochrophyta	Chlorophyta	Total
Kure Atoll	2	53	14	21	90
Midway Atoll	1	63	28	31	123
Pearl & Hermes Atoll	1	40	13	20	74
Lisianski Island (includes Neva Shoals)	0	31	3	18	52
Laysan Island	15	66	23	27	131
Maro Reef	0	42	18	19	79
Gardner Pinnacles	0	53	11	11	75
French Frigate Shoals (includes La Pérouse Pinnacle)	1	114	19	39	173
Necker Island	1	60	26	31	118
Nihoa Island	0	16	7	10	33
Total Genera	13	89	20	26	148
Total Species	18	198	45	74	335

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