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A List of Marine Algae from Libya

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Abstract

Based on published records of earlier collections, a list of marine algae was compiled totaling 178 species: Chlorophyta—15 genera, 29 species, Phaeophyta—19 genera, 34 species, Rhodophyta—76 genera, 112 species, Cyanophyta—2 genera, 3 species. The history of marine algal collections in Libya is discussed briefly.

Introduction

Our knowledge of the marine algae of the coast of Libya is quite meager. The first scientific expedition along the coast of Libya was in 1878 by Professor P. Ascherson, a German botanist from the University of Berlin and an authority on the central European flora. He collected only five algal specimens and reported these findings in *Beitrag zur Flora Aegyptens*. The specimens were identified by G. B. DeToni as *Gracilaria confervoides* Greville (now *G. verrucosa* (Hudson) Papenfuss), *Cladophora flavescens* Kützinger (*Cladophora fracta* (Vahl) Kützinger?), *Enteromorpha compressa* (L.) Greville and two diatoms, *Cocconeis* sp. and *Striatella unipunctata* C. Ag. Also in 1878 Captain Enrico D. Albertis commanding the "Violante" collected marine algae a few kilometers north of Tripoli. These collections were identified and published by Piccone (1879, 1884, 1892).

Professor G. Haimann, Chancellor of the Corte di Cassazione of Palermo, visited Libya in 1881 under the sponsorship of Italian government. Traveling from Bengazi to Derna he collected 44 specimens of marine algae as well as other plants. His collections were identified by A. Piccone. G. F. Ruhmer, Assistant at the Botanical Museum of Berlin, was in Bengazi from 14.xii.1882 to 19.iv.1883 surveying this region. He obtained only 9 algae which were subsequently identified by Piccone. Professor R. Spigai, professor of the Italian School in Tripoli and Constantinople visited Tripoli and its environs in 1887, collecting algal specimens that later were identified by G. B. DeToni and D. Levi. A physician, A. Vaccari, visited Libya from October, 1911 to September, 1913, while serving on the hospital

ship "Regina d'Italia" and again through 1914 on another hospital ship "Albero". During these periods he collected a total of 109 algal specimens at Bengazi, Marsa, Susa, Derna and Tobruk upon which he later published in collaboration with Professor A. Béguinot in the Archaeological Mission of Italy.

Professor A. Trotter, a member of the Gregory Mission, was sponsored by the Ministry of Agriculture in Italy to visit Tripolitania in 1912 when he collected marine algae from El-Khoms and Tripoli. At nearly the same time (1912–1913) Professor C. F. Parona of Torino collected calcareous algae principally in the vicinity of Tripoli. Rainieri (1920) subsequently published on these specimens.

In 1915–1917 the Reverend V. Zanon of the RRPP Guiseppini Mission at Fuehat (Bengazi) made extensive plant collections from the Bengazi region including 130 algae of which 30 were undescribed. The collections of Haimann, Ruhmer, Trotter, Vaccari, and Zanon were identified and published by DeToni, Levi, Forti and Piccone.

Fragmentary algal collections dredged by a Danish Oceanographic Expedition (1908–1910) were identified and published by Lemoine (1915) and Petersen (1918). Muschler (1910) and Pampanini (1931) compiled lists of marine algae from Tripolitania and Cyrenaica.

Presently, extensive collections are being made along the coast in preparation for the publication of a complete marine algal flora of Libya. It was thought necessary to have a correct nomenclatural and taxonomic list of the species thus far reported by previous workers. It

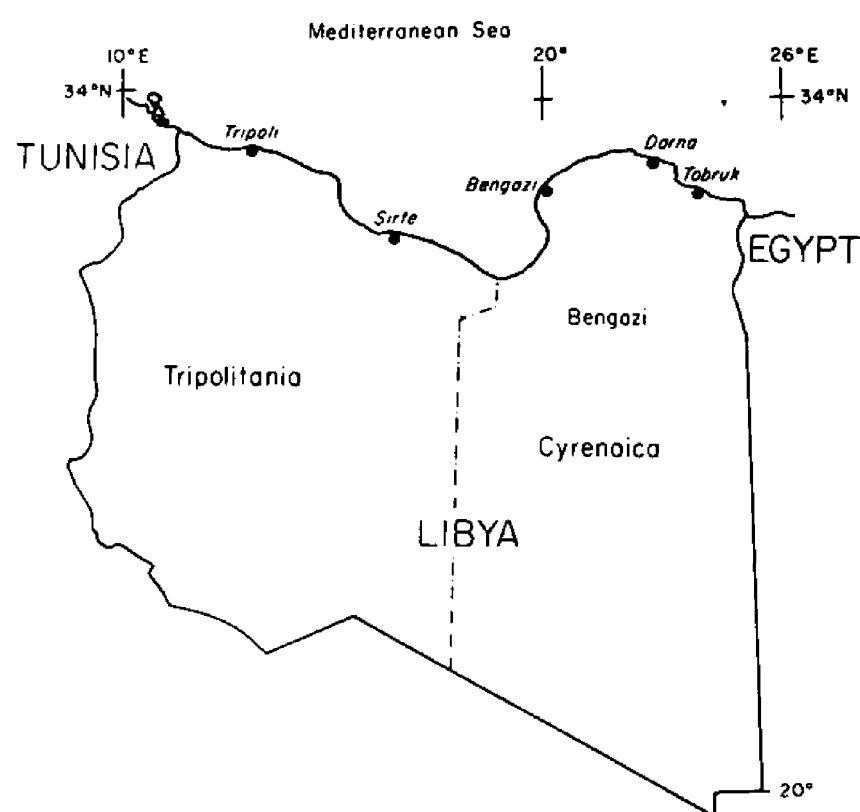


Fig. 1. A map of Libya showing major collecting sites referred to in the text.

appears that the marine algal vegetation of Libya is not rich-fifteen genera (29 species) of the Chlorophyta, 19 genera (34 species) of Phaeophyta, 76 genera (112 species) of Rhodophyta and 2 genera (3 species) in the Cyanophyta, are thus far recorded. Other algae, including the diatoms, have not been incorporated in our list. A map indicating the major collecting sites is provided (Fig. 1).

CHLOROPHYTA

CHLOROPHYCEAE

Chaetophorales

Chaetophoraceae

Phaeophila Hauck

Phaeophila dendroides (Crouan frat.) Batters

Recorded as: *Phaeophila floridearum* Hauck. DeToni et Forti 1913: 15. Pampanini 1931: 32.

Distribution: Benghazi.

Ulvella Crouan

Ulvella lens Crouan frat.

DeToni et Forti 1913: 16. Pampanini 1931: 32.

Distribution: Benghazi

Ochlochaete Thwaites in Harvey

Ochlochaete hystrix Thwaites ex Harvey

DeToni et Forti 1913: 16. Pampanini 1931: 32.

Distribution: Benghazi.

Ulvales

Ulvaceae

Enteromorpha Link (nom. cons.)

Enteromorpha clathrata (Roth) Greville

DeToni et Forti 1913: 15. Pampanini 1931: 31.

Distribution: Tobruk.

Enteromorpha compressa (Linnaeus) Greville

DeToni 1892: 147; 1895: 457. Muschler 1910: 295. Pampanini 1931: 31. Piccone 1892: 46.

Distribution: Cyrenaica, Tripoli.

Enteromorpha intestinalis (Linnaeus) Greville

Muschler 1910: 294.

Distribution: Cyrenaica.

Enteromorpha linza (Linnaeus) J. Agardh

Muschler 1910: 294. DeToni 1895: 457

Distribution: Cyrenaica, Tripoli.

Enteromorpha linza var. *crispata* J. Agardh

Muschler 1910: 294. Pampanini 1931: 31. Piccone 1892: 46.

Distribution: Cyrenaica.

Enteromorpha linza var. *lanceolata* J. Agardh

Muschler 1910: 294. Pampanini 1931: 32. Piccone 1892: 46.

Distribution: Cyrenaica.

Ulva Linnaeus

Ulva fasciata Delile

DeToni 1895: 455, 457. DeToni et Forti 1913: 15.

Distribution: Tripoli.

Ulva lactuca Linnaeus

DeToni et Levi 1888: 249. Muschler 1910: 294. Pampanini 1931: 31.

Distribution: Benghazi-Sabri.

Ulva lactuca var. *lattissima* (L.) DC

DeToni 1895: 457. Piccone 1892: 46.

Distribution: Cyrenaica, Tripoli.

Ulva lactuca f. *genuina* Hauck

Recorded as: *U. lactuca* var. *β genuina* Hauck. Muschler 1910: 294. Pampanini 1931: 31.

Distribution: Cyrenaica.

Cladophorales

Cladophoraceae

Chaetomorpha Kützinger (nom. cons.)

Chaetomorpha aerea (Dillwyn) Kützinger

DeToni 1892: 147; 1895: 457.

Distribution: Tripoli.

Chaetomorpha linum (O. F. Müller) Kützinger

Pampanini 1931: 32.

Distribution: Benghazi-Mefluga.

Cladophora Kützinger**Cladophora albida** (Hudson) Kützinger.

Pampanini 1931: 32.

Distribution: Bengazi-Mefluga.**Cladophora catenata** (J. Agardh) Hauck¹⁾

DeToni et Forti 1913: 16. Pampanini 1931: 32.

Distribution: Bengazi.**Cladophora cornea** Kützinger

DeToni et Forti 1914: 292.

Distribution: Tripoli.**Cladophora gracilis** (Griffiths) Kützinger²⁾

DeToni 1895: 457. Muschler 1910: 295. Pampanini 1931: 33.

Piccone 1892: 46.

Distribution: Cyrenaica. Tripoli.**Cladophora hutchinsiae** (Dillwyn) Kützinger

DeToni et Forti 1913: 17.

Distribution: Tripoli.**Cladophora ramulosa** Meneghini

DeToni et Forti 1913: 17. Pampanini 1931: 33.

Distribution: Tobruk.**Cladophora refracta** (Roth) Kützinger³⁾

Pampanini 1931: 33.

Distribution: Cyrenaica.**Cladophora utriculosa** Kützinger⁴⁾

DeToni et Forti 1931: 17.

Distribution: Tripoli.**Cladophora** sp.

Piccone 1884: 111.

Distribution: Tripoli.**Anadyomenaceae****Anadyomene** Lamouroux**Anadyomene stellata** (Wulfen) C. Agardh

DeToni 1895: 457. DeToni et Forti 1913: 17; 1914: 293. DeToni et Levi 1888: 249. Muschler 1910: 295. Petersen 1918: 5.

Distribution: Derna. Tripoli.**Microdictyon** Decaisne**Microdictyon tenuius** (C. Agardh) DecaisneRecorded as: *Microdictyon umbilicatum* (Vellay) Zanardini. Petersen 1918: 5.*Distribution*: Sirte. Tripoli.**Siphonocladales****Valoniaceae****Valonia** C. Agardh**Valonia utricularis** (Roth) C. Agardh

DeToni 1895: 457. DeToni et Forti 1913: 18; 1914: 293.

Muschler 1910: 297. Piccone 1884: 112; 1892: 47.

Distribution: Cyrenaica. Tripoli.**Caulerpales****Caulerpaceae****Caulerpa** Lamouroux**Caulerpa prolifera** (Forsskål) Lamouroux

Ardisonne 1893: 687. DeToni 1895: 457. DeToni et Forti

1913: 18; 1914: 293. DeToni et Levi 1888: 249. Muschler

1910: 296. Petersen 1918: 6. Piccone 1884: 112; 1892: 47.

Distribution: Bengazi. Derna. Sirte. Tripoli.**Codiales****Codiaceae****Codium** Stackhouse**Codium bursa** (Linnaeus) C. Agardh

Ardisonne 1893: 687. DeToni 1895: 457. DeToni et Forti 1913: 19.

Distribution: Tripoli.**Codium tomentosum** Stackhouse

DeToni 1895: 457. DeToni et Levi 1888: 249. Muschler 1910: 297.

Distribution: Tripoli.**Udoteaceae****Udotea** Lamouroux**Udotea petiolata** (Turra) BørgesenRecorded as: *Udotea desfontainii* (Lamouroux) Decaisne. Muschler 1910: 296.Recorded as: *Flabellaria petiolata* (Turra) Trevisan. DeToni 1895: 457. DeToni et Forti 1914: 293. Pampanini 1931: 33. Petersen 1918: 6. Piccone 1884: 115; 1892: 47.*Distribution*: Cyrenaica. Sirte. Tripoli.**Halimeda** Lamouroux (nom. cons.)**Halimeda tuna** (Ellis et Solander) Lamouroux

Ardisonne 1893: 688. DeToni 1895: 457. DeToni et Levi 1888: 249. DeToni et Forti 1913: 19; 1914: 293. Muschler 1910: 296. Pampanini 1931: 33. Petersen 1918: 7. Piccone 1884: 114; 1892: 47.

Distribution: Bengazi. Derna. Sirte. Tobruk. Tripoli.**Dasycladales****Dasycladaceae****Dasycladus** C. Agardh**Dasycladus vermicularis** (Scopoli) KrasserRecorded as: *Dasycladus claraeformis* (Roth) C. Ag.

DeToni 1895: 455, 457. Petersen 1918: 6.

Distribution: Sirte. Tobruk. Tripoli.

¹⁾ Van den Hoek (1963) indicates that Mediterranean specimens of *Cladophora lehmanniana* and *C. prolifera* were misidentified as *C. catenata* although he did not examine specimens from Libya.

²⁾ Van den Hoek (1963) treats *C. gracilis* (Griffiths) Kützinger as a synonym of *C. serracea* (Hudson) Kützinger.

³⁾ Van den Hoek (1963) states that the type specimen of *C. refracta* was destroyed in 1943 and thus is of uncertain validity.

⁴⁾ Van den Hoek (1963) treats *C. utriculosa* Kützinger as a synonym of *C. lehmanniana* (Lindenberg) Kützinger.

PHAEOPHYTA

PHAEOPHYCEAE

Ectocarpales

Ectocarpaceae

Ectocarpus (Lyngbye) Hamel

Ectocarpus confervoides (Roth) Kjellman var. *arcta* (Kützinger) Kjellman

Recorded as: *Ectocarpus arctus* Kützinger.

DeToni 1892: 146; 1895: 457.

Distribution: Tripoli.

Sphacelariales

Stypocaulaceae

Halopteris Kützinger

Halopteris scoparia (Linnaeus) Sauvageau

DeToni et Forti 1914: 291.

Recorded as: *Sphacelaria scoparia* (Linnaeus) Lyngbye. Muschler 1910: 298.

Recorded as: *Hypnocaulon scoparium* Kützinger.

Pampanini 1931: 36. Piccone 1892: 47.

Recorded as: *Stypocaulon scoparium* (Linnaeus) Kützinger.

DeToni 1892: 146; 1895: 457.

Distribution: Bengazi-Sabri. Cyrenaica. Tripoli.

Cladostephaceae

Cladostephus C. Agardh

Cladostephus verticillatus (Lightfoot) Prudhomme van Reine

DeToni 1895: 455, 457

Distribution: Tripoli.

Dictyotales

Dictyotaceae

Dictyopteris Lamouroux (nom. cons.)

Dictyopteris membranacea (Stackhouse) Batters

Recorded as: *Halysieris polypodioides* (Desfontaines) C. Agardh.

DeToni et Forti 1914: 291. DeToni et Levi 1888: 248. De Toni

1895: 457. Muschler 1910: 302. Pampanini 1931: 35. Piccone

1892: 48.

Distribution: Bengazi-Giuliana. Cyrenaica. Tripoli.

Dictyota Lamouroux (nom. cons.)

Dictyota dichotoma (Hudson) Lamouroux

DeToni et Forti 1913: 14; 1914: 291. DeToni et Levi 1888: 247.

Muschler 1910: 301. Pampanini 1931: 35. Petersen 1918: 8.

Piccone 1892: 47.

Distribution: Bengazi-Giuliana. Sirte. Tenedos. Tobruk. Tripoli.

Dictyota linearis (C. Agardh) Greville

DeToni 1895: 457. DeToni et Forti 1913: 14; 1914: 291. Muschler

1910: 301. Pampanini 1931: 35. Petersen 1918: 8. Piccone 1884:

118. *Distribution*: Bengazi-Giuliana. Sirte. Tripoli.

Dilophus J. Agardh

Dilophus fasciola (Roth) Howe

Recorded as: *Dictyota fasciola* (Roth) Lamouroux.

DeToni 1892: 146; 1895: 457. Muschler 1910: 301. Pampanini

1931: 35. Piccone 1884: 118; 1892: 48.

Distribution: Bengazi-Sabri. Tripoli.

Padina Adanson (nom. cons.)

Padina pavonia (Linnaeus) Lamouroux

DeToni 1895: 457. DeToni et Levi 1888: 247. Muschler 1910:

302. Pampanini 1931: 35. Piccone 1892: 48. Petersen 1918: 8.

Distribution: Bengazi-Giuliana. Cyrenaica. Sirte. Tripoli.

Taonia J. Agardh

Taonia atomaria (Woodward) J. Agardh

DeToni 1895: 457. DeToni et Forti 1913: 14; 1914: 291.

Muschler 1910: 302. Pampanini 1931: 34. Piccone 1892: 48.

Distribution: Cyrenaica. Tripoli.

Zonaria C. Agardh (nom. cons.)

Zonaria tournefortii (Lamouroux) Montagne

Recorded as: *Zonaria flava* (Clement) J. Agardh.

DeToni et Levi 1888: 248. Muschler 1910: 302. DeToni

1895: 457.

Distribution: Tripoli.

Chordariales

Myrionemataceae

Myrionema Greville

Myrionema strangulans Greville

Muschler 1910: 298. Pampanini 1931: 35.

Recorded as: *Myrionema vulgare* Thuret var. *maculaeformis* (Kützinger) Thuret.

Piccone 1892: 47.

Distribution: Cyrenaica.

Spermatochneaceae

Stilophora J. Agardh (nom. cons.)

Stilophora rhizodes (Turner) J. Agardh

Muschler 1910: 299. Piccone 1884: 118. DeToni 1895: 457.

Distribution: Tripoli.

Scytosiphonales

Scytosiphonaceae

Colpomenia (Endlicher) Derbés et Solier

Colpomenia sinuosa (Mertens ex Roth) Derbés et Solier

Pampanini 1931: 35.

Recorded as: *Hydroclathrus sinuosus* (Roth) Zanardini.

DeToni 1895: 457. Muschler 1910: 303. Piccone 1892: 47.

Distribution: Cyrenaica. Tripoli.

Scytosiphon C. Agardh (nom. cons.)**Scytosiphon lomentaria** (Lyngbye) Link

DeToni 1892: 146. DeToni et Forti 1914: 291.

Distribution: Tripoli.**Petalonia** Derbés et Solier**Petalonia fascia** (O. F. Müller) KuntzeRecorded as: *Phyllitis fascia* (Müller) Kützing.

DeToni et Forti 1913: 15. Pampanini 1931: 35.

Distribution: Tobruk.

Dictyosiphonales

Asperococcaceae

Asperococcus Lamouroux**Asperococcus bullosus** Lamouroux

DeToni 1895: 457.

Distribution: Tripoli.

Giraudiaceae

Giraudia Derbés et Solier**Giraudia sphacelarioides** Derbés et Solier in Castagne

DeToni 1895: 455, 457.

Distribution: Tripoli.

Cutleriales

Cutleriaceae

Zanardinia Nardo**Zanardinia prototypus** (Nardo) NardoRecorded as: *Cutleria collaris* Zanardini.

Muschler 1910: 299. Piccone 1884: 119.

Recorded as: *Zanardinia collaris* Crouan.

DeToni 1895: 457.

Distribution: Tripoli.

Fucales

Cystoseiraceae

Cystoseira C. Agardh**Cystoseira abies-marina** (Gmelin) C. Agardh

Muschler 1910: 300.

Distribution: Tripoli.**Cystoseira amentacea** (C. Agardh) Bory

DeToni 1895: 457. Muschler 1910: 300. Pampanini 1931: 34.

Piccone 1892: 48.

Distribution: Cyrenaica. Tripoli.**Cystoseira balearica** Sauvageau

DeToni et Forti 1914: 291.

Distribution: Tripoli-Gargaresc.**Cystoseira barbata** (Goodenough et Woodward)
J. Agardh

DeToni 1895: 457. Muschler 1910: 300. Pampanini 1931: 34.

Piccone 1892: 48.

Distribution: Cyrenaica. Tripoli.**Cystoseira compressa** (Esper) Gerloff and Nizamuddin
(1975)Recorded as: *Cystoseira abrotanifolia* C. Agardh.

DeToni 1895: 457. DeToni et Forti 1914: 291. Muschler

1910: 301. Pampanini 1931: 34. Piccone 1892: 48.

Distribution: Bengazi-Sabri, Giuliana. Cyrenaica. Tripoli.**Cystoseira corniculata** (Wulfen) Zanardini emend. Hauck

Muschler 1910: 300. Pampanini 1931: 34.

Distribution: Cyrenaica.**Cystoseira crinita** (Desfontaines) Duby

DeToni 1892: 145; 1895: 457. Muschler 1910: 300. Pampanini

1931: 34. Piccone 1892: 48.

Distribution: Bengazi-Giuliana. Tripoli.**Cystoseira discors** (Linnaeus) C. Agardh emend.
Sauvageau

DeToni et Forti 1914: 291. DeToni et Levi 1888: 248. Muschler

1910: 300. Piccone 1892: 48. Petersen 1918: 9.

Distribution: Cyrenaica. Sirte. Tripoli.**Cystoseira erica-marina** (Gmelin) Naccari

Piccone 1892: 48.

Distribution: Cyrenaica.**Cystoseira hopii** Valiante (non. al.)

DeToni 1895: 457.

Distribution: Tripoli.**Cystoseira montagnei** J. Agardh emend. Montagne

DeToni 1895: 457. Piccone 1884: 120.

Distribution: Tripoli.**Cystoseira spinosa** Sauvageau

DeToni et Forti 1914: 291.

Distribution: Tripoli.**Cystoseira stricta** (Montagne) Sauvageau

DeToni et Forti 1914: 291.

Distribution: Tripoli.

Sargassaceae

Sargassum C. Agardh**Sargassum acinaria** C. AgardhRecorded as: *Sargassum linifolium* (Turner) C. Agardh.

DeToni et Forti 1913: 13; 1914: 290. Muschler 1910: 299.

Pampanini 1931: 34. Petersen 1918: 9.

Recorded as: *S. linifolium* var. *linifolium* J. Agardh.

Ardisonne 1893: 685. Piccone 1892: 48.

Recorded as: *S. linifolium* var. *salicifolium* J. Agardh.

DeToni et Levi 1888: 248. Piccone 1884: 122; 1892: 48.

Recorded as: *S. salicifolium* J. Agardh.

DeToni 1895: 457.

Distribution: Bengazi. Cyrenaica. Sirte. Tripoli.**Sargassum hornschurchii** C. Agardh

DeToni et Forti 1913: 13. Piccone 1884: 122.

Distribution: Tripoli.

Sargassum trichocarpum (J. Agardh) J. Agardh

Muschler 1910: 299. Pampanini 1931: 34.

Distribution: Bengazi.

RHODOPHYTA

BANGIOPHYCEAE

Goniotrichales

Goniotrichaceae

Goniotrichum Kützinger

Goniotrichum alsidii (Zanardini) Howe

Recorded as: *Goniotrichum elegans* (Chauvin) Zanardini.

DeToni et Forti 1913: 20. Pampanini 1931: 2.

Distribution: Bengazi.

Bangiales

Bangiaceae

Bangia Lyngbye

Bangia atropurpurea (Roth) C. Agardh

Recorded as: *Bangia fuscopurpurea* (Dillwyn) Lyngbye.

DeToni 1892: 145; 1895: 457.

Distribution: Tripoli.

Porphyra C. Agardh

Porphyra umbilicalis (Linnaeus) J. Agardh

DeToni et Forti 1914: 289.

Recorded as: *Wildemania laciniata* (Lightfoot) DeToni.

DeToni 1892: 145; 1895: 457.

Distribution: Tripoli.

Erythropeltidaceae

Erythrotrichea Areschoug

Erythrotrichia carnea (Dillwyn) J. Agardh

DeToni 1892: 145; 1895: 457.

Distribution: Tripoli.

FLORIDEOPHYCEAE

Nemaliales

Acrochaetiaceae

Achrochaetium Nägeli

Achrochaetium savianum (Meneghini) Nägeli

Recorded as: *Chantransia savianum* (Meneghini) Ardissoni.

DeToni et Forti 1913: 13. Pampanini 1931: 36.

Distribution: Tobruk.

Rhodochorton Nägeli

Rhodochorton purpureum (Lightfoot) Rosenvinge.

Recorded as: *Rhodochorton rothii* (Turton) Nägeli.

DeToni 1892: 144; 1895: 457.

Distribution: Tripoli.

Helminthocladiaceae

Liagora Lamouroux

Liagora viscida (Forsskål) C. Agardh

Muschler 1910: 303. Pampanini 1931: 36. Piccope 1892: 50.

Distribution: Bengazi-Sabri. Cyrenaica. Tripoli.

Liagora viscida (Forsskål) C. Agardh f. *ceranoides* (Zan.)

Feldmann

Recorded as: *Liagora ceranoides* Zanardini.

DeToni 1892: 143; 1895: 457.

Distribution: Tripoli.

Chaetangiaceae

Galaxaura Lamouroux

Galaxaura oblongata (Ellis et Solander) Lamouroux

Recorded as: *Galaxaura adriatica* Zanardini.

DeToni 1895: 457. DeToni et Levi 1888: 244. Muschler

1910: 303.

Distribution: Tripoli.

Scinaia Bivona

Scinaia forcillata Bivona

Recorded as: *Scinaia furcellata* (Turner) Bivona.

DeToni 1895: 452, 457.

Distribution: Tripoli.

Bonnemaisoniaceae

Asparagopsis Montagne

Asparagopsis taxiformis (Delile) Trevisan

Recorded as: *Asparagopsis delilei* Montagne.

DeToni 1895: 453, 457

Distribution: Tripoli.

Gelidiales

Gelidiaceae

Gelidium Lamouroux

Gelidium crinale (Turner) Lamouroux

DeToni 1895: 457. DeToni et Levi 1888: 245. Muschler

1910: 303.

Distribution: Tripoli.

Pterocladia J. Agardh

Pterocladia capillacea (Gmelin) Bornet et Thuret

Schmidt 1957: 715.

Distribution: Tripoli.

Pterocladia tripolitana DeToni et Levi

DeToni 1895: 457. DeToni et Levi 1888: 245. Muschler

1910: 304.

Distribution: Tripoli.

Cryptonemiales

Gloiosiphoniaceae

Schimmelmannia Schousboe ex Kützinger

Schimmelmannia ornata Schousboe ex Kützinger.

DeToni 1895: 454, 457.

Distribution: Tripoli.

Rhizophyllidaceae***Rhizophyllis* Kützing*****Rhizophyllis squamariae* (Meneghini) Kützing**

DeToni 1895: 457. DeToni et Levi 1888: 244. Muschler 1910: 311. Pampanini 1931: 39.

Distribution: Bengazi-Giuliana. Tripoli.

Peyssonneliaceae***Peyssonnelia* Decaisne*****Peyssonnelia polymorpha* (Zanardini) Schmitz in Falkenberg**

DeToni et Forti 1913: 6.

Distribution: Tripoli.

***Peyssonnelia dubyi* Crouan frat**

Recorded as: *Cruoriella dubyi* (Crouan frat.) Schmitz.

DeToni et Forti 1914: 290.

Distribution: Tripoli-Sciara Sciat.

***Peyssonnelia rubra* (Greville) J. Agardh**

DeToni 1895: 457. DeToni et Forti 1914: 290. DeToni et Levi 1888: 243. Muschler 1910: 311. Petersen 1918: 12. Piccone 1884: 129. Raineri 1921: 148.

Distribution: Sirte. Tripoli.

***Peyssonnelia squamaria* (Gmelin) Decaisne**

DeToni 1895: 457. DeToni et Forti 1913: 6; 1914: 290. DeToni et Levi 1888: 243. Muschler 1910: 311. Pampanini 1931: 39. Piccone 1892: 49.

Distribution: Bengazi-Giuliana. Cyrenaica. Tripoli.

Contarinia* Zanardini**Contarinia peyssonneliaeformis* Zanardini**

Ardissone 1893: 683. DeToni 1895: 457. DeToni et Forti 1913: 7. DeToni et Levi 1888: 244. Muschler 1910: 311.

Distribution: Tripoli.

Corallinaceae***Corallina* Linnaeus*****Corallina granifera* Ellis et Solander**

Pampanini 1931: 40.

Recorded as: *Corallina virgata* Zanardini.

DeToni 1895: 457. Muschler 1910: 313. Petersen 1918: 12.

Piccone 1892: 52.

Distribution: Cyrenaica. Derna. Tripoli.

***Corallina mediterranea* Areschoug**

Raineri 1921: 147.

Distribution: Tripoli.

***Corallina officinalis* Linnaeus**

DeToni 1895: 457. Muschler 1910: 312. Pampanini 1931: 40. Piccone 1892: 52. Raineri 1921: 147.

Distribution: Cyrenaica. Tripoli.

Jania* Lamouroux**Jania adhaerens* Lamouroux**

Recorded as: *Corallina adhaerens* (Lamouroux) Kützing.

Muschler 1910: 313. Pampanini 1931: 40. Piccone 1892: 52.

Distribution: Cyrenaica.

***Jania corniculata* (Linnaeus) Lamouroux**

DeToni 1892: 144; 1895: 457.

Distribution: Tripoli.

***Jania rubens* (Linnaeus) Lamouroux**

DeToni 1895: 457. DeToni et Levi 1888: 247. Muschler 1910: 313. Piccone 1892: 52.

Recorded as: *Corallina rubens* Lamouroux.

DeToni et Forti 1913: 4; 1914: 290. Pampanini 1931: 40.

Distribution: Bengazi-Giuliana. Cyrenaica. Tobruk. Tripoli.

Amphiroa* Lamouroux**Amphiroa rigida* Lamouroux**

DeToni 1895: 457. DeToni et Forti 1913: 4; 1914: 290.

Muschler 1910: 312. Pampanini 1931: 40. Piccone 1892: 51.

Distribution: Cyrenaica. Tripoli.

Lithophyllum* Philippi**Lithophyllum byssoides* (Lamouroux) Foslie**

DeToni et Forti 1913: 4. Raineri 1921: 142.

Distribution: El-Khoms. Tripoli.

***Lithophyllum decussatum* (Ellis et Solander) Philippi**

Raineri 1921: 144.

Distribution: El-Khoms. Tripoli.

***Lithophyllum incrustans* Philippi**

DeToni et Forti 1914: 290.

Distribution: Tripoli.

***Lithophyllum racemus* (Lamarck) Foslie**

DeToni et Forti 1913: 5.

Distribution: Tripoli.

***Lithophyllum solutum* (Foslie) Lemoine**

Lemoine 1915: 13. Schmidt 1957: 716.

Distribution: Sirte. Tripoli.

Pseudolithophyllum* Lemoine**Pseudolithophyllum expansum* (Philippi) Lemoine**

Recorded as: *Lithophyllum expansum* Philippi.

DeToni et Forti 1914: 290. Lemoine 1915: 14. Raineri

1921: 140. Schmidt 1957: 716.

Additional Synonymy: *Crodelia expansa* (Philippi) Kylin.

Distribution: Derna. Sirte. Tripoli.

Dermatolithon* Foslie⁵**Dermatolithon pustulatum* (Lamouroux) Foslie**

DeToni et Forti 1913: 5. Muschler

1910: 312. Pampanini 1931: 40. Schmidt 1957: 716.

Recorded as: *Melobesia pustulata* Lamouroux.

DeToni 1895: 457. Piccone 1892: 51.

Distribution: Cyrenaica. Tripoli.

⁵) The correct name for *Dermatolithon* is *Tenarea* although this combination has not yet been formally proposed for the species listed here.

Dermatolithon corallinae (Crouan frat.) Foslie in
Børgesen

Recorded as: *Melobesia corallinae* Crouan frat.
DeToni et Forti 1913: 5. Pampanini 1931: 39.
Distribution: Tobruk.

Dermatolithon cystoseirae (Hauck) Huvé

Recorded as: *Melobesia cystoseirae* Hauck.
DeToni et Forti 1913: 5. Pampanini 1931: 39.
Synonym: *D. papillosum* (Zanard.) Foslie var. *cystoseirae*
(Hauck) Lemoine.
Distribution: Bengazi-Giuliana, Tobruk.

Lithothamnium Philippi

Lithothamnium crispatum Hauck

Raineri 1920: 283; 1921: 134.
Distribution: Tripoli.

Lithothamnium fruticulosum (Kützinger) Foslie

DeToni et Forti 1913: 5. Raineri 1920: 286; 1921: 138.
Distribution: Tripoli.

Phymatolithon Foslie

Phymatolithon lenormandii (Areschoug) Adey

Recorded as: *Lithothamnium lenormandii* (Areschoug) Foslie.
Raineri 1920: 285; 1921: 136.
Distribution: Tripoli.

Mesophyllum Lemoine

Mesophyllum lichenoides (Ellis et Solander) Lemoine

Recorded as: *Lithophyllum lichenoides* Rosan.
DeToni 1895: 457. Piccone 1892: 51. Raineri 1921: 141.
Recorded as: *Lithothamnium lichenoides* (Ellis et Solander)
Heydrich. Muschler 1910: 312. Pampanini 1931: 39.
Distribution: Cyrenaica, Tripoli.

Mesophyllum philippii (Foslie) Adey

Recorded as: *Lithothamnium philippii* Foslie.
Raineri 1920: 285; 1921: 137.
Distribution: Tripoli.

Neogoniolithon Setchell et Mason

Neogoniolithon mamillosum (Hauck) Setchell et Mason

Recorded as: *Lithothamnium hauckii* Rothpletz.
Lemoine 1915: 8. Raineri 1920: 284; 1921: 135. Schmidt
1957: 716.
Distribution: Derna, Sirte, Tripoli.

Fosliella Howe

Fosliella farinosa (Lamouroux) Howe

Recorded as: *Melobesia farinosa* Lamouroux.
DeToni 1895: 457. DeToni et Forti 1913: 6; 1914: 290.
Pampanini 1931: 40. Piccone 1892: 51.
Distribution: Bengazi-Giuliana, Cyrenaica, Tripoli.

Fosliella lejolisii (Rosanoff) Howe

Recorded as: *Melobesia lejolisii* Rosanoff.
Muschler 1910: 312. Pampanini 1931: 40. Raineri 1921: 146.
Distribution: Cyrenaica.

Fosliella zonalis (Crouan frat.) J. Feldmann

Recorded as: *Melobesia zonalis* (Crouan) Foslie. Lemoine
1915: 20.
Distribution: Sirte.

Cryptonemiaceae

Halymenia C. Agardh

Halymenia fastigiata J. Agardh

Muschler 1910: 310. Pampanini 1931: 39.
Distribution: Bengazi.

Halymenia floresia (Clement) C. Agardh

DeToni 1895: 455, 457
Distribution: Tripoli.

Grateloupia C. Agardh

Grateloupia dichotoma J. Agardh

DeToni 1895: 457. DeToni et Levi 1888: 242. Muschler
1910: 310.
Distribution: Tripoli.

Grateloupia filicina (Lamouroux) C. Agardh

Pampanini 1931: 39.
Distribution: Bengazi-Giuliana.

Cryptonemia J. Agardh

Cryptonemia lomation (Bertoloni) J. Agardh

DeToni 1895: 457. DeToni et Forti 1914: 290. Muschler
1910: 310. Piccone 1884: 124.
Distribution: Tripoli.

Acrodiscus Zanardini

Acrodiscus vidovichii (Meneghini) Zanardini

DeToni 1895: 457. DeToni et Forti 1914: 290. DeToni et
Levi 1888: 243. Muschler 1910: 310.
Distribution: Tripoli.

Gigartinales

Sebdeniaceae

Sebdenia Kylin

Sebdenia monardiana (Montagne) Berthold

Recorded as: *Halymenia monardiana* Montagne.
DeToni 1895: 457. DeToni et Levi 1888: 242.
Distribution: Tripoli.

Gracilariaceae

Gracilaria Greville (nom. cons.)

Gracilaria armata (C. Agardh) Greville

DeToni 1895: 453, 457.
Distribution: Tripoli.

Gracilaria dura (C. Agardh) J. Agardh

DeToni 1895: 453, 457.
Distribution: Tripoli.

***Gracilaria verrucosa* (Hudson) Papenfuss**

Recorded as: *Gracilaria confervoides* Greville.
DeToni 1895: 457. Muschler 1910: 304. Pampanini 1931: 36.
Piccone 1892: 49. Schmidt 1957: 715.
Distribution: Cyrenaica. Tripoli.

Plocamiaceae***Plocamium* Lamouroux*****Plocamium cartilagineum* (Linnaeus) Dixon⁶**

Recorded as: *Plocamium coccineum* (Hudson) Lyngbye.
DeToni 1895: 453, 457.
Distribution: Tripoli.

Sphaerococcaceae***Sphaerococcus* Stackhouse*****Sphaerococcus coronopifolius* (Goodenough et Woodward) Stackhouse**

DeToni 1895: 457. DeToni et Forti 1913: 12. DeToni et Levi 1888: 244. Muschler 1910: 304. Pampanini 1931: 36. Piccone 1892: 49. Schmidt 1957: 715.
Distribution: Cyrenaica. Tripoli.

Caulacanthus* Kützing**Caulacanthus ustulatus* (Turner) Kützing**

DeToni et Forti 1914: 289.
Distribution: Tripoli.

Rissoellaceae***Rissoella* J. Agardh*****Rissoella verruculosa* (Bertoloni) J. Agardh**

DeToni 1895: 452, 457.
Distribution: Tripoli.

Hypneaceae***Hypnea* Lamouroux*****Hypnea musciformis* (Wulfen) Lamouroux**

DeToni 1895: 457. DeToni et Forti 1913: 11. Muschler 1910: 305. Pampanini 1931: 36. Piccone 1892: 50.
Distribution: Bengazi. Tripoli.

Phyllophoraceae***Phyllophora* Greville*****Phyllophora nervosa* (DeCandolle) Greville**

DeToni 1895: 457. Muschler 1910: 304. Pampanini 1931: 36.
Piccone 1892: 49.
Distribution: Cyrenaica. Tripoli.

Gymnogongrus* Martius**Gymnogongrus griffithsiae* (Turner) Martius**

DeToni 1895: 452.
Recorded as: *Actinococcus aggregatus* Schmitz.
DeToni 1895: 452, 457. DeToni et Forti 1913: 12.
Distribution: Tripoli.

⁶) Dixon (1967) discussed the nomenclatural changes related to *P. coccineum*

Rhodymeniaceae***Gloiocladia* J. Agardh*****Gloiocladia furcata* (C. Agardh) J. Agardh**

DeToni 1895: 453, 457.
Distribution: Tripoli.

Faucea* Montagne**Faucea repens* (C. Agardh) Montagne et Bory**

DeToni 1895: 453, 457.
Distribution: Tripoli.

Chrysymenia* J. Agardh**Chrysymenia ventricosa* (Lamouroux) J. Agardh var. *digitata* (Zanardini) Hauck**

DeToni 1895: 457. Muschler 1910: 305.
Recorded as: *Chrysymenia digitata* Zanardini. DeToni 1895: 457. Piccone 1884: 123.
Distribution: Tripoli.

Botryocladia* Kylin**Botryocladia botryoides* (Wulfen) Feldmann**

Recorded as: *Chrysymenia uvaria* (Linnaeus) J. Agardh.
DeToni et Forti 1914: 289.
Recorded as: *Botryocladia uvaria* (Wulfen) Kylin.
DeToni 1895: 457. DeToni et Levi 1888: 243. Muschler 1910: 305. Schmidt 1957: 715.
Distribution: Tripoli.

***Botryocladia chiajeana* (Meneghini) Kylin**

Recorded as: *Chrysymenia chiajeana* Meneghini.
DeToni 1895: 453. Muschler 1910: 305. Piccone 1884: 124.
Distribution: Tripoli.

Lomentariaceae***Gastroclonium* Kützing*****Gastroclonium clavatum* (Roth) Ardissonne**

DeToni et Forti 1913: 11.
Distribution: Tripoli.

Ceramiales**Ceramiaceae*****Antithamnion* Nägeli*****Antithamnion plumula* (Ellis) Thuret in LeJolis**

DeToni 1892: 144; 1895: 457.
Distribution: Tripoli.

Ceramium* Roth**Ceramium ciliatum* (Ellis) Ducluz**

DeToni 1892: 144; 1895: 457. DeToni et Forti 1913: 7; 1914: 290.
Distribution: Tripoli.

***Ceramium circinatum* (Kützing) J. Agardh**

DeToni et Forti 1913: 7; 1914: 290. Pampanini 1931: 38.
Distribution: Tripoli. Tobruk.

Ceramium diaphanum var. *elegans* (Roth) Feldmann et Mazoyer

Recorded as: *Ceramium diaphanum* (Lightfoot) Roth.
DeToni 1895: 457, Muschler 1910: 310. Pampanini 1931: 39.
Recorded as: *Ceramium elegans* Ducluz.
Piccone 1892: 49.
Distribution: Cyrenaica, Tripoli.

Ceramium rubrum (Hudson) C. Agardh

DeToni 1892: 144; 1895: 457.
Distribution: Tripoli.

Ceramium tenuissimum (Roth) J. Agardh

Recorded as: *Callithamnion tenuissimum* Kützinger.
Pampanini 1931: 38.
Distribution: Bengazi-Giuliana.

Microcladia Greville

Microcladia glandulosa (Solander ex Turner) Greville

DeToni 1895: 454, 457.
Distribution: Tripoli.

Spyridia Harvey in Hooker

Spyridia filamentosa (Wulfen) Harvey in Hooker

DeToni et Forti 1913: 7.
Distribution: Tripoli.

Wrangelia C. Agardh

Wrangelia penicillata (C. Agardh) C. Agardh

DeToni 1895: 452, 457. DeToni et Forti 1913: 12. Pampanini 1931: 36.
Distribution: Bengazi-Giuliana, Tripoli.

Callithamnion Lyngbye

Callithamnion granulatum (Ducluz) C. Agardh

De Toni 1895: 454, 457.
Distribution: Tripoli.

Aglaothamnion G. Feldmann

Aglaothamnion scopulorum (C. Agardh) G. Feldmann

Recorded as: *Callithamnion scopulorum* C. Agardh.
DeToni 1892: 144; 1895: 457.
Distribution: Tripoli.

Pleonosporium Nägeli

Pleonosporium borrieri (Smith) Nägeli ex Hauck

DeToni 1895: 454, 457
Distribution: Tripoli.

Bornetia Thuret

Bornetia secundiflora (J. Agardh) Thuret

DeToni 1895: 454, 457. Muschler 1910: 309. Pampanini 1931: 38. Piccone 1892: 50.
Distribution: Tripoli.

Griffithsia C. Agardh

Griffithsia schousboei Montagne

DeToni 1892: 143; 1895: 457.
Distribution: Tripoli.

Spermothamnion Areschoug

Spermothamnion flabellulatum Bornet

DeToni 1895: 457.
Distribution: Tripoli.

Delesseriaceae

Acrosorium Zanardini

Acrosorium uncinatum (J. Agardh) Kylin

Recorded as: *Nitophyllum uncinatum* J. Agardh.
Pampanini 1931: 37.
Distribution: Bengazi-Giuliana.

Hypoglossum Kützinger

Hypoglossum woodwardii Kützinger

Pampanini 1931: 37.
Recorded as: *Delesseria hypoglossum* (Woodward) Lamouroux.
DeToni 1895: 457. Muschler 1910: 306. Piccone 1892: 49.
Distribution: Cyrenaica, Tripoli.

Dasyaceae

Dasya C. Agardh

Dasya rigidula (Kützinger) Ardissonne

DeToni et Forti 1914: 290.
Distribution: Cyrenaica, Tripoli.

Dasyopsis Zanardini

Dasyopsis plana (C. Agardh) Zanardini

DeToni 1895: 454, 457.
Distribution: Tripoli.

Dasyopsis spinella (C. Agardh) Zanardini

Recorded as: *Dasya spinella* C. Agardh.
DeToni 1895: 457. Muschler 1910: 309. Piccone 1884: 138.
Distribution: Tripoli.

Rhodomelaceae

Polysiphonia Greville (nom. cons.)

Polysiphonia castelliana De Notaris et Dufour

DeToni 1895: 457. Piccone 1892: 51.
Distribution: Cyrenaica, Tripoli.

Polysiphonia complanata (Clemente) J. Agardh

DeToni 1895: 454, 457
Distribution: Tripoli.

Polysiphonia elongata (Hudson) Sprengel

DeToni 1892: 143; 1895: 457. Muschler 1910: 307. Piccone 1884: 134.
Distribution: Tripoli.

Polysiphonia sertularioides (Grateloup) J. Agardh

DeToni 1892: 143; 1895: 457.
Distribution: Tripoli.

Polysiphonia subulifera (C. Agardh) Harvey

DeToni 1895: 457. Muschler 1910: 307. Piccone 1884: 135.
Distribution: Tripoli.

Børgesenella* Kylin**Børgesenella fruticulosa* (Wulfen) Kylin**

Recorded as: *Polysiphonia fruticulosa* (Wulfen) Sprengel.
DeToni 1895: 457. DeToni et Forti 1913: 10; 1914: 289.
Muschler 1910: 308. Pampanini 1931: 37. Piccone 1892: 51.
Distribution: Cyrenaica. Tripoli.

Digenia* C. Agardh**Digenia simplex* (Wulfen) C. Agardh**

DeToni 1895: 457. Muschler 1910: 308. Pampanini 1931: 37.
Piccone 1892: 50.
Distribution: Cyrenaica. Tripoli.

Brongniartella* Bory**Brongniartella byssoides* (Goodenough et Woodward) Schmitz**

DeToni et Forti 1913: 10. Pampanini 1931: 37.
Distribution: Bengazi. Tobruk. Tripoli.

Dipterosiphonia

Schmitz et Falkenberg in Engler et Prantl

***Dipterosiphonia rigens* (Schousboe) Falkenberg**

DeToni et Forti 1913: 9; 1914: 289.
Distribution: Tripoli.

Herposiphonia* Nägeli**Herposiphonia secunda* (C. Agardh) Ambronn**

Muschler 1910: 308. Pampanini 1931: 37.
Recorded as: *Polysiphonia secunda* (C. Agardh) Zanardini.
Piccone 1892: 51. DeToni 1895: 457.
Distribution: Bengazi-Sabri, Giuliana. Cyrenaica. Tripoli.

***Herposiphonia tenella* (C. Agardh) Ambronn**

DeToni et Forti 1913: 9.
Distribution: Tripoli.

Lophocladia* Schmitz**Lophocladia lallemandii* (Montagne) Schmitz**

Petersen 1918: 17.
Distribution: Derna. Sirte. Tripoli.

Lophosiphonia* Falkenberg in Engler et Prantl**Lophosiphonia cristata* Falkenberg**

DeToni et Forti 1913: 9. Pampanini 1931: 38.
Distribution: Tobruk.

***Lophosiphonia obscura* (J. Agardh) Falkenberg**

DeToni et Forti 1913: 9. Muschler 1910: 308. Pampanini 1931: 38.
Recorded as: *Polysiphonia obscura* (C. Ag.) J. Ag.
DeToni 1895: 457.
Distribution: Cyrenaica. Tripoli.

Rytiphlaea* C. Agardh**Rytiphlaea tinctoria* (Clemente) C. Agardh**

DeToni 1895: 457. DeToni et Forti 1913: 8; 1914: 290. Muschler 1910: 308. Pampanini 1931: 38. Petersen 1918: 17. Piccone 1884: 136; 1892: 51.
Distribution: Bengazi-Giuliana. Cyrenaica. Sirte. Tripoli.

Halopitys* Kützinger**Halopitys incurvus* (Hudson) Batters**

Recorded as: *Halopithys pinastroides* (Gmelin) Kützinger.
DeToni 1895: 457. DeToni et Forti 1914: 298. Muschler 1910: 309. Pampanini 1931: 38.
Recorded as: *Rytiphloea pinastroides* (Gmelin) C. Agardh.
Piccone: 1892: 51.
Distribution: Cyrenaica. Tripoli.

Vidalia* Lamouroux**Vidalia volubilis* (Linnaeus) J. Agardh**

DeToni 1895: 457. DeToni et Forti 1914: 290. DeToni et Levi 1888: 246. Muschler 1910: 309. Pampanini 1931: 38. Petersen 1918: 17. Piccone 1884: 137; 1892: 51. Schmidt 1957: 715.
Distribution: Cyrenaica. Sirte. Tripoli.

Chondria* C. Agardh**Chondria dasyphylla* (Goodenough et Woodward) C. Agardh**

DeToni 1895: 457. Pampanini 1931: 37.
Recorded as: *Chondriopsis dasyphylla* (Woodward) J. Agardh.
Piccone 1892: 50. Muschler 1910: 307.
Distribution: Cyrenaica. Tripoli.

Acanthophora* Lamouroux**Acanthophora najadiformis* (Delile) Papenfuss**

Recorded as: *Acanthophora delilei* Lamouroux.
DeToni 1895: 457. DeToni et Levi 1888: 247. Muschler 1910: 307. Schmidt 1957: 715.
Distribution: Tripoli.

Ricardia* Derbés et Solier**Ricardia montagnei* Derbés et Solier**

DeToni 1895: 457. DeToni et Levi 1888: 246. Muschler 1910: 306.
Distribution: Tripoli.

Laurencia* Lamouroux**Laurencia obtusa* (Hudson) Lamouroux**

DeToni 1895: 457. DeToni et Forti 1913: 10. DeToni et Levi 1888: 246. Muschler 1910: 306. Pampanini 1931: 37. Petersen 1918: 17. Piccone 1884: 133; 1892: 50.
Distribution: Bengazi-Sabri. Cyrenaica. Derna. Tripoli.

***Laurencia paniculata* (C. Agardh) J. Agardh**

DeToni et Forti 1913: 10; 1914: 289.
Distribution: Tripoli.

***Laurencia papillosa* (C. Agardh) Greville**

DeToni 1895: 457. DeToni et Forti 1913: 11. DeToni et Levi 1888: 246. Muschler 1910: 306. Pampanini 1931: 37. Piccone 1884: 133; 1892: 50.
Distribution: Bengazi-Sabri. Cyrenaica. Tripoli.

Halodictyon* Zanardini**Halodictyon mirabile* Zanardini**

DeToni et Forti 1913: 8. Pampanini 1931: 38.
Distribution: Tobruk.

CYANOPHYTA

CYANOPHYCEAE

Nostocales

Rivulariaceae

Calothrix C. Agardh ex Bornet et Flahault

Calothrix aeruginea (Kützinger ex Thuret) Bornet et Flahault

DeToni et Forti 1913: 20. Pampanini 1931: 2.

Distribution: Bengazi.

Calothrix crustaceae Thuret ex Bornet et Flahault

DeToni 1895: 456, 457.

Distribution: Tripoli.

Oscillatoriaceae

Lyngbya C. Agardh ex Gomont

Lyngbya sordida (Zanardini) Gomont

DeToni 1895: 456, 457.

Distribution: Tripoli.

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