The Ulvophyceae (Chlorophyta) of eastern Sorsogon, Philippines, including *Halimeda magnicuneata* sp. nov. (Bryopsidales)

Richard V. Dumilag, Ferdinand S. Dumago, Rea Kissel R. Cabudoy, Mark Christian E. Peralta, Camille C. Li, Glenn Cedrick V. Gamus, Rose Glendelyn T. Romero, Sandra L. Yap, Michael Y. Roleda, Paul John L. Geraldino, Heroen Verbruggen, Frederik Leliaert, Stefano G.A. Draisma, Lawrence M. Liao and Gerald T. Kraft

Supplementary Table S1: Under each species, the following information appear in order: references of previous records in the area, and a list of citations per site of all exsiccata examined in this study.

Ulvophyceae K.R.Mattox et K.D.Stewart

Ulvales Blackman et Tansley

Ulvaceae J.V.Lamouroux ex Dumortier

Ulva australis Areschoug

as *Ulva pertusa* Kjellman cited by Trono (1975: 26, 1997: 13 in BU, 2018: 4 in BU and II).

Specimens examined: **BU:** Dancalan, BR PH300, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, as *U. rigida*, CEB003252, 16.viii.1998, coll. A. Ferol; MSI T243306, 30.ix.2000, coll. M.Y. Roleda et M. Samson; MSI T24367, 01.x.2000, coll. M.Y. Roleda et M. Samson; as *U. pertusa* NCU-A-0029757, 22.iv.1998., coll. L. Liao; Dapdap, as *U. pertusa* NCU-A-0029756, 22.iv.1998., coll. M.H. Hommersand; **SM:** Olango, FEUH2465-68, 1.vi.2018, coll. R.V. Dumilag et G.C. Gamus; FEUH3383-84, 8.x.2018, coll. R.V. Dumilag et G.C. Gamus.

Ulva clathrata (Roth) C.Agardh

as *Enteromorpha clathrata* (Roth) Greville cited in Trono (1975: 25, 1997: 6, 2017:6 in BU).

Ulva flexuosa Wulfen

as *Enteromorpha flexuosa* (Wulfen) J.Agardh cited in Trono (1975: 25, 1997: 7 in BU).

Specimens examined: **BU:** San Antonio, FEUH838, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH839, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Ulva intestinalis Linnaeus

Trono (2018: 6 in BA).

Specimen examined: **BA:** MSI T22607, 24.ii.2000, coll. M.L.C. Bande et C. Nañola.

Ulva kylinii (Bliding) H.S.Hayden, Blomster, Maggs, P.C.Silva, Stanhope et Waaland

as *Enteromorpha kylinii* Bliding in Trono (1997: 9, 2017: 9, 2018:2 in BA and BU).

Specimen examined: **BA**: MSI T22618, 24.ii.2000, coll. M.L.C. Bande et C. Nañola.

Ulva lactuca Linnaeus

Trono (1972: 127 in BA, 1975: 26 in BA and BU; 1997: 11 in BU, 2018: 3 in BA, BU, MT, TI, and JI). as *Ulva fasciata* Delile in Trono (2017: 10, 2018: 2 in BU).

Specimens examined: **BA**: MSI T23891, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **BU**: Dancalan, BR PH298, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; CEB003262, 11.ii.2004, coll. Diaz; Dapdap, BR HEC12352, 22.iv.1998, coll. E. Coppejans; as *U. fasciata* CEB003298, 16.viii.1998, coll. L. Liao; FEUH826, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH827, FEUH3053, FEUH832, 27-28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2480, 01.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH825, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22661, 26.ii.2000, coll. M.L.C. Bande et M. Samson; **JI**: MSI T23457, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Ulva reticulata Forsskål

Kraft (1969: 31 in BU). Trono (1975: 28, 1997: 14 in BA and BU, 2018: 5 in BA, BU, MT, TI, and JI). Kraft et al. (1999: 6 in BU).

Specimens examined: **PD**: MSI T23848, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA**: MSI T23887, MSI T23899, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **BU**: HO K211, 9.iii.1968, heaps of it right around the 0 tide mark on almost all of the reefs studied. This voucher specimen is part of 64 wet-weight grams in a ring sample dominated by "*Eucheuma serra*" (197.3 g) and two non-stoloniferous species of *Sargassum* (189.5 and 235.5 g) from the study islet in the bay ca 1.5 km south of the Bulusan River; Dancalan (see Kraft 1969 for the ring method), CEB290024, 16.viii.1998, coll. K. Vicentuan; MSI T24262, 30.ix.2000, coll. M.Y. Roleda et M. Samson; FEUH834, FEUH3050-51, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2415, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; Dapdap, MSI T24671, 26.iii.2001, coll. M.Y. Roleda et M. Samson; **SM**: Olango, FEUH836, FEUH3049, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH835, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH837, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2483, 1.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH833, FEUH3052 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22667, 26.ii.2000, coll. M.L.C. Bande et M. Samson.

Cladophorales Haeckel

Anadyomenaceae Kützting

Anadyomene plicata C.Agardh

Kraft (1969: 196 in BU). Trono (1972: 127, 1975: 30, 1997: 17 in BU, 2018: 7 in MT and TI).

Specimens examined: **BU:** HO K157, 7.iii.1968, usually found on the vertical sides of channels through the reef flat at 0.30-0.90 m depths ca 2.5 km south of the Bulusan River sides of channels in the reef flat, coll. G.T. Kraft; HO K157, 9.iii.1968, 2 wet-weight grams in a 60-cm diam. ring sample at 0.20 m above 0 tide level along a transect dominated by "*Eucheuma serra*" (55 g) and *Hydropuntia eucheumatoides* (275.5 g) on the study islet in the bay ca 1.5 km south of the Bulusan River sides of channels in the reef flat) (see Kraft 1969 for the ring method), coll. G.T. Kraft; HO K240, 11.iii.1968, coll. Gertrudes Aguilar-Santos et G.T. Kraft on the low-intertidal/upper subtidal reef flat in front of the town of Bulusan, coll. G.T. Kraft; det. William Gilbert; Dancalan, FEUH46, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH47, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH45, FEUH3056, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23511, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Microdictyon cf. umbilicatum (Velley) Zanardini

Specimens examined: **BU:** HO K853, 10.vi.1968, same habitat as K852. A single clump on a coral mound at 0.33 m, another at 1.2 m growing with *Amansia glomerata* and *Amphiroa* sp., coll. G.T. Kraft.

Microdictyon okamurae Setchell
Trono (2018: 8 in PD).

Specimens examined: **PD:** MSI T23810, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan et M. Samson; **SM:** Olango, FEUH104, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li et M.E. Peralta.

Boodleaceae Børgesen

Boodlea coacta (Dickie) G.Murray et De Toni

Specimen examined: **BU:** HO K249 *Boodlea coacta* (12.iii.1968, 8.5 wet-weight grams in a ring sample dominated by "*Eucheuma serra*" (335.5 grams), *Sargassum* sp. (406 g), *Ulva reticulata* (150.5 g), and *Turbinaria ornate* (Turner) J.Agardh (85.5 g) from 0.10 m above chart datum at the study islet in the bay ca 1.5 km south of the BU River) (see Kraft 1969 for the ring method), coll. G.T. Kraft.

Boodlea composita (Harvey) F.Brand
Trono (1975:30, 1997:22 in BU, 2018:12 in MT, TI, and JI).

Specimens examined: **SM:** Olango, FEUH106, FEUH108, 27-28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH3388-89, FEUH107 25,28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH105, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23545, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Cladophoropsis vaucheriiformis (Areschoug) Papenfuss
as *Cladophoropsis neocaledonica* (Grunow ex Murray et Boodle) Papenfuss in Trono (2004: 26, 2018: 12 in BU).

Specimen examined: **BU:** CEB002501, 16.viii.1998, coll. M.L. Docoy; CEB290026, 16.viii.1998, coll. G.M. Valiente; **SM:** Olango, FEUH214, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Phyllodictyon anastomosans (Harvey) Kraft et M.J.Wynne
as *Struvea anastomosans* Piccone et Grunow ex Piccone in Kraft (1969: 210 in BU).

Specimens examined: **BU:** HO K026, 9.vi.1968, 0.10 wet-weight grams in a ring sample dominated by *Halimeda opuntia* (88.0 g) at +0.02 to -0.15 m along the margin of the small islet in the embayment ca. 1.5 km south of the BU River (see Kraft 1969 for the ring method); the specimen preserved in formalin, not pressed, coll. G.T. Kraft; **SM:** Olango, FEUH634-636, 25.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Struvea okamurae Leliaert
as *Chamaedoris orientalis* Okamura et Higashi in Trono (2004: 25 in BU).

Specimens examined: **BU:** Dancalan, BR HEC12289, 21.iv.1998, coll. E. Coppejans; Dapdap, NCU-A-0005043, 22.iv.1998., A.J.K. Millar; NCU-A-0005044; NCU-A-0005044, 22.iv.1998., L. Liao; BR HEC12301, 22.iv.1998, coll. E. Coppejans; BR HV834, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; San Bernardino Island: as *C. orientalis*, HO K939, 14.vi.1968; coll. by G. Kraft et Robert DeWreede, plants growing on rocks in sand on channel floors at 1.8 m and also affixed to the sides of bordering rocks up to 0.60 m depth, almost always in areas of strong current and seldom if ever in sheltered situations around the southwest corner of the Island; **SM:** Olango, FEUH749-750, FEUH3057, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Cladophoraceae Wille

Chaetomorpha antennina (Bory) Kützing
Kraft (2000: 551 at San Bernardino Is., BU).

Specimens examined: **PD:** MSI T23829, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA:** MSI T23882, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **TI:** MSI T23522, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JJ:** MSI T23497, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Chaetomorpha vieillardii (Kützing) M.J.Wynne
as *Chaetomorpha crassa* (C. Agardh) Kützing in Kraft (1969: 221 in BU) and in Trono (1975: 28, 1997: 18 in BA). as *Chaetomorpha linum* (O.F. Müller) Kützing in Trono (2018: 9 in BU).

Specimens examined: **BA:** MSI T22613, 24.ii.2000, coll. M.L.C. Bande et C. Nañola ; **BU:** as *Chaetomorpha* cf. *crassa*, HO K398, 19.iii.1968, 2.5 wet-weight grams in a ring sample dominated by "*Eucheuma serra*" (171 g), "*Eucheuma*" *cottonii* (48.0 g), *Ulva reticulata* (153 g) and *Gracilaria "lichenoides"* (128.5 g) at 0.20-0.34 m below chart datum along the inner margin of the reef ca 1.1 km north of the BU River), (see Kraft 1969 for the ring method), coll. G.T. Kraft; HO K374, 18.iii.1968, plants epiphytic on *Sargassum* sp. at the zero tide mark along the inner-reef flat ca 1 km north of the BU River, coll. G.T. Kraft; HO K903, 12.vi.1968, plants growing on shallow subtidal rock along the inner edge of the reef flat ca 1.1 km north of the BU River. coll. G.T. Kraft,

det. William Gilbert; Dapdap, MSI T24539, 26.iii.2001, coll. M.Y. Roleda et M. Samson; San Antonio, FEUH169, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH171, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH170, 21.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH168, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22664, 26.ii.2000, coll. M.L.C. Bande et M. Samson.

Cladophora aokii Yamada

as *Cladophora ryukyuensis* Sakai et Yoshida in Kraft (2000: 551 at San Bernardino Is., BU).

Specimens examined: **BU**: as *Cladophora* cf. *aokii*, HO K849, K850, 10.vi.1968, stiff and wiry thalli on rock at 0.45 m (K849) and 3.0 m (K850), along the edges of the southern boundary of the embayment ca 1.5 km south of the BU River. coll. G.T. Kraft.

Cladophora quisumbingii Manza

Trono (2018: 10 in BA and BU).

Cladophora vagabunda (Linnaeus) Hoek

Specimen examined: **SM**: Olango, FEUH3390, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Lychaete dotyana (W.J. Gilbert) M.J. Wynne

as *Cladophora dotyana* in Leliaert et al. (2003: 236 in BU).

Specimens examined: **BU**: Dancalan, BR PH289, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, NCU-A-0006970, 22.iv.1998. coll. D.W. Freshwater; BR HEC12336, 22.iv.1998, coll. E. Coppejans; FEUH2385, FEUH3058-3060, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; **SM**: Olango, FEUH2474, 1.vi.2018, coll. R.V. Dumilag et G.C. Gamus.

Dictyosphaeriaceae Kützing

Dictyosphaeria cavernosa (Forsskål) Børgesen

Kraft (1969: 44 in BU). Trono (1975:31, 1997:24 in BU). Trono (2018: 13 in BU, MT, TI, and JI).

Specimens examined: **BU**: HO K386, 19.iii.1968, 11 g in a 60-cm diam. ring sample at 0.37 m below 0 tide levels along the channel ca 1 km north of town, coll. G.T. Kraft, (see Kraft 1969 for the ring method); Dancalan, BR PH314, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, CEB290012, CEB003042, 16.viii.1998, coll. J.G. Young, G.M. Valiente; MSI T24536, 26.iii.2001, coll. M.Y. Roleda et M. Samson; FEUH251, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH246, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH247, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH245, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **JI**: MSI T23494, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Dictyosphaeria versluysii Weber van Bosse

Trono (1997:25 in BU). Trono (2018: 13 in BU, MT, TI, and JI).

Specimens examined: **BU**: Dancalan, FEUH248, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH249-250, 27-28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22659, 26.ii.2000, coll. M.L.C. Bande et M. Samson; **JI**: MSI T23507, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Siphonocladaceae F.Schmitz

Boergesenia forbesii (Harvey) Feldmann

Kraft (1969: 241 in BU). Trono (1975: 31, 1997: 21 in BU). Trono (2018: 11 in PD, BA, BU, MT, TI, and JI).

Specimens examined: **PD**: MSI T22634, 25.ii.2000, coll. M.L.C. Bande et C. Nañola ; MSI T23813, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA**: MSI T23873, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **BU**: HO K375, 18.iii.1968, plants at the base of a coral mound at 0.25 m along the inner-reef flat ca 1 km north of the BU River, coll. G.T. Kraft; Dancalan, FEUH101, FEUH3062, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH99, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH102-103, 27-28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2549, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH100, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22662, 26.ii.2000, coll. M.L.C. Bande et M. Samson; **JI**: MSI T23506, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Valoniaceae Kützing

Valonia aegagropila C.Agardh

Trono (1975: 30, 1997: 26, 2018:15 in BU, MT, TI and JI).

Specimens examined: **BU**: Dancalan, CEB003468, 21.iv.1995, L. Liao; MSI T24239, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **SM**: Olango, FEUH841, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH840, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH842, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T23525, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI**: MSI T23458, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Valonia fastigiata Harvey ex J.Agardh

Specimens examined: **BU**: Dancalan, FEUH845, FEUH3061, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2416, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; San Antonio, FEUH844, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH846, 25.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2475, 01.vi.2018, R.V. Dumilag et G.C. Gamus;

San Rafael, FEUH843, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH847, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Valonia utricularis (Roth) C.Agardh
Kraft (1969: 42 in BU).

Specimen examined: **BU:** HO K253, 12.iii.1968, 9.5 wet-weight grams in a ring sample dominated by "*Eucheuma serra*" (335.5 grams), *Sargassum* sp. (406 g), *Ulva reticulata* (150.5 g), and *Turbinaria ornata* (85.5 g) from 0.10 above chart datum at the study islet in the bay ca 1.5 km south of the BU River, (see Kraft 1969 for the ring method), coll. G.T. Kraft, det. William Gilbert on 24 October 1968.

Valonia ventricosa J.Agardh

Kraft (1969: 231 in BU). Trono (1975: 30, 1997: 28 in BU). Trono (2018: 16 in MT and JI).

Specimens examined: **BU:** Dapdap, CEB290025, 16.viii.1998, coll. L. Liao; MSI T24534, 26.iii.2001, coll. M.Y. Roleda et M. Samson; **JI:** MSI T23490, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Valoniopsis pachynema (G.Martens) Børgesen
Trono (2018: 16 in PD).

Specimen examined: **BU:** HO K933, 14.vi.1968, thalli on rock along the west side of San Bernardino Island, the plants growing in dense heads 0.20-0.25 m in diameter from +0.25 to -0.12 m depths on sides of the spurs in a wave-battered cove, coll. by G. Kraft et Robert DeWreede.

Bryopsidales J.H.Schaffner

Bryopsidaceae Bory

Bryopsis pennata J.V.Lamouroux

Trono (1975: 32, 2004: 28, 2018: 17 in BU).

Specimens examined: **BA:** MSI T23869, T23888, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **BU:** MSI T25999, 18.iv.2003, coll. W. Mendoza; Dancalan, CEB290004, 21.iv.1998, coll. L.M. Liao; FEUH120, FEUH3064, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH121, FEUH3065-3066, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH119, FEUH3063, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR PH262, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; MSI T24572, 26.iii.2001, coll. M.Y. Roleda et M. Samson; as *B. harveyana* CEB200012, 20.ii.2012, unknown collector. **SM:** Olango, FEUH122, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **JI:** MSI T23467, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpaceae Kützting

Caulerpa ambigua Okamura

Specimen examined: **BU:** HO K365, 18.iii.1968, thalli at 0.60 m on rock of the inner face of the deep undercut at the entry to a deep channel through the reef ca 1 km north of the BU River, coll. G.T. Kraft.

Caulerpa biserrulata Sonder

Specimen examined: **BU:** Dancalan, BR HV830, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; **SM:** Olango, FEUH136, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Caulerpa brachypus Harvey

Trono (2018: 18 in BU).

Specimens examined: **BU:** Dapdap, BR HEC12310, 22.iv.1998, coll. E. Coppejans; MSI T24364, 01.x.2000, coll. M.Y. Roleda et M. Samson.

Caulerpa buginensis E.Verheij et Prud'homme

as *Caulerpa* sp. Trono 1972: 128 in BU, as *Caulerpa* sp. 2 in Trono 2004: 34 in BU.

Specimens examined: **BU:** Dancalan, CEB002248, 16.viii.1998, coll. C. Estipona; Dapdap, CEB002250, 20.iv.1998, coll. Lawrence Liao; Dapdap, MICH 679831 (Kraft #359), 18.iii.1968, thalli on the first rock outcrop below the reef undercut at the entry to a deep channel through the reef ca 1 km north of the BU River, a single patch found between 1.8-2.1 m, coll. G.T. Kraft; BR HEC12303-12304, 22.iv.1998, coll. E. Coppejans; NCU-A-0003848, 22.iv.1998., coll. D.W. Freshwater; MSI T24308, 30.ix.2000, coll. M.Y. Roleda; MSI T24368, 01.x.2000, coll. M.Y. Roleda et M. Samson; MSI T24433, 14.xii.2000, coll. M.Y. Roleda et M. Samson; BR HV784, 10.ii.2004, coll. H. Verbruggen, R. Diaz et C. Galanza.

Caulerpa chemnitzia (Esper) J.V.Lamouroux

as *Caulerpa peltata* in Trono (1975: 33, 1997: 35 in BU); Taylor (1977: 8 in BU). as *Caulerpa racemosa* var. *peltata* (Belleza and Liao 2007: 90 in BU). Trono (2018: 18 in BU).

Specimens examined: **BA:** MSI T23863, MSI T23875, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; MSI T24271, MSI T24300, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** Dancalan, as *C. peltata*, CEB002269, 16.viii.1998, coll. Jasong Young; as *C. peltata*, CEB002271, 21.iv.1998, coll. L. Liao; MSI T24255, 30.ix.2000, coll. M.Y. Roleda et M. Samson; BR HV828, 11.iv.2004, coll. H. Verbruggen, R. Diaz et C. Galanza; as *C. peltata*, CEB200021, 20.ii.2012, coll. D.F.C. Belleza; FEUH2564, 29.v.2018, coll. R.V. Dumilag et G.C. Gamus; Dapdap, BR PH265, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. de Smedt; as *C. peltata*, NCU-A-0004027, 22.iv.1998., coll. D.W. Freshwater; MSI T24365, 01.x.2000, coll. M.Y. Roleda et M. Samson; MSI T24557, 26.iii.2001, coll. M.Y. Roleda et M. Samson; FEUH2399, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; **SM:** Olango, FEUH145, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH144, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23523, T23536, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa chemnitzia (Esper) J.V.Lamouroux ecad. *laetevirens*

as *Caulerpa racemosa* var. *laete-virens* (Montagne) Weber-van Bosse (Trono 2004: 32 in SM).

Specimens examined: **BU**: Dapdap, BR HEC12311, 22.iv.1998, coll. E. Coppejans; **SM**: Olango, FEUH154, FEUH3068-3071, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Caulerpa chemnitzia (Esper) J.V.Lamouroux ecad. ***turbinata***
as *Caulerpa racemosa* var. *turbinata* (Belleza and Liao 2007: 91 in BU).

Specimen examined: **BU**: Dancalan, BR HV829, 11.ii.2004, coll. H. Verbruggen, R. Diaz et C. Galanza; Dapdap, as *C. racemosa* var. *turbinata*, CEB002328, 16.viii.1998, coll. Jason Young.

Caulerpa cupressoides (Vahl) C.Agardh
Kraft (1969: 221 in BU). Trono (1997: 31, 1975: 32, 2018: 19 in BU). Trono (2018: 19 in TI).

Specimens examined: **BU**: Dancalan, MSI T24245, 30.ix.2000, coll. M.Y. Roleda et M. Samson; Dapdap, BR HEC12307, 22.iv.1998, coll. E. Coppejans; FEUH142, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, NCU-A-0003876, 22.iv.1998., coll. D.W. Freshwater; NCU-A-0030479, 22.iv.1998., coll. D.W. Freshwater; CEB290005, 16.vii.2998, coll. C. Estipona; CEB290006, 16.viii.1998, coll. Gloria Mariz Valiente; San Antonio, FEUH138, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH000858, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH3074-3075, 25.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH140-141, 27-28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2592, 1.vi.2018, coll. R.V. Dumilag, G.C. Gamus, J. Agluba, J. De Guzman, J.R. Estipular, D.L. Lagatuz, et C.D. Rivadelo; San Rafael, FEUH137, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22640, 26.ii.2000, coll. M.L.C. Bande et M. Samson; MSI T23514, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI**: MSI T23466, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa cupressoides var. ***lycopodium*** Weber-van Bosse f. ***disticha*** Weber-van Bosse
Belleza and Liao (2007: 75 in BU).

Specimens examined: **BU**: Dancalan, CEB002308, 16.viii.1998, coll. L. Liao; Dapdap, BR HEC12308, 22.iv.1998, coll. E. Coppejans.

Caulerpa elongata Weber-van Bosse
Taylor (1977: 5 in BU).

Specimens examined: **BU**: Dapdap, BR HEC12309, 22.iv.1998, coll. E. Coppejans; MSI T24549, 26.iii.2001, coll. M.Y. Roleda et M. Samson; **SM**: San Rafael, FEUH143, 21.viii.2017, R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T23534, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa fergusonii G.Murray

Taylor (1977:5 in BU). Belleza and Liao (2007: 78 in GU).

Specimen examined: **BU**: Dancalan, MSI T24238, 30.ix.2000, coll. M.Y. Roleda et M. Samson. **GU**: Panganiban, CEB002357, 17.viii.1998, coll. Antonette Kindica.

Caulerpa filicoides Yamada
Trono (2018:19 in BU).

Caulerpa lentillifera J.Agardh
Kraft (1969: 221 in BU). Doty and Santos-Aguilar (1970: 352 in BU). Trono (1975: 33, 1997: 33 in BU). Trono (2018: 20 in BA, BU, MT, TI, and JI). probably named as *Caulerpa microphysa* (Weber van Bosse) in Kraft (1969: 204 in BU).

Specimens examined: **BA**: MSI T23864, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; MSI T24266, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU**: Dancalan, FEUH2423, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; Dapdap, BR HEC12314, 22.iv.1998, coll. E. Coppejans; MSI T24299, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **SM**: Olango, FEUH2537, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus; **TI**: MSI T23499, T23550, 16.v.2000, M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa lessonii Bory
Trono (2018: 21 in BA and BU).

Specimens examined: **BA**: MSI T24292, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU**: Dapdap, MSI T24311, 30.ix.2000, coll. M.Y. Roleda et M. Samson; MSI T24339, 01.x.2000, coll. M.Y. Roleda et M. Samson; **MT**: MSI T22666, 26.ii.2000, coll. M. Roleda et M.L.C. Bande.

Caulerpa mexicana Sonder ex Kützing
Taylor (1977: 7 in BU). Belleza and Liao (2007:81 in BU).

Specimen examined: **BU**: Dancalan, CEB002275, 16.viii.1998, coll. Antonette Kindica; CEB002277, 21.iv.1998, coll. L. Liao.

Caulerpa opposita Coppejans et Meinesz

Specimen examined: **BU**: Dancalan, BR PH304, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt.

Caulerpa pickeringii Harvey et Bailey
as *Caulerpa pickeringii* in Trono (1972:128 in BU).

Specimen examined: **BU**: HO K349, 17 March 1968, upright assimilators in hand-like clumps covering rocks with *C. racemosa* and a *Sargassum* sp. at 0.15-0.20 m. on the reef flat just north of the channel offshore from the Montenegro's house in BU. coll. G.T. Kraft, det. Maxwell Doty.

Caulerpa racemosa (Forsskål) J.Agardh
Kraft (1969: 41 in BU). Taylor (1977: 9 in BU). Trono (1975: 33, 1997: 36 in BU). Kraft et al. (1999: 6 in BU). Trono (2018: 22 in PD, BA, BU, MT, TI, and JI).

Specimens examined: **PD**: Balumbonan, MSI TT22632, 25.ii.2000, coll. M.L.C. Bande et C. Nañola ; **BA**: MSI T23862, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU**: Dancalan, NCU-A-0004065, 21/22.iv.1998, coll. M.H. Hommersand; FEUH148-151,

22/23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, CEB002345, 16.viii.1998, coll. J.L. Melgo; BR HEC12305, BR HEC12313, 22.iv.1998, coll. E. Coppejans; NCU-A-0004064, 22.iv.1998., coll. M.H. Hommersand; MSI T24427, 14.xii.2000, coll. M.Y. Roleda; CEB200018-19, 20.ii.2012, unknown collector; FEUH000156, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH149, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH155, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH139, FEUH152-153, FEUH3076-78, 25,28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2485, 01.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH146-147, FEUH3072-73, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T22645, 26.ii.2000, coll. M.L.C. Bande et M. Samson; MSI T23518, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI:** MSI T23459, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa serrulata (Forsskål) J.Agardh

Trono (1975: 33, 1997: 39 in BU). Taylor (1977: 10 in GU). Trono (2018: 23 in BA, BU, and TI).

Specimens examined: **BA:** MSI T23879, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU:** HO K373, 18.iii.1968, plants at 0.60 m on the side of a meandering narrow channel through the inner-reef flat ca 1 km north of the BU River, coll. G.T. Kraft; Dancalan, MSI T24236, 30.ix.2000, coll. M.Y. Roleda et M. Samson; Dapdap, BR HEC12312a, BR HEC12312b, 22.iv.1998, coll. E. Coppejans; NCU-A-0004138, 22.iv.1998., coll. M.H. Hommersand; **SM:** San Rafael, FEUH157, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23526, MSI T23546, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI:** MSI T23510, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa serrulata* f. *spiralis (Weber-van Bosse) Gilbert

Taylor (1977: 11 in GU).

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

Kraft (1969: 195 in BU). Trono (1975: 34, 1997: 40 in BU). Belleza and Liao (2007: 95 in BU). Trono (2018: 24 in PD, BA, TI, and JI).

Specimens examined: **PD:** MSI T22623, 25.ii.2000, coll. M.L.C. Bande et M. Samson; MSI T23821, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA:** MSI T23878, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; MSI T24273, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** Dancalan, CEB002242, 21.iv.1998, coll. L. Liao; MSI T24246, 30.ix.2000, coll. M.Y. Roleda et M. Samson; FEUH158-159, FEUH3067, 22-23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, CEB290007, 16.viii.1998, coll. Jenny Lynn Melgo; CEB290008, 20.ii.2012, unknown collector; BR HEC12306, 22.iv.1998, coll. E. Coppejans; MSI T24331, 01.x.2000, coll. M.Y. Roleda et M. Samson; MSI T24425, 14.xii.2000, coll. M.Y. Roleda et M. Samson; MSI T24531, 26.iii.2001, coll. M.Y. Roleda et M. Samson; FEUH3382, 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; **SM:** San Rafael, FEUH160, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23549, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI:** MSI T23460, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Caulerpa taxifolia (M.Vahl) C.Agardh

Trono (1975:34, 1997: 42 in BU). Famá et al. (2002a: 620 in BU). Meusnier et al. (2004: 87 in BU). Trono (2018: 25 in BA and PD).

Specimens examined: **PD**: MSI T22636, 25.ii.2000, coll. M.L.C. Bande et C. Nañola; **BA**: MSI T23898, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU**: Dancalan, NCU-A-0003842, 21/22.iv.1998, coll. M.H. Hommersand; MSI T24247, 30.ix.2000, coll. M.Y. Roleda et M. Samson; Dapdap, BR HEC12302, 22.iv.1998, coll. E. Coppejans; CEB290009, 16.viii.1998, coll. C. Estipona; MSI T24301, 30.ix.2000, coll. M.Y. Roleda et M. Samson; MSI T24324, 01.x.2000, coll. M.Y. Roleda et M. Samson; MSI T24570, 26.iii.2001, coll. M.Y. Roleda et M. Samson; FEUH3387, 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; **SM**: Olango, FEUH162, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH163, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH161, 21.viii.2017, R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Caulerpa urvilleana Montagne

as *Caulerpa urvilliana* in Trono (1975: 35, 1997: 43 in BU). as *Caulerpa urvilliana* var. *urvilliana* (Taylor 1977: 14 in BU). Trono (2018: 26 in MT and TI).

Caulerpa* cf. *ashmeadii Harvey

Specimen examined: **BU**: MICH 679832, 6.iv.1969, coll. G.T. Kraft.

Codiaceae Kützing

Codium arabicum Kützing

Trono (1997: 35, 2018: 27 in BU).

Specimens examined: **BU**: Dapdap, NCU-A-0007553, 22.iv.1998, M.H. Hommersand; MSI T25997, 18.iv.2003, coll. W. Mendoza.

Codium bartlettii C.K.Tseng et W.J.Gilbert

Trono (1997: 47 in BU). Trono (2018: 27 in PD and BA).

Specimens examined: **PD**: MSI T23822, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA**: MSI T23896, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU**: Dapdap, FEUH2382, 28.v.2018, R.V. Dumilag et G.C. Gamus; **SM**: Olango, FEUH2531, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH215, FEUH3031, 21.viii.2017, R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Codium edule P.C.Silva

Trono (2018: 28 in BA and BU).

Specimens examined: **GU**: CEB002917, 17.viii.1993, coll. M. Dimzon; **BA**: MSI T23874, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU**: Dapdap, NCU-A-0007778, 22.iv.1998, coll. D.W. Freshwater; Dancalan, NCU-A-0007777, 21/22.iv.1998, coll. M.H. Hommersand; **SM**: Olango, FEUH2532, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus; FEUH3375-3381; 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH214, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et

M.E. Peralta; FEUH2528-2529, FEUH2532, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus.

Codium geppiorum O.C.Schmidt

Specimen examined: **SM:** San Rafael, FEUH216, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Codium* cf. *latum Suringar

Specimens examined: **SM:** San Rafael, FEUH217, FEUH3026-3028, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Codium platyclados R.Jones et Kraft
Jones and Kraft (1984: 269 in BU).

Specimens examined: **BU:** Dapdap, FEUH3331-3346, 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; **SM:** Olango, FEUH212-213, FEUH3029-3030, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2521, FEUH2523-2525, 02.vi.2018, coll. R.V. Dumilag et G.C. Gamus.

Codium* cf. *tenu Kützing
Verbruggen et al. (2007: 249 in BU). Trono (2018: 30 in BA and BU).

Specimens examined: **BA:** MSI T24268, 30.ix.2000, coll. MSI T24266, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** MSI T26006, 18.iv.2003, coll. R. Villanueva; Dapdap, FEUH3347-3374 8.x.2018, coll. R.V. Dumilag et G.C. Gamus.

Dichotomosiphonaceae G.M.Smith

Avrainvillea amadelpha (Montagne) A.Gepp et E.S.Gepp

Specimens examined: **BU:** Dapdap, BR HEC12348, 22.iv.1998, coll. E. Coppejans; BR HV786-87, 10.ii.2004, coll. H. Verbruggen, R. Diaz, & C. Galanza.

Avrainvillea erecta (Berkeley) A.Gepp et E.S.Gepp
as *Avrainvillea sordida* (Montagne) Crouan ex Maze et Schramm in Kraft (1969: 221 in BU). Trono (1997: 66, 2018: 39 in BU).

Specimens examined: **BU:** HO K172, 8.iii.1968, thalli growing on overhung shore-facing channel faces from 3.0-4.5 along the inner reef margin in the inlet ca 1 km north of BU, coll. G.T. Kraft, det. William Gilbert; HO K390, 19.iii.1968, 4.0 wet-weight grams in a 60-cm diam. ring sample in a ring sample dominated by "*E. serra*" (122.0 g), *Ulva reticulata* (64.0 g), and *Sargassum* sp. (78.0 g) from a transect along the inner reef margin ca 1 km north of the BU River at 0.30-0.45 m below 0 tide level from a transect along the inner reef margin in the inlet ca 1 km north of BU, (see Kraft 1969 for the ring method), coll. G.T. Kraft, det. by William Gilbert; Dapdap, Dapdap, CEB003573, 16.viii.1998, coll. L. Liao; FEUH3386, 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; San Antonio, FEUH84, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH2503, 1.vi.2018, coll. R.V. Dumilag et G.C. Gamus; San Rafael, FEUH85, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Avrainvillea lacerata J.Agardh

Trono (2018: 40 in PD, BA, BU, MT, TI, and JI).

Specimens examined: **PD:** MSI T23824, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA:** MSI T24278, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** Dapdap, BR HEC12300, 22.iv.1998, coll. E. Coppejans; MSI T24530, 26.iii.2001, coll. M.Y. Roleda et M. Samson; **TI:** MSI T23548, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI:** MSI T23486, 16.v.2000, M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Avrainvillea longicaulis (Kützting) G.Murray et Boodle

Trono (1997: 68 in BU).

Avrainvillea nigricans Decaisne

Trono (2018: 40 in BA).

Specimen examined: **BU:** HO K491, 7.vi.1968, thin and lax blades on rock surfaces ca 9.0 m deep off the shore-facing edge of the inner reef margin ca 1 km north of BU, coll. G.T. Kraft, det. Jeanine O. Stojkovich.

Avrainvillea obscura (C.Agardh) J.Agardh

as *Avrainvillea capituliformis* T. Tanaka in Trono (1975:35, 1997: 70 in BU).

Specimens examined: **BU:** Dapdap, BR HEC12390, 22.iv.1998, coll. E. Coppejans; **SM:** Olango, FEUH2581,2586, 01.vi.2018, coll. R.V. Dumilag, G.C. Gamus, J. Agluba, J. De Guzman, J.R. Estipular, D.L. Lagatuz, et C.D. Rivadelo.

Halimedaceae Link

Chlorodesmis fastigiata (C.Agardh) S.C.Ducker

as *Chlorodesmis comosa* in Trono (1975: 36 in BU). Trono (1997: 71 in BU).

Specimens examined: **PD:** MSI T23814, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BU:** Dancalan, FEUH179, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR PH260, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; San Antonio, FEUH178, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH000180-81, 27-28,xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH182, 25.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH177, FEUH183, FEUH3081, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI:** MSI T23524, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Halimeda bikinensis W.R.Taylor

Specimen examined: **BU:** Dapdap, CEB002854 et BR PH275a, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt.

Halimeda borneensis W.R.Taylor

as *Halimeda simulans* M. Howe in Trono (1975: 38, 1997: 61 in BA, 2018: 36 in PD and BA).

Halimeda cylindracea Decaisne

probably identified as *Halimeda monile* (J. Ellis et Solander) J.V. Lamouroux in Kraft (1969: 226 in BU). Trono (1975: 36, 1997: 52 in BU).

Specimens examined: **PD:** MSI T23836, 21.v.2000, coll M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BU:** HO K419, 20 March 1968, growing at 0.30-044 cm below 0 tide level along an inner reef margin in the bay ca 1 km north of BU), coll. G.T. Kraft; Dancalan, MSI T24231, 30.ix.2000, coll. M.Y. Roleda et M. Samson; FEUH2427, 28.v.2018, coll. R.V. Dumilag et G.C. Gamus; Dapdap, BR HEC12315, 22.iv.1998, coll. E. Coppejans; BR HV770, 8.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; BR HV826, 11.iv.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; FEUH415, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH410, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH411, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH412, FEUH3043-3044, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH413-414, 27-28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH409, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda discoidea Decaisne

Kraft (1969: 145 in BU). Trono (1997: 53 in BU). Trono (2018: 32 in PD).

Specimens examined: **PD:** MSI T22625, 25.ii.2000, coll. M.L.C. Bande et M. Samson; **GU:** CEB002835, 17.viii.1998, J. Young; **BU:** as *H. cuneata* f. *digitata*, HO K002 7.vi.1968, growing at 6 m, the commonest alga on rocks off the reef edge west of a channel ca 1 km north of BU, coll. G.T. Kraft, det. JoAnn Noble, Dancalan, BR HV827, 11.iv.2004, coll. H. Verbruggen, R. Diaz et C. Galanza; CEB290027, 16.viii.1998, coll. J. Young; Dancalan, CEB002834, 21.iv.1998, , CEB002841, 18.viii.1998, coll. L.M. Liao; Dapdap, NCU-A-0015197, 22.iv.1998. coll. D.W. Freshwater; CEB200053, 21.ii.2012, FEUH3385, unknown collector; 8.x.2018, coll. R.V. Dumilag et G.C. Gamus; San Antonio, FEUH428, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH427, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH417, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH416, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda distorta (Yamada) Hillis-Colinvaux

Specimens examined: **BU:** Dancalan, BR PH324, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HEC12320-21, 22.iv.1998, coll. E. Coppejans; BR PH275b, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV767, 8.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Halimeda fragilis W.R.Taylor

Specimens examined: **GU:** CEB002872, 17.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; **BU:** Dancalan, BR PH316-317, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; CEB002871, CEB002874, 16,21.iv.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV820, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Halimeda gigas W.R.Taylor

as *Halimeda tuna* (J. Ellis et Solander) J.V.Lamouroux in Trono (1975: 38, 1997: 63 in BU) and in Trono (2018: 37 in PD, BA, and BU).

Specimens examined: **PD:** as *H. tuna*, MSI T23826, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **GU:** Panganiban, CEB003572, 17.viii.1998, CEB003572, I. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; **BA:** as *H. tuna*, MSI T23892, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; MSI T24291, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** as *H. tuna*, Dancalan, BR PH319, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, BR PH283, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; MSI T24343, 01.x.2000, coll. M.Y. Roleda et M. Samson, Dapdap, as *H. tuna*, CEB003702, 16.viii.1998, coll. F. Leliaert, L.M. Liao, O. Dargent, et G. De Smedt; BR HV769, 8.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; San Antonio, BR HV793, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; FEUH429, 22.viii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda gracilis Harvey ex J.Agardh

Specimens examined: **GU:** CEB002823, 17.viii.1998, F. Leliaert, L. Liao, O. Dargent, et G. de Smedt; **BU:** Dancalan, BR HV824, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; Dapdap, BR PH281, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt, FEUH3033, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda incrassata (J.Ellis) J.V.Lamouroux

Specimen examined: **BU:** Dancalan, CEB200057, 19.ii.2012, unknown collector; Dapdap, BR HEC12318, 22.iv.1998, coll. E. Coppejans.

Halimeda lacunalis W.R.Taylor

Specimen examined: **BU:** Dancalan, BR PH321, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt.

Halimeda macroloba Decaisne

Trono (1975: 37 in BA and BU). Trono (1997: 57, 2018: 33 in BU).

Specimen examined: **BA:** MSI T23893, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan.

Halimeda macrophysa Askenasy

Trono (1975: 37, Trono 1997: 58 in BU).

Specimens examined: **BU:** Dancalan, BR HV822, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; Dapdap, BR HEC12316, 22.iv.1998, coll. E. Coppejans; BR PH251, BR PH276, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; FEUH431, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEUH432, 28.ii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH430, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda magnicuneata Verbruggen et Dumilag, *sp. nov.*

This study (see main text)

Halimeda melanesica Valet

Specimens examined: **BU:** HO K429 (two sheets, initially, in Feb. 1970, identified as *H. incrassata*), 22.iii.1968, growing at 1.5 m on rock under a shading overhang along the shore-facing reef drop-off in the bay ca 1 km south of the BU River, coll. G.T. Kraft, det. by H. Verbruggen, 06.v.2012; Dancalan, CEB290018, 12.ii.2004, unknown collector; BR PH318, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV818, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; FEUH418, FEUH3036-3039, 28.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, CEB003147, 16.viii.1998, F. Leliaert, L. Liao, O. Dargent, et G. de Smedt; BR HEC12322, 22.iv.1998, coll. E. Coppejans; BR PH278, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV790, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Halimeda minima (W.R.Taylor) Hillis-Colinvaux

Specimens examined: **BU:** as *H. copiosa*, Dancalan, BR PH320, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, BR HEC12317, 22.iv.1998, coll. E. Coppejans; BR PH274, BR PH279, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt, Dancalan, CEB290015, CEB290017, 12.ii.2004, unknown collector; Dapdap, as *H. copiosa* CEB290014, CEB290016, 16.viii.1998, coll. M.J. Palomar; MSI T24347, 01.x.2000, coll. M.Y. Roleda et M. Samson; BR HV791, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; FEUH435, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH433-34, 27-28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH436, 25.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halimeda opuntia (Linnaeus) J.V.Lamouroux

Kraft (1969: 31 in BU). Trono (1975: 37 in BU). Trono (1997: 59 in BA and BU). Trono (2018: 35 in PD, BA, BU, MT, and JI).

Specimens examined: **PD:** MSI T23804, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BU:** HO K948 (2 sheets), 8.vi.1968, part of 191 wet-weight grams in a 60-cm diam. ring sample with "*Eucheuma serra*" (37.0 g), "*E. cottonii*", and *Hydropuntia eucheumatoides* (Harvey) Gurgel et Fredericq (55.5 g) from 0.15-0.20 m below 0 tide level along a transect in the study islet in the bay ca 1.5 km south of BU), coll. G.T. Kraft; HO K888, 11.vi.1968, 13.0 g, in a ring sample dominated by *Mastophora rosea* (32.0 g), "*E. serra*" (= *B. gelatinae*) (14.0 g), and *Amphiroa* sp. (35.5 g) at 0.20-0.45 m below chart datum), (see Kraft 1969 for the ring method), coll. G.T. Kraft, det. Joanne Noble; Dancalan, NCU-A-0008420, 21/22.iv.1998., coll. M.H. Hommersand; Dancalan, CEB290019, 12.ii.2004, unknown collector; FEUH421, FEUH3042, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2428, 28.v.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR PH280, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV792, 10.ii.2004, coll. H. Verbruggen, R. Diaz et C. Galanza; FEUH426, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Antonio, FEU420, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH422, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH423, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH424-

425, FEUH3041, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH419, FEUH3040, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22655, 26.ii.2000, coll. M.L.C. Bande et M. Samson; MSI T23540, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **JI**: MSI T23483, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Halimeda taenicola W.R.Taylor
Trono (2018: 37 in BU).

Halimeda velasquezii W.R.Taylor
Trono (1975: 39 in BA). Trono (1997: 64 in BU). Trono (1975: 39 in BA, BU, SM, MT, and JI).

Specimens examined: **BA**: MSI T23889, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; MSI T24286, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU**: HO K220, 11.iii.1968, 2.0 wet-weight grams in a ring sample almost entirely dominated by *Sargassum* sp. (1155.5 g) at 0.15 m above chart datum on the study islet in the bay ca 1.5 km south of the BU River, (see Kraft 1969 for the ring method), coll. G.T. Kraft, det. Joanne Noble; HO K883, 11.vi.1968, thallus on the shoreward side of the reef ca 1.1 km north of the BU River, 0.20-0.06 m below MLLW tide datum, 32.5 wet-weight grams in a ring sample dominated by *Turbinaria decurrens* (143.5 g) in an area punctuated by *Diadema* borings, coll. G.T. Kraft, det. Joanne Noble; HO K889, 11.vi.1968, habitat same as K888, coll. G.T. Kraft, det. Joanne Noble; Dancalan, BR PH322, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; NCU-A-0015257, 21/22.iv.1998., coll. M.H. Hommersand; CEB003093, 16.viii.1998, coll. A. Ferol; BR HV825, 11.iv.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; Dancalan, CEB003092, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. de Smedt; Dapdap, CEB003089, 20.iv.1998, coll. L. Liao; CEB200060, 19.ii.2012, unknown collector; FEUH437, FEUH3034-35, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR PH277, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; NCU-A-0015256, 22.iv.1998., coll. M.H. Hommersand; MSI T24558, 26.iii.2001, coll. M.Y. Roleda et M. Samson; BR HV768, BR HV779, 8.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; **SM**: Olango, FEUH439, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH438, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **JI**: MSI T23484, 16.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson.

Rhipidosiphon javensis Montagne
as *Udotea javensis* (Kraft 1969: 210 in BU).

Specimens examined: **BU**: Dancalan, FEUH691, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR PH284, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; BR HV783, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Rhipilia crassa A.J.K.Millar et Kraft
Millar and Kraft (2001: 32 in BU)

Rhipilia nigrescens Coppejans et Prud'homme

Specimen examined: **BU**: HO K491, from rock surfaces at 9.0 m. det. Jeanine Stojkovich, coll. G.T. Kraft; Dapdap, BR HV788, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Rhipilia orientalis A.Gepp et E.S.Gepp

Specimen examined: **BU:** Dapdap, BR HV782, 10.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza.

Rhipiliopsis carolyniae Kraft

Kraft (1986: 51 in BU).

Specimen examined: **BU:** Dancalan, CEB003390, 21.iv.1998, L. Liao; Dapdap, BR PH268, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; MSI T34259, 30.ix.2000, coll. M.Y. Roleda et M. Samson.

Tydemania expeditionis Weber van Bosse

Trono (1975: 40, 1997: 73 in BU). Trono (2018: 43 in BA).

Specimens examined: **BA:** MSI T23867, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; **BU:** HO K168, 8.iii.1968, thalli growing on calcified worm tubes along the near-vertical sides of coral bommies at 2.4-3.0 m depths just north of the BU River). coll. G.T. et Carolyn U.C. Kraft; HO K486 (3 sheets), 7.vi.1968, thalli associated with *Amansia glomerata*, *Halimeda* sp., *Gracilaria "gigas"*, *Mastophora rosea* and *Amphiroa* sp. on a coral knob at 1.2 m depth just off the shore-facing reef margin ca 1 km north of BU. coll. G.T. et Carolyn U.C. Kraft; Dancalan, BR PH313, 16.viii.1998, coll. F. Leliaert, L. Liao, O. Dargent, et G. De Smedt; Dapdap, BR HV771, 8.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; Dapdap, NCU-A-0008403, 22.iv.1998, coll. M.H. Hommersand; **SM:** San Rafael, FEUH824, FEUH3080, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Udotea argentea Zanardini

Specimen examined: **BU:** Dapdap, BR HEC12299, 22.iv.1998, coll. E. Coppejans.

Udotea indica A.Gepp et E.S.Gepp

Specimen examined: **BU:** Dapdap, BR HEC12298, 22.iv.1998, coll. E. Coppejans.

Udotea occidentalis A.Gepp et E.S.Gepp

Trono (1975: 36 in BU).

Specimens examined: **BU:** Dapdap, CEB200001, CEB200014, 20.ii.2012, unknown collector.

Udotea orientalis A.Gepp et E.S.Gepp

Kraft (1969: 231 in BU). Trono (2018: 45 in PD, BA, BU, and SM).

Specimens examined: **PD:** MSI T23811, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **BA:** MSI T23876, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, et P. Tan; MSI T24282, 30.ix.2000, coll. M.Y. Roleda et M. Samson; **BU:** Dancalan, BR HV817, 11.ii.2004, coll. H. Verbruggen, R. Diaz, et C. Galanza; Dapdap, MSI T24435, 14.xii.2000, coll. M.Y. Roleda et M. Samson; San Antonio, FEUH695, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH693, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM:** Olango, FEUH696, FEUH3084, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH697, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et

M.E. Peralta; FEUH2530, FEUH2533, FEUH3085, 2.vii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH694, 21.viii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH692, FEUH3082-3083, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Dasycladales Pascher

Dasycladaceae Kützing

Bornetella nitida Munier-Chalmas ex Sonder

Kraft (1969: 41 in BU); Trono (1972: 128, 1975: 40, 1997: 79 in BU). Trono (2018: 46 in PD and BA).

Specimens examined: **PD**: MSI T23828, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande, P. Tan, et M. Samson; **GU**: Panganiban, CEB290002, 17.viii.1998, coll. Jenny Lynn Melgo; **BA**: MSI T22608, 24.ii.2000, coll. M.L.C. Bande et C. Nañola ; MSI T23897, 21.v.2000, coll. M.Y. Roleda, M.L.C. Bande et P. Tan; **BU**: Dancalan, FEUH109, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH110, 24.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH111, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH115, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Bornetella oligospora Solms-Laubach

Specimen examined: **BU**: HO K378, 18.iii.1968, plants in upright heads at 0.10-0.20 m depths on the thinly sand-covered floor of an inner-reef margin ca 1 km north of the BU River, coll. G.T. Kraft, det. Eric Coppejans; Dancalan, CEB002142, 12.ii.2004, coll. D. Olandesca.

Bornetella sphaerica (Zanardini) Solms-Laubach

Trono (1975: 41 in BU). Trono (2018: 48 in MT and TI).

Specimens examined: **GU**: Panganiban, CEB002404, 17.viii.1998, coll. D.M. Poquita; **BU**: Dapdap, BR HEC12328, 22.iv.1998, coll. E. Coppejans; San Antonio, FEUH113-114, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH116, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; San Rafael, FEUH112, 21.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **TI**: MSI T22665, 26.ii.2000, coll. M.L.C. Bande et M. Samson.

Neomeris annulata Dickie

Specimen examined: **BU**: HO K184, 9.iii.1968, thalli at 1.2 m depth on a 30cm diam. flat rock on sand off the study islet ca south of the BU River, coll. G.T. Kraft.

Neomeris vanbosseae M.Howe

Specimens examined: **GU**: Panganiban, CEB003847, 17.viii.1998, coll. Antonette Kindica; **BU**: Dancalan, CEB003905, 11.ii.2004, coll. D. Olandesca; FEUH572, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, BR HEC12327, 22.iv.1998, coll. E. Coppejans; CEB200050,

20.ii.2012, coll. D.F.C. Belleza; San Antonio, FEUH571, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH573, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; FEUH2594, 01.vi.2018, coll. R.V. Dumilag, G.C. Gamus, J. Agluba, J. De Guzman, J.R. Estipular, D.L. Lagatuz, et C.D. Rivadelo; San Rafael, FEUH574, 28.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Halicoryne wrightii Harvey

Kraft (1969: 226 in BU). Trono (1975: 40, 1997: 95 in BU). Trono (2018: 50 in BA).

Specimens examined: **BA**: MSI T22605, 24.ii.2000, coll. M.L.C. Bande et C. Nañola; **BU**: HO K155, 7.iii.1968, growing at 0.90 m with *Acetabularia* sp. on shells covered by sand on the sandy bottom of a shallow reef channel ca 1.5 km south of BU), coll. G.T. Kraft; Dapdap, CEB200049, 20.ii.2012, coll. D.F.C. Belleza; San Antonio, FEUH406-408, 22.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Polyphysaceae Kützing

Acetabularia dentata Solms-Laubach

Specimens examined: **BU**: Dapdap, BR HEC12349, 22.iv.1998, coll. E. Coppejans; FEUH000173, 23.viii.2017; **SM**: Olango, FEUH172, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Acetabularia major G.Martens

Specimens examined: **BU**: HO K852 *Acetabularia* cf. *major* (10.vi.1968), sharing a small rock with *Neomeris* sp. at same habitat as K849 and K850 (10.vi.1968), coll. G.T. Kraft.

Acetabularia ryukyuensis Okamura et Yamada

Specimens examined: **BU**: Dapdap, BR HEC12329, 22.iv.1998, coll. E. Coppejans; San Antonio, FEUH3079, 27.ii.2018, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta

Parvocaulis exiguus (Solms-Laubach) S.Berger, Fettweiss, Gleissberg, Liddle, U.Richter, Sawitzky et Zuccarello

Specimens examined: **BU**: Dancalan, FEUH860, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; **SM**: Olango, FEUH861, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

Parvocaulis parvulus (Solms-Laubach) S.Berger, Fettweiss, Gleissberg, Liddle, U.Richter, Sawitzky et Zuccarello

Specimens examined: **BU**: Dancalan, FEUH859, 23.viii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta; Dapdap, Dapdap, CEB200052, 20.ii.2012, unknown collector; **SM**: Olango, FEUH862, 27.xii.2017, coll. R.V. Dumilag, G.C. Gamus, R.R. Cabudoy, F.S. Dumago, C.C. Li, et M.E. Peralta.

References

- Ang Jr., P.O., S.M. Leung and M.M. Choi. 2013. A verification of reports of marine algal species from the Philippines. *Philipp. J. Sci.* 142: 5–49.
- Belleza, D.F.C. and L.M. Liao. 2007. Taxonomic inventory of the marine green algal genus *Caulerpa* (Chlorophyta, Bryopsidales) at the University of San Carlos (Cebu) Herbarium. *The Philipp. Scientist* 44: 71–104.
- Boedeker, C., F. Leliaert and G.C. Zuccarello. 2016. Molecular phylogeny of the Cladophoraceae (Cladophorales, Ulvophyceae), with the resurrection of *Acrocladus* Nägeli and *Willeella* Børgesen, and the description of *Lurbica* gen. nov. and *Pseudorhizoclonium* gen. nov. *J. Phycol.* 52: 905–928.
- Boo, G.H., L.L. Gall, K.A. Miller, D.W. Freshwater, T. Wernberg, R. Terada, K.J. Yoon and S.M. Boo. 2016. A novel phylogeny of the Gelidiales (Rhodophyta) based on five genes including the nuclear CesaA, with descriptions of *Orthogonacladia* gen. nov. and *Orthogonacladiaceae* fam. nov. *Mol. Phylogenet. Evol.* 101: 359–372.
- Bolton, J.J., M.D. Cyrus, M.J. Brand, M. Joubert and B.M. Macey. 2016. Why grow *Ulva*? Its potential role in the future of aquaculture. *Perspect. Phycol.* 3: 113–120.
- Coppejans, E. and W.F. Prud'homme van Reine. 1992. Seaweeds of the Snellius—II Expedition (E. Indonesia), the genus *Caulerpa* (Chlorophyta-Caulerpales). *Bull. Séanc. Acad. R Sc. Outre-Mer.* 37: 667–712.
- Couceiro L., J. Cremades and R. Barreiro. 2011. Evidence for multiple introductions of the Pacific green alga *Ulva australis* Areschoug (Ulvales, Chlorophyta) to the Iberian Peninsula. *Botanica Marina* 54: 391–402.
- Cremen, M.C.M., J.M. Huisman, V.R. Marcelino and H. Verbruggen. 2016. Taxonomic revision of *Halimeda* (Bryopsidales, Chlorophyta) in south-western Australia. *Aust. Syst. Bot.* 29: 41–54.
- Cremen, M.C.M., F. Leliaert, J. West, D.W. Lam, S. Shimada, J.M. Lopez-Bautista and H. Verbruggen. 2019. Reassessment of the classification of Bryopsidales (Chlorophyta) based on chloroplast phylogenomic analyses. *Mol. Phylogenet. Evol.* 130: 397–405.
- De Smedt, G., O. De Clerck, F. Leliaert, E. Coppejans and L.M. Liao. 2001. Morphology and systematics of the genus *Halymenia* C. Agardh (Halymeniales, Rhodophyta) in the Philippines. *Nova Hedwigia* 73: 293–322.
- Dijoux, L., H. Verbruggen, L. Mattio, N. Duong and C. Payri. 2012. Diversity of *Halimeda* (Bryopsidales, Chlorophyta) in New Caledonia: a combined morphological and molecular study. *J. Phycol.* 48: 1465–1481.
- Doty, M.S. 1995. *Betaphycus philippinensis* gen. et sp. nov. and related species (Solieriaceae, Gigartinales). In: (, I.A. Abbott, ed) *Taxonomy of Economic Seaweeds* V. La Jolla, California: California Sea Grant College System, pp. 237–245.
- Doty, M.S. and G. Santos-Aguilar. 1970. Transfer of toxic algal substances in marine food chains. *Pac. Sci.* 24: 351–355.

- Draisma, S.G.A., W.F. Pru'homme van Reine, T. Sauvage, G.S. Belton, C.F.D. Gurgel, P-E. Lim and S-M. Phang. 2014. A re-assessment of the infra-generic classification of the genus *Caulerpa* (Caulerpaceae, Chlorophyta) inferred from a time-calibrated molecular phylogeny. *J. Phycol.* 50: 1020–1034.
- Dumilag, R.V. 2018. *Betaphycus gelatinus* and *B. philippinensis* (Gigartinales, Rhodophyta) are conspecific. *Phytotaxa* 372: 22–34.
- Dumilag R.V., W.G.M. Gallardo, C.P.C. Garcia, Y. You, A.K.C. Chaves and L. Agahan. 2018. Phenotypic and mtDNA variation in Philippine *Kappaphycus cottonii* (Gigartinales, Rhodophyta). *Mitochondrial DNA* 29: 951–963.
- Dumilag, R.V., L. M. Liao and A.O. Lluisma. 2014. Phylogeny of *Betaphycus* (Gigartinales, Rhodophyta) as inferred from COI sequences and morphological observations on *B. philippinensis*. *J. Appl. Phycol.* 26: 587–595.
- Egerod, L.E. 1952. An analysis of the siphonous Chlorophycophyta with special reference to the Siphonocladales, Siphonales and Dasycladales of Hawaii. *University of California Publications in Botany* 25: 325–453.
- Famà, P., O. Jousson, L. Zaninetti, A. Meinesz, F. Dini, G. Di Giuseppe, A.J.K. Millar and J. Pawlowski. 2002a. Genetic polymorphism in *Caulerpa taxifolia* (Ulvophyceae) chloroplast DNA revealed by a PCR-based assay of the invasive Mediterranean strain. *J. Evol. Biol.* 15: 618–624.
- Famà, P., B. Wysor, W.H.C.F. Kooistra and G.C. Zuccarello. 2002b. Molecular phylogeny of the genus *Caulerpa* (Caulerpales, Chlorophyta) inferred from chloroplast *tufA* gene. *J. Phycol.* 38: 1040–1050.
- Ferrer, M.S.R., R.N. Gomez, C.B. Nacido, M.T. Moises and R.V. Dumilag. 2019. Genetic diversity of Philippine *Gracilaria salicornia* (Gracilariaceae, Rhodophyta) based on mitochondrial COI-5P sequences. *Biologia* 74: 599–607.
- Filloramo, G.V. and G. W. Saunders. 2016. Application of multigene phylogenetics and site-stripping to resolve intraordinal relationships in the Rhodymeniales (Rhodophyta). *J. Phycol.* 52: 339–355
- Gabriel, D., S.G.A. Draisma, W.E. Schmidt, T. Schils, T. Sauvage, C. Maridakis, C.F.D. Gurgel, D.J. Harris and S. Fredericq. 2017. Beneath the hairy look: the hidden reproductive diversity of the *Gibbsmithia hawaiiensis* complex (Dumontiaceae, Rhodophyta). *J. Phycol.* 53: 1171–1192.
- Gaillande, C., G. Remoissenet, C. Payri and M. Zubia. 2017. *Caulerpa* consumption, nutritional value and farming in the Indo-Pacific region. *J. Appl. Phycol.* 29: 2249–2266.
- Gilbert, W.J. 1961. An annotated checklist of Philippine marine Chlorophyta. *Philipp. J. Sci.* 88: 413–451.
- Gordon, A.L., J Sprintall and A. Ffield. 2011. Regional oceanography of the Philippine Archipelago. *Oceanogr.* 24: 14–27.
- Guiry, M.D. and G.M Guiry. 2019. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. <http://www.algaebase.org>; searched on 07 June 2019.

- Güven, K.C., A. Percot and E. Sezik. 2010. Alkaloids in marine algae. *Mar. Drugs* 8, 269–284.
- Hall, R. 1997. Cenozoic plate tectonic reconstructions of SE Asia. In: (A.J. Fraser, S.J. Matthews and R.W. Murphy, eds.) *Petroleum Geology of Southeast Asia. Geol. Soc. Spec. Publ.* 126: 11–23.
- Hall, R. 2002. Cenozoic geological and plate tectonic evolution of SE Asia and the SW Pacific: computer-based reconstructions, model and animations. *J. Asian Earth Sci.* 20: 353–431.
- Hernández-Kantún, J.J., A.R. Sherwood, R. Riosmena-Rodriguez, J.M. Huisman and O. De Clerck. 2012. Branched *Halymenia* species (Halymeniaceae, Rhodophyta) in the Indo-Pacific region, including descriptions of *Halymenia hawaiiiana* sp. nov. and *H. tondoana* sp. nov. *Eur. J. Phycol.* 47: 421–432.
- Hollants, J., F. Leliaert, H. Verbruggen, O. De Clerck and A. Willems. 2013. Host specificity and coevolution of Flavobacteriaceae endosymbionts within the siphonous green seaweed *Bryopsis*. *Mol. Phylogenet. Evol.* 67: 608–614.
- Huisman, J.M. 2015. *Algae of Australia: Marine Benthic Algae of North-western Australia 1: Green and Brown Algae*. CSIRO Publishing, 328 pp.
- Huisman, J.M. and G.W. Saunder. 2007. Phylogeny and classification. In: (P.M. McCarthy and A.M. Orchard, eds) *Algae of Australia: Introduction*. Melbourne: Australian Biological Resources Study and CSIRO Publishing, pp. 66–104.
- Huisman, J.M. and F. Leliaert. 2015. Cladophorales. In: (J.M. Huisman, ed) *Algae of Australia: Marine benthic algae of North-western Australia. 1. Green and brown algae*. Canberra et Melbourne: ABRS et CSIRO Publishin, pp. 32–67.
- Hughey, J.R., C.A. Maggs, F. Mineur, C. Jarvis, K. Miller, S. Shabaka and P.W. Gabrielson. 2019. Genetic analysis of the Linnaean *Ulva lactuca* (Ulvales, Chlorophyta) holotype and related type specimens reveals name misapplications, unexpected origins, and new synonymies. *J. Phycol.* 55: 503–508.
- Jones, R. and G.T. Kraft. 1984. The genus *Codium* (Codiales, Chlorophyta) at Lord Howe Island (N.S.W.). *Brunonia* 7: 253–276.
- Kazi, M.A., C.R.K. Reddy and B. Jha. 2013. Molecular phylogeny and barcoding of *Caulerpa* (Bryopsidales) based on the *tufA*, *rbcL*, 18S rDNA and ITS rDNA genes. *PLoS ONE* 8: e82438.
- Kooistra, W.H.C.F., E.G.G. Coppejans and C. Payri. 2002. Molecular systematics, historical ecology, and phylogeography of Halimeda (Bryopsidales). *Mol. Phylogenet. Evol.* 24: 121–138.
- Kraft, G.T. 1969. The red algal genus *Euclima* in the Philippines. MSc Thesis, University of Hawaii, 358 pp.
- Kraft, G.T. 1972. Preliminary studies of Philippine *Euclima* species (Rhodophyta). Part 1. Taxonomy and ecology of *Euclima arnoldii* Weber-van Bosse. *Pac. Sci.* 26: 318–334.

Kraft, G.T. 1973. The morphology of *Cubiculoporum koronicarpis* gen. et sp. nov., representing a new family in the Gigartinales (Rhodophyta). *Am. J. Bot.* 60: 872–882.

Kraft, G.T. 1984. Taxonomic and morphological studies of tropical and subtropical species of *Callophycus* (Solieriaceae, Rhodophyta). *Phycologia* 23: 53–71.

Kraft, G.T. 1986a. The green algal genera *Rhipiliopsis* A. et E.S. Gepp and *Rhipiliella* gen. nov. (Udoteaceae, Bryopsidales) in Australia and the Philippines. *Phycologia* 25: 47–72.

Kraft, G.T. 1986b. The genus *Gibsmithia* (Dumontiaceae, Rhodophyta) in Australia. *Phycologia* 25: 423–447.

Kraft, G.T. 2000. Marine and estuarine benthic green algae (Chlorophyta) of Lord Howe Island, south-western Pacific. *Austr. Syst. Bot.* 13: 509–648.

Kraft, L.G.K., G.T. Kraft and R.F. Waller. 2010. Investigations into Southern Australian *Ulva* (Ulvophyceae, Chlorophyta) taxonomy and molecular phylogeny indicate both cosmopolitanism and endemic cryptic species. *J. Phycol.* 46: 1257–1277.

Kraft, G.T., L.M. Liao, A.J.K. Millar, E.G.G. Coppejans, M.H. Hommersand and D.W. Freshwater. 1999. Marine benthic red algae (Rhodophyta) from Bulusan, Sorsogon Province, Southern Luzon, Philippines. *The Philipp. Scientist* 36: 1–50.

Leliaert F. 2004. Taxonomic and phylogenetic studies in the Cladophorophyceae (Chlorophyta). DSc thesis. April 1, 2004. Ghent University. 294 pp.

Leliaert, F. and C. Boedeker. 2007. Cladophorales. In: (J. Brodie, C.A. Maggs, and D. John, eds.) *Green seaweeds of Britain and Ireland*. London: The British Phycological Society. pp. 131–183.

Leliaert, F., E. Coppejans and O. De Clerck. 1998. The Siphonocladales sensu Egerod (Chlorophyta) from Papua New Guinea and Indonesia (Snellius-II Expedition). *Belg. J. Bot.* 130: 177–197.

Leliaert, F., F. Rousseau, B. De Reviers and E. Coppejans. 2003. Phylogeny of the Cladophorophyceae (Chlorophyta) inferred from partial LSU rRNA gene sequences: is the recognition of a separate order Siphonocladales justified? *Eur. J. Phycol.* 38: 233–246.

Leliaert, F., A.J.K. Millar, C. Vlaeminck and E. Coppejans. 2007. Systematics of the green macroalgal genus *Chamaedoris* Montagne (Siphonocladales), with an emended description of the genus *Struvea* Sonder. *Phycologia* 46: 709–725.

Leliaert, F., H. Verbruggen, B. Wysor and O. De Clerck. 2009. DNA taxonomy in morphologically plastic taxa: Algorithmic species delimitation in the *Boodlea* complex (Chlorophyta: Cladophorales). *Mol. Phylogenet. Evol.* 53: 122–133.

Leliaert, F., D.A. Payo, C.F.D. Gurgel, T. Schils, S.G.A. Draisma, G.W. Saunders, M. Kamiya, A.R. Sherwood, S-M. Lin, J.M. Huisman, L. Le Gall, R.J. Anderson, J.J. Bolton, L. Mattio, M. Zubia, T. Spokes, C. Vieira, C.E. Payri, E. Coppejans, S. D'Hondt, H. Verbruggen and O. De Clerck. 2018. Patterns and drivers of species diversity in the Indo-Pacific red seaweed *Portieria*. *J. Biogeogr.* 45: 2299–2313.

- Lewmanomont, K. 2008. Some *Caulerpa* and *Caulerpella* (Bryopsidales, Chlorophyta) from Thailand. *In*: (S.-M. Phang, K. Lewmanomont and P.E. Lim, eds). *Taxonomy of Southeast Asian Seaweeds, Institute of Ocean and Earth Sciences, University of Malaya, Monograph Series 2*: UM Press, Kuala Lumpur, pp. 1–14.
- Licuanan, W.Y., M.L.S. Medina, K.S. Luzon, M.S. Samson, C.L. Nañola, R.N. Rollon, M.Y. Roleda (2011) Priority reef areas in the Pacific Coast of the Philippines for marine protected area deployment. *Philipp. Agri. Scientist* 94: 62–78.
- Lin, S-M. and D.W. Freshwater. 2008. The red algal genus *Gelidiella* (Gelidiales, Rhodophyta) from Taiwan, including *Gelidiella fanii* sp. nov. *Phycologia* 47: 168–176.
- Lin, S-M., J.M. Huisman and D. L. Ballantine. 2014. Revisiting the systematics of *Ganonema* (Liagoraceae, Rhodophyta) with emphasis on species from the northwest Pacific Ocean. *Phycologia* 53: 37–51.
- Manza, A.V. 1939. Two new species of Philippine *Cladophora*. *Bull. Nat. Res. Coun. Philipp.* 23: 109.
- Millar, A.J.K. and G.T. Kraft. 2001. Monograph of the green macroalgal genus *Rhipilia* (Udoteaceae, Halimedales), with a description of *R. crassa* sp. nov. from Australia and the Philippines. *Phycologia* 40: 21–34.
- Nguyen, H.D., Q.N. Huynh, N.B. Tran and V.T. Nguyen. 1993. *Marine algae of North Vietnam*. Science and Technic Publishing House: Hanoi. 344 pp.
- Norris, R.E. 1987. A re-evaluation of *Ptilophora* Kützinger and *Beckerella* Kylin (Gelidiales, Rhodophyceae) with a review of South African species. *Bot. Mar.* 30: 243–258.
- O'Kelly, C.J., A. Kurihara, T.C. Shipley and A.R. Sherwood. 2010. Molecular assessment of *Ulva* spp. (Ulvophyceae, Chlorophyta) in the Hawaiian Islands. *J. Phycol.* 46: 728–735.
- Olsen, J.L. and J.A. West. 1988. *Ventricaria* (Siphonocladales-Cladophorales complex, Chlorophyta), a new genus for *Valonia ventricosa*. *Phycologia* 27: 103–108.
- Pattarach K., J. Mayakun and S.G.A. Draisma. 2019a. An enigmatic *Caulerpa macrodisca* Decaisne (Chlorophyta) from the mangrove channels on the Andaman sea coast of Thailand. *J. Fish. Environ.* 43: 27–42.
- Pattarach, K., J. Mayakun and S.G.A. Draisma. 2019b. DNA assisted diversity assessment of the green algal genus *Caulerpa* J.V.Lamouroux (Chlorophyta) in Thailand. 23rd International Seaweed Symposium, 28 Apr.-3 May 2019, Jeju, South Korea. PA61, Program et Abstract book. p. 243.
- Payo D.A., F. Leliaert, H. Verbruggen, S. D'hondt and H.P. Calumpong. 2013. Extensive cryptic species diversity and fine-scale endemism in the marine red alga *Portieria* in the Philippines. *Proc. Royal Soc. B.* 280: 20122660.
- Pongparadon S., G.C. Zuccarello, S-M. Phang, H. Kawai, T. Hanyuda and A. Prathep. 2015. Diversity of *Halimeda* (Chlorophyta) from the Thai–Malay Peninsula. *Phycologia* 54: 349–366.

- Price I.R. 2011. A taxonomic revision of the marine green algal genera *Caulerpa* and *Caulerpella* (Chlorophyta, Chlorophyceae) in northern (tropical and subtropical) Australia. *Aus. Syst. Bot.* 24: 137–213.
- Prud'homme van Reine, W.F., E. Verheij and E. Coppejans. 1996. Species and ecads of *Caulerpa* (Ulvophyceae, Chlorophyta) in Malesia (South-East Asia): Taxonomy, biogeography and biodiversity. *Neth. J. Aquatic Ecol.* 30: 83–98.
- Roleda, M.Y. and C.L. Hurd. 2019. Seaweed nutrient physiology: Application of concepts to aquaculture and bioremediation. *Phycologia* 58: 552–562.
- Rollon, R.N., M.S. Samson, M.Y. Roleda, K.G. Araño, M.W.B. Vergara and W.Y. Licuanan (2003). Estimating biomass from the cover of *Gelidiella acerosa* along the coasts of Eastern Philippines. *Bot. Mar.* 46: 497–502.
- Santianez, W.J.E., K.M. Lee, S. Uwai, A. Kurihara, P.J.L. Geraldino, E.T. Ganzon-Fortes, S.M. Boo and K. Kogame. 2018. Untangling nets: elucidating the diversity and phylogeny of the clathrate brown algal genus *Hydroclathrus*, with the description of a new genus *Tronoella* (Scytosiphonaceae, Phaeophyceae). *Phycologia* 57: 61–78.
- Sauvage T., M.J. Wynne, V.J. Paul and S. Fredericq. 2014. Morphological and molecular clarification of the enigmatic *Caulerpa floridana* W.R. Taylor (Chlorophyta, Bryopsidales) from the Dry Tortugas, Florida. *Eur. J. Phycol.* 49: 370–383.
- Silva, P.C., E.G. Meñez and R.L. Moe. 1987. Catalog of the benthic marine algae of the Philippines. *Smithsonian Contributions to the Marine Sciences* 27: 1–197.
- Škaloud, P., F. Rindi, C. Boedeker and F. Leliaert. 2018. *Freshwater Flora of Central Europe, Vol 13: Chlorophyta: Ulvophyceae*. Berlin, Heidelberg, Springer Spektrum. 289 pp.
- Smith, A.J. 2004. Medicinal and pharmaceutical uses of seaweed natural products: A review. *J. Appl. Phycol.* 16: 245–262.
- Stam, W.T., J.L. Olsen, S.F. Zaleski, S.N. Murray, K.R. Brown and L.J. Walters. 2006. A forensic and phylogenetic survey of *Caulerpa* species (Caulerpales, Chlorophyta) from the Florida coast, local aquarium shops, and e-commerce: establishing a proactive baseline for early detection. *J. Phycol.* 42: 1113–1124.
- Taylor, W.R. 1977. Notes on plants of the genus *Caulerpa* in the Herbarium of Maxwell S. Doty at the University of Hawaii. *Atoll Res. Bull.* 208: 1–17.
- Tchokouaha Yamthe, L.R., R. Appiah-Opong, P.V. Tsouh Fokou, N. Tsabang, F. Fekam Boyom, A.K. Nyarko and M.D. Wilson. 2017. Marine algae as source of novel antileishmanial drugs: A review. *Mar. Drugs* 15: 323.
- Trono Jr, G.C. 1972. Notes on some marine benthic algae in the Philippines. *Kalikasan, Philipp. J. Biol.* 1: 126–147.
- Trono Jr, G.C. 1975. The marine benthic algae of Bulusan and vicinity, province of Sorsogon I. Introduction and Chlorophyta. *Kalikasan, Philipp. J. Biol.* 4: 23–41.

- Trono Jr, G.C. 1976. The marine benthic algae of Bulusan and vicinity, province of Sorsogon II. Phaeophyta. *Kalikasan, Philipp. J. Biol.* 4: 213–220.
- Trono Jr, G.C. 1997. *Field guide and atlas of the seaweed resources of the Philippines*. Bookmark, Makati City. 306 pp.
- Trono Jr, G.C. 2004. *Field Guide of the Seaweed Resources of the Philippines Volume II*. Bureau of Agricultural Research Development, Department of Agriculture, Diliman, Quezon City and Marine Environment and Resources Foundation Inc., University of the Philippines, Diliman, Quezon City. 261 pp.
- Trono Jr, G.C. 2017. *Field Guide of the Seaweed Resources of the Philippines: Epiphytes et Microbenthic Algae Volume III*. Bureau of Agricultural Research Development, Department of Agriculture, Diliman, Quezon City. 230 pp+xvi.
- Trono Jr, G.C. 2018. *An illustrated seaweed flora collected along the Pacific seaboard of the Philippines Part II. Chlorophyceae and Phaeophyceae*. National Academy of Science and Technology (NAST), Bicutan, Taguig City, Philippines. 167 pp.
- Umamaheswara Rao, M. 1969. Catalogue of marine algae in the reference collections of the Central Marine Fisheries Research Institute. *Bull. Central Mar. Fish. Res. Inst.* 9: 37–48.
- Verbruggen, H. 2005. Resegmenting *Halimeda* molecular and morphometric studies of species boundaries within a green algal genus. DSc thesis. Ghent University, Ghent, Belgium. 214 pp.
- Verbruggen, H., O. De Clerck, T. Schils, W. Kooiistra and E. Coppejans. 2005. Evolution and phylogeny of *Halimeda* section *Halimeda* (Bryopsidales, Chlorophyta). *Mol. Phylogenet. Evol.* 37: 789–803.
- Verbruggen, H., F. Leliaert, C.A. Maggs, S. Shimada, T. Schils, J. Provan, D. Booth, S. Murphy, O. De Clerck, D.S. Littler, M.M. Littler and E. Coppejans. 2007. Species boundaries and phylogenetic relationships within the green algal genus *Codium* (Bryopsidales) based on plastid DNA sequences. *Mol. Phylogenet. Evol.* 44: 240–254.
- Verbruggen, H., L. Tyberghein, K. Pauly, C. Vlaeminck, K. Van Nieuwenhuyze, W.H.C.F. Kooiistra, F. Leliaert and O. De Clerck. 2009. Macroecology meets macroevolution: Evolutionary niche dynamics in the seaweed *Halimeda*. *Global Ecol. Biogeogr.* 18: 393–405.
- Wade, R. M. and A.R. Sherwood. 2017. Molecular determination of kleptoplast origins from the sea slug *Plakobranthus ocellatus* (Sacoglossa, Gastropoda) reveals cryptic bryopsidalean (Chlorophyta) diversity in the Hawaiian Islands. *J. Phycol.* 53: 467–475.
- Wang, W-L., S-L. Liu and S-M. Lin. 2005. Systematics of the calcified genera of the Galaxauraceae (Nemaliales, Rhodophyta) with an emphasis on Taiwan species. *J. Phycol.* 41: 685–703.
- Wiriadamrikul, J., P.J.L. Geraldino, J.M. Huisman, K. Lewmanomont and S.M. Boo. 2013. Molecular diversity of the calcified red algal genus *Tricleocarpa* (Galaxauraceae, Nemaliales) with the description of *T. jejuensis* and *T. natalensis*. *Phycologia* 52: 338–351.

Wynne, M.J. 2011. Proposal of the name *Chaetomorpha vieillardii* (Kütz.), n. comb., for a large-celled tropical *Chaetomorpha* (Chlorophyta). *Pac. Sci.* 65: 109–115.

Wynne, M.J. 2017. The reinstatement of *Lychaete* J. Agardh (Ulvophyceae, Cladophoraceae). *Notulae Algarum* 31: 1–4.

Wynne, M.J., H. Verbruggen and D.L. Angel. 2009. The recognition of *Caulerpa integerrima* (Zanardini) comb. et stat. nov. (Bryopsidales, Chlorophyta) from the Red Sea. *Phycologia* 48: 291–301.

Yang M.Y., P.J.L. Geraldino and M.S. Kim. 2013. DNA barcode assessment of *Gracilaria salicornia* (Gracilariaceae, Rhodophyta) from Southeast Asia. *Bot Stud* 54: 27.