

Cyanobacteria of Greece: an annotated checklist

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Abstract

Background

The checklist of Greek Cyanobacteria was created in the framework of the Greek Taxon Information System (GTIS), an initiative of the LifeWatchGreece Research Infrastructure (ESFRI) that has resumed efforts to compile a complete checklist of species reported from Greece. This list was created from exhaustive search of the scientific literature of the last 60 years. All records of taxa known to occur in Greece were taxonomically updated.

New information

The checklist of Greek Cyanobacteria comprises 543 species, classified in 130 genera, 41 families, and 8 orders. The orders Synechococcales and Oscillatoriales have the highest number of species (158 and 153 species, respectively), whereas these two orders along with Nostocales and Chroococcales cover 93% of the known Greek cyanobacteria species. It is worth mentioning that 18 species have been initially described from Greek habitats. The marine epilithic *Ammatoidea aegea* described from Saronikos Gulf is considered endemic to this area. Our bibliographic review shows that Greece hosts a high diversity of cyanobacteria, suggesting that the Mediterranean area is also a hot spot for microbes.

Keywords

blue-green algae, Cyanophyceae, bacteria, microorganisms, Aegean Sea, freshwater, marine, checklist, biodiversity, Mediterranean

Introduction

The history of natural science is directly linked to Greek civilization, since the older written references to plants, animals, and algae are found in the Homeric Epics dating back to the 8th century BC; the first record of algae in the Western literature appears in Homer's Iliad:

“the dark waves uprear their heads and scatter their sea-wrack (*phycos*) in all directions” [*Iliad* IX.1 translated by Batler (1998)]. The Greek philosopher, and first marine biologist, Aristotle, who has established scientific knowledge for many animal and plant taxa (see Voultziadou 2007) reported “red snow” in 4th century BC: “after lying for some time, snow turns slightly red” (*Historia Animalium* 552b8 translated by Peck 1970); this is considered as one of the oldest records of snow algae [unicellular Chlorophyta, like *Chlamydomonas* or *Chloromonas* according to Duval et al. (1999)].

In modern times, research on Greek microflora, Cyanobacteria included, started in the 20th century with the studies of freshwater algae by Stanković (1931) and Skuja (1937). In the subsequent two decades, no published work in microflora can be traced until the limnological survey by Ananiadis (1956). During the 1960s Konstantinos Anagnostidis performs two extensive studies of Cyanobacteria from thermal springs (Anagnostidis 1961) and sulphur-communities (Sulphuretum) in marine and freshwater habitats of Greece (Anagnostidis 1968). These taxonomic studies revealed the occurrence of a great number of cyanobacteria taxa, led to the description of several new species (e.g. *Geitlerinema apolloniae* Anagnostidis, 2001; *Leptolyngbya phormidioides* (Anagnostidis) Anagnostidis & Komárek, 1988; *Pseudanabaena lonchoides* Anagnostidis, 1961; *Pseudophormidium battersii* (Gomont) Anagnostidis, 2001; *Borzia perikleii* Anagnostidis in (Anagnostidis and Komárek 1988)), and were later widely used to establish the modern classification system of Cyanobacteria (Anagnostidis and Komárek 1985, Anagnostidis and Komárek 1988, Anagnostidis and Komárek 1990, Komárek and Anagnostidis 1986, Komárek and Anagnostidis 1989). Although a lot of the valuable taxonomic, ecological, and biogeographical information recorded in Anagnostidis' monographs is now contained in the “Süßwasserflora von Mitteleuropa” series (Komárek 2013, Komárek and Anagnostidis 1999, Komárek and Anagnostidis 2005, Komárek 2013), many details of his work remain unavailable to the broader scientific community since they were published in Greek.

The systematic research on Greek Cyanobacteria started in the 1980s with a series of publications on cyanobacterial taxonomy and species composition (Anagnostidis and Economou-Amilli 1978, Anagnostidis and Economou–Amilli 1980, Anagnostidis et al. 1981, Anagnostidis et al. 1982, Overbeck et al. 1982, Anagnostidis et al. 1983, Anagnostidis and Pantazidou 1985, Anagnostidis and Pantazidou 1988a, Anagnostidis and Pantazidou 1988b, Anagnostidis and Pantazidou 1988c, Hindak and Moustaka 1988, Anagnostidis et al. 1988a, Anagnostidis and Pantazidou 1991b, Anagnostidis and Pantazidou 1991a, Anagnostidis and Roussomoustakaki 1991, Tryfon 1996), as well as on population dynamics (Moustaka-Gouni 1988, Moustaka-Gouni and Nikolaidis 1990, Moustaka-Gouni and Nikolaidis 1992, Tafas and Economou-Amilli 1997, Tryfon et al. 1997, Montesanto et al. 1999, Moustaka-Gouni et al. 2000, Temponeras et al. 2000, Vardaka et al. 2000) regarding both the freshwater and marine waterbodies. The recent research on cyanobacterial diversity in Greece comprises polyphasic or multidisciplinary studies of cyanobacteria strains (Gkelis et al. 2005b, Lamprinou et al. 2011, Lamprinou et al. 2013a, Lamprinou et al. 2013b, Gkelis et al. 2015b, Gkelis and Panou 2016, Bravakos et al. 2016), natural populations (Moustaka-Gouni et al. 2009, Moustaka-Gouni et al. 2010, Papadimitriou et al. 2013, Gkelis and Zaoutsos 2014, Gkelis et al. 2014, Gkelis et al.

2015a), as well as ecological works (e.g. Lamprinou et al. 2009, Katsiapi et al. 2011, Katsiapi et al. 2012).

Despite the increased research efforts, knowledge of diversity and distribution of Cyanobacteria in Greece is still inconsistent since no list on local cyanobacterial flora has ever been published. Modern biodiversity research faces an ever increasing rate of data generation and efforts are made to structure, aggregate, link and process these data in a meaningful way (Koureas et al. 2016). Currently, the Greek Taxon Information System (GTIS), an initiative launched by the LifeWatchGreece Research Infrastructure (ESFRI), is resuming efforts to compile a database of all species reported from Greece; a prerequisite for GTIS is to have checklists for each taxonomic group (Bailly et al. 2016). The aim of this study is to create a checklist of cyanobacterial taxa inhabiting the area of Greece on the basis of the recent taxonomic revisions.

Materials and methods

The Checklist of Greek Cyanobacteria was created in the framework of the Greek Taxon Information System (GTIS), an initiative of the LifeWatchGreece Research Infrastructure (ESFRI) that has resumed efforts to compile a complete checklist of all species reported from Greece (Bailly et al. 2016). In that publication, a methodology is described to produce Preliminary Checklists only. However, in the present case of Cyanobacteria, the status of the list for Greece was quite advanced, and the recent primary literature was exhaustively searched for this work; the present list is thus considered as an updated, annotated, and archived checklist.

The data for this study were collected through extensive search in the scientific literature of the last 60 years. The search was performed in Scopus and Web of Science using the keywords: Greece AND cyanobacteria, Greece AND phytoplankton, Greece AND cyanoprokaryota, Greece AND blue-green algae. Furthermore, the two exhaustive monographs by Anagnostidis (Anagnostidis 1961, Anagnostidis 1968) were studied and the cyanobacterial taxa were recorded. All geographical areas of Greece and all biomes (freshwater, marine, terrestrial, caves etc.) and biotic forms (planktic, benthic, periphytic, endolithic, epizotic etc.) were considered.

The taxonomic status of the recorded cyanobacterial taxa was checked and updated, where necessary, to the currently accepted taxonomically species using Komárek and Anagnostidis (1999), Komárek and Anagnostidis (2005), Komárek (2013), and the AlgaeBase (Guiry and Guiry 2016). The species were classified to suprageneric taxa according to the latest taxonomic revisions on the basis of polyphasic methods (Komárek et al. 2014, Komárek 2016). Not valid species, species of unclear taxonomic status, and species transferred to other phyla were excluded from the list. Also, infraspecific taxa that are not valid or need revision were not included in the list. The first publication mentioning a taxon's occurrence in Greece and the original name used in that record is given under Notes and Nomenclature, respectively.

Data resources

The data collected were published in Global Biodiversity Information Facility (GBIF) through the Integrated Publishers Toolkit (IPT) according to the Darwin Core Archive biodiversity informatics data standard and are made publicly available through GBIF (UUID: [655027fc-76ea-447a-a443-f36dd2e853d7](https://doi.org/10.15468/lkj0mr), DOI: 10.15468/lkj0mr).

List of Cyanobacteria known to occur in Greece

***Ammatoidea aegaea* Anagnostidis & Pantazidou, 1991**

Nomenclature:

Ammatoidea aegaea

Notes: Anagnostidis and Pantazidou 1991a

***Anabaena cf. cylindrica* Lemmermann, 1896**

Nomenclature:

Anabaena cf. cylindrica

Notes: Gkelis et al. 2015b

***Anabaena inaequalis* Bornet & Flahault, 1888**

Nomenclature:

Anabaena inaequalis

Notes: Tafas and Economou-Amilli 1997

***Anabaena laxa* A. Braun in Bornet & Falhault, 1888**

Nomenclature:

Anabaena laxa

Notes: Anagnostidis 1961

***Anabaena oscillarioides* Bory ex Bornet & Flahault, 1888**

Nomenclature:

Anabaena oscillarioides

Notes: Anagnostidis 1961

***Anabaena perturbata* H. Hill, 1976**

Nomenclature:

Anabaena perturbata

Notes: Moustaka 1988

***Anabaena planctonica* Brunthaler, 1903**

Nomenclature:

Anabaena solitaria f. *planctonica*

Notes: Moustaka 1988

***Anabaena sphaerica* Bornet & Flahault, 1888**

Nomenclature:

Anabaena sphaerica

Notes: Tafas and Economou-Amilli 1997

***Anabaena torulosa* Lagerheim ex Bornet & Flahault, 1888**

Nomenclature:

Anabaena torulosa

Notes: Anagnostidis 1961

***Anabaenopsis arnoldii* Aptekar, 1926**

Nomenclature:

Anabaenopsis arnoldii

Notes: Moustaka-Gouni et al. 2007

(G. S. West) Woloszynska & V. Miller, 1923

Nomenclature:

Anabaenopsis cf. *elenkinii* f. *circularis*

Notes: Moustaka 1988

***Anabaenopsis circularis* (G. S. West) Woloszynska & V. Miller, 1923**

Nomenclature:

Anabaenopsis cunningtonii

Notes: Vardaka et al. 2005

***Anabaenopsis elenkinii* V. V. Miller, 1923**

Nomenclature:

Anabaenopsis elenkinii

Notes: Vardaka et al. 2005

***Anabaenopsis milleri* Woronichin, 1929**

Nomenclature:

Anabaenopsis milleri

Notes: Lanaras et al. 1989

***Anabaenopsis tanganyikae* (G. S. West) Woloszynska & V. Miller, 1923**

Nomenclature:

Anabaenopsis tanganyikae

Notes: Hindak and Moustaka 1988

***Anathece clathrata* (W. & G. S. West) Komárek, Kastovsky & Jezberová, 2011**

Nomenclature:

Aphanothece clathrata

Notes: Anagnostidis 1968

***Anathece endophytica* (W. & G. S. West) Komárek, Kastovsky & Jezberová, 2011**

Nomenclature:

Aphanothece nidulans var. *endophytica*

Notes: Hindak and Moustaka 1988

***Anathece minutissima* (West) Komárek, Kastovsky & Jezberová, 2011**

Nomenclature:

Aphanothece minutissima

Notes: Tryfon et al. 1997

***Aphanizomenon favaloroii* S.H.Otaño, 2012**

Nomenclature:

Aphanizomenon favaloroii

Notes: Moustaka-Gouni et al. 2016

***Aphanizomenon flos-aquae* Ralfs ex Bornet & Flahault, 1886**

Nomenclature:

Aphanizomenon flos-aquae

Notes: Ananiadis 1956

***Aphanizomenon gracile* Lemmermann, 1907**

Nomenclature:

Aphanizomenon gracile

Notes: Anagnostidis 1968

***Aphanocapsa biformis* A. Braun in P. Richter, 1879**

Nomenclature:

Aphanocapsa biformis

Notes: Anagnostidis 1961

***Aphanocapsa cf. holsatica* (Lemmermann) G. Cronberg & Komárek, 1994**

Nomenclature:

Microcystis cf. holsatica

Notes: Hindak and Moustaka 1988

***Aphanocapsa conferta* (W. & G. S. West) Komárková-Legnerová & Cronberg, 1994**

Nomenclature:

Aphanocapsa elachista var. *conferta*

Notes: Tryfon et al. 1997

***Aphanocapsa delicatissima* W. & G. S. West, 1912**

Nomenclature:

Aphanocapsa delicatissima

Notes: Moustaka-Gouni 1988

***Aphanocapsa elachista* W. & G. S. West, 1912**

Nomenclature:

Aphanocapsa elachista

Notes: Anagnostidis 1968

***Aphanocapsa fusco-lutea* Hansgirg, 1892**

Nomenclature:

Aphanocapsa fusco-lutea

Notes: Lamprinou et al. 2012

***Aphanocapsa grevillei* (Berkeley) Rabenhorst, 1865**

Nomenclature:

Aphanocapsa grevillei

Notes: Anagnostidis 1961

***Aphanocapsa incerta* (Lemmermann) G. Cronberg & Komárek, 1994**

Nomenclature:

Aphanocapsa incerta

Notes: Tryfon et al. 1996

***Aphanocapsa marina* Hansgirg, 1892**

Nomenclature:

Aphanocapsa marina

Notes: Anagnostidis 1968

***Aphanocapsa muscicola* (Meneghini) Wille, 1919**

Nomenclature:

Aphanocapsa muscicola

Notes: Anagnostidis 1961

***Aphanocapsa parietina* (Nägeli ex Kützing) Nägeli, 1849**

Nomenclature:

Aphanocapsa parientina

Notes: Lamprinou et al. 2012

***Aphanocapsa raspaigellae* (Hauck) Frémy in Feldmann, 1933**

Nomenclature:

Aphanocapsa raspaigellae

Notes: Anagnostidis 1968

***Aphanocapsa rivularis* (Carmichael) Rabenhorst, 1865**

Nomenclature:

Aphanocapsa anodontae

Notes: Anagnostidis 1968

***Aphanocapsa salina* Woronichin (Voronichin), 1929**

Nomenclature:

Aphanocapsa salina

Notes: Anagnostidis and Golubic 1966

***Aphanocapsa sesciacensis* Frémy, 1928**

Nomenclature:

Aphanocapsa sescianensis

Notes: Anagnostidis and Golubic 1966

***Aphanocapsa thermalis* Brügger, 1863**

Nomenclature:

Aphanocapsa thermalis

Notes: Anagnostidis 1961

***Aphanothece castagnei* (Kützing) Rabenhorst, 1865**

Nomenclature:

Aphanothece castagnei

Notes: Anagnostidis 1961

***Aphanothece cf. rubra* Liebetanz, 1926**

Nomenclature:

Aphanothece cf. rubra

Notes: Lamprinou et al. 2012

***Aphanothece cf. rufescens* Hansgrig, 1892**

Nomenclature:

Aphanothece cf. rufescens

Notes: Lamprinou et al. 2012

***Aphanothece cf. salina* Elenkin & Danilov, 1915**

Nomenclature:

Aphanothece cf. salina

Notes: Anagnostidis and Roussomoustakaki 1991

***Aphanothece marina* (Ercegovic) Komárek & Anagnostidis, 1995**

Nomenclature:

Synechococcus marinus

Notes: Anagnostidis 1968

***Aphanothece microscopica* Nägeli, 1849**

Nomenclature:

Aphanothece microscopica

Notes: Anagnostidis 1968

***Aphanothece microspora* (Meneghini) Rabenhorst, 1863**

Nomenclature:

Aphanothece microspora

Notes: Anagnostidis 1968

***Aphanothece nidulans* Richter in Wittrock & Nordstedt, 1884**

Nomenclature:

Aphanothece nidulans

Notes: Anagnostidis 1961

***Aphanothece pallida* (Kützing) Rabenhorst, 1863**

Nomenclature:

Aphanothece pallida

Notes: Lamprinou et al. 2012

***Aphanothece saxicola* Nägeli, 1849**

Nomenclature:

Aphanothece saxicola

Notes: Anagnostidis 1968

***Aphanothece stagnina* (Sprengel) A. Braun in Rabenhorst, 1863**

Nomenclature:

Aphanothece stagnina

Notes: Anagnostidis 1968

***Arthrospira fusiformis* (Voronikhin) Komárek & J. W. G. Lund, 1990**

Nomenclature:

Arthrospira fusiformis

Notes: Moustaka-Gouni et al. 2007

***Arthrospira platensis* Gomont, 1892**

Nomenclature:

Arthrospira platensis

Notes: Vardaka et al. 2005

***Asterocapsa aerophytica* F. Lederer, 2000**

Nomenclature:

Asterocapsa aerophytica

Notes: Lamprinou et al. 2012

***Asterocapsa divina* Komárek, 1993**

Nomenclature:

Asterocapsa divina

Notes: Lamprinou et al. 2012

***Asterocapsa jilinica* H. X. Xiao, 2000**

Nomenclature:

Asterocapsa jilinica

Notes: Lamprinou et al. 2012

***Asterocapsa sinica* Liang & Chen, 1985**

Nomenclature:

Asterocapsa sinica

Notes: Lamprinou et al. 2012

***Blennothrix brebissonii* (Kützing ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Hydrocoleum brebissonii

Notes: Anagnostidis 1968

***Blennothrix glutinosa* (Gomont ex Gomont) Anagnostidis & Komárek, 2001**

Nomenclature:

Hydrocoleum glutinosum

Notes: Anagnostidis 1968

***Blennothrix heterotricha* (Gomont ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Hydrocoleum heterotrichum

Notes: Anagnostidis 1968

***Blennothrix lyngbyacea* (Kützing ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Hydrocoleum lyngbyaceum

Notes: Anagnostidis and Golubic 1966

***Borzia perikleii* Anagnostidis in Anagnostidis & Komárek, 1988**

Nomenclature:

Borzia trilocularis

Notes: Anagnostidis 1977

***Borzia starkii* Schiller, 1954**

Nomenclature:

Borzia starkii

Notes: Anagnostidis 1977

***Borzia susedana* Ercegovic, 1925**

Nomenclature:

Borzia susedana

Notes: Anagnostidis 1977

***Borzia trilocularis* Cohn ex Gomont, 1892**

Nomenclature:

Borzia trilocularis

Notes: Anagnostidis 1968

***Brachytrichia quoyi* Bornet & Flahault, 1886**

Nomenclature:

Brachytrichia quoyi

Notes: Anagnostidis 1968

***Calothrix aeruginea* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix aeruginea

Notes: Anagnostidis 1968

***Calothrix braunii* Bornet & Flahault, 1886**

Nomenclature:

Calothrix braunii

Notes: Anagnostidis 1968

***Calothrix cf. fusca* Bornet & Flahault, 1886**

Nomenclature:

Calothrix cf. fusca

Notes: Lamprinou et al. 2012

***Calothrix confervicola* C. Agardh ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix confervicola

Notes: Anagnostidis 1968

***Calothrix contarenii* Bornet & Flahault, 1886**

Nomenclature:

Calothrix contarenii

Notes: Anagnostidis 1968

***Calothrix javanica* De Wildeman, 1897**

Nomenclature:

Calothrix javanica

Notes: Anagnostidis et al. 1981

***Calothrix marchica* Lemmermann, 1914**

Nomenclature:

Calothrix marchica

Notes: Anagnostidis et al. 1981

***Calothrix parietina* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix parietina

Notes: Anagnostidis 1968

***Calothrix pulvinata* C. Agardh ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix pulvinata

Notes: Anagnostidis and Golubic 1966

***Calothrix scopulorum* C. Agardh ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix scopulorum

Notes: Anagnostidis and Golubic 1966

***Calothrix stagnalis* Gomont, 1895**

Nomenclature:

Calothrix stagnalis

Notes: Anagnostidis et al. 1981

***Calothrix thermalis* Hasngirg ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix thermalis

Notes: Anagnostidis 1968

***Chamaesiphon confervicola* A. Braun in Rabenhorst, 1865**

Nomenclature:

Chamaesiphon curvatus

Notes: Anagnostidis 1968

***Chamaesiphon geitleri* A. Braun in Rabenhorst, 1865**

Nomenclature:

Chamaesiphon geitleri

Notes: Anagnostidis 1968

***Chamaesiphon incrustans* Grunow in Rabenhorst, 1865**

Nomenclature:

Chamaesiphon incrustans

Notes: Anagnostidis 1968

***Chamaesiphon polonicus* (Rostafinski) Hansgirg, 1893**

Nomenclature:

Chamaesiphon polonicus

Notes: Anagnostidis 1968

***Chamaesiphon polymorphus* Geitler, 1925**

Nomenclature:

Chamaesiphon polymorphus

Notes: Anagnostidis 1968

***Chlorogloea microcystoides* Geitler, 1926**

Nomenclature:

Chlorogloea microcystoides

Notes: Anagnostidis 1961

***Chlorogloea novacekii* Komárek & Montejano, 1994**

Nomenclature:

Chlorogloea novacekii

Notes: Lamprinou et al. 2012

***Chlorogloea rivularis* (Hansgirg) Komárek & Anagnostidis, 1995**

Nomenclature:

Xenococcus rivularis

Notes: Anagnostidis 1968

***Chroococidiopsis doonensis* R. B. Singh, 1968**

Nomenclature:

Chroococidiopsis doonensis

Notes: Lamprinou et al. 2009

***Chroococidiopsis kashayi* Friedmann, 1961**

Nomenclature:

Chroococidiopsis kashaii

Notes: Lamprinou et al. 2012

***Chroococidiopsis thermalis* Geitler, 1933**

Nomenclature:

Chroococidiopsis thermalis

Notes: Anagnostidis and Pantazidou 1988a

***Chroococcidium gelatinosum* Geitler, 1933**

Nomenclature:

Chroococcidium gelatinosum

Notes: Metaxatos et al. 2003

Skuja ex Joosten, 2006

Nomenclature:

Chroococcus cf. *aphanocapsoides*

Notes: Lamprinou et al. 2012

N. L. Gardner, 1927

Nomenclature:

Chroococcus cf. *subsphaericus*

Notes: Lamprinou et al. 2012

***Chroococcus cohaerens* (Brébisson) Nägeli, 1849**

Nomenclature:

Chroococcus cohaerens

Notes: Lamprinou et al. 2009

***Chroococcus dispersus* (Keissler) Lemmermann, 1904**

Nomenclature:

Chroococcus dispersus

Notes: Anagnostidis 1968

***Chroococcus helveticus* Nägeli, 1849**

Nomenclature:

Chroococcus helveticus

Notes: Anagnostidis et al. 1981

***Chroococcus lithophilus* Ercegovic, 1925**

Nomenclature:

Chroococcus lithophilus

Notes: Lamprinou et al. 2012

***Chroococcus microscopicus* Komárková-Legnerová & G. Cronberg, 1994**

Nomenclature:

Chroococcus microscopicus

Notes: Tryfon et al. 1997

***Chroococcus minor* (Kützing) Nägeli, 1849**

Nomenclature:

Chroococcus minor

Notes: Anagnostidis 1961

***Chroococcus minutus* (Kützing) Nägeli, 1849**

Nomenclature:

Chroococcus minutus

Notes: Anagnostidis 1961

***Chroococcus spelaeus* Ercegovic, 1925**

Nomenclature:

Chroococcus spelaeus

Notes: Lamprinou et al. 2009

***Chroococcus subnudus* (Hansgirg) G. Cronberg & J. Komárek, 1994**

Nomenclature:

Chroococcus subnudus

Notes: Lamprinou et al. 2012

***Chroococcus tenax* (Kirchner) Hieronymus, 1892**

Nomenclature:

Chroococcus tenax

Notes: Lamprinou et al. 2009

***Chroococcus thermalis* (Meneghini) Nägeli, 1849**

Nomenclature:

Chroococcus thermalis

Notes: Radea et al. 2010

***Chroococcus turgidus* (Kützing) Nägeli, 1849**

Nomenclature:

Chroococcus turgidus

Notes: Anagnostidis 1961

***Chroococcus turicensis* (Nägeli) Hansgirg, 1887**

Nomenclature:

Chroococcus turicensis

Notes: Lamprinou et al. 2012

***Chroococcus varius* A. Braun in Rabenhorst, 1876**

Nomenclature:

Chroococcus varius

Notes: Anagnostidis 1968

***Chroococcus westii* Boye-Petersen, 1923**

Nomenclature:

Chroococcus westii

Notes: Lamprinou et al. 2012

***Chryso sporum bergii* (Ostenfeld) E. Zapomelová, O. Skácelová, P. Pumann, R. Kopp & E. Janecek, 2012**

Nomenclature:

Anabaena bergii

Notes: Katsiapi et al. 2011

***Chryso sporum ovalisporum* (Forti) E. Zapomelová, O. Skácelová, P. Pumann, R. Kopp & E. Janecek, 2012**

Nomenclature:

Aphanizomenon ovalisporum

Notes: Gkelis et al. 2005a

***Clastidium rivulare* (Hansgirg) Hansgirg, 1892**

Nomenclature:

Clastidium rivulare

Notes: Anagnostidis 1968

***Clastidium setigerum* O. Kirchner, 1880**

Nomenclature:

Clastidium setigerum

Notes: Anagnostidis 1968

***Coelosphaerium ktzingianum* Nägeli, 1849**

Nomenclature:

Coelosphaerium minutissimum

Notes: Anagnostidis 1968

***Coleofasciculus chthonoplastes* (Thuret ex Gomont) M. Siegesmund, J. R. Johansen & T. Friedl in Siegesmund et al. 2008**

Nomenclature:

Microcoleus chthonoplastes

Notes: Anagnostidis 1968

***Cuspidothrix issatschenkoi* (Usachev) P. Rajaniemi, Komárek, R. Willame, P. Hrouzek, K. Kastovská, L. Hoffmann & K. Sivonen, 2005**

Nomenclature:

Aphanizomenon issatschenkoi

Notes: Moustaka-Gouni 1988

***Cyanobacterium cedrorum* (Sauvageau) Komárek, Kopecky & Cepák, 1999**

Nomenclature:

Synechococcus cedrorum

Notes: Anagnostidis 1968

***Cyanobacterium minervae* (J. J. Copeland) Komárek, Kopecky & Cepák, 1999**

Nomenclature:

Synechococcus minervae

Notes: Anagnostidis 1961

***Cyanocatena planctonica* Hindák, 1975**

Nomenclature:

Cyanocatena planctonica

Notes: Moustaka-Gouni 1988

***Cyanodictyon imperfectum* Cronberg & Weibull, 1981**

Nomenclature:

Cyanodictyon imperfectum

Notes: Moustaka-Gouni and Nikolaidis 1990

***Cyanodictyon planctonicum* B. A. Mayer, 1994**

Nomenclature:

Cyanodictyon planctonicum

Notes: Tryfon et al. 1996

***Cyanodictyon reticulatum* (Lemmermann) Geitler, 1925**

Nomenclature:

Cyanodictyon reticulatum

Notes: Danielidis et al. 1996

***Cyanogranis ferruginea* (F. Wawrik) Hindák ex Hindák in Joosen, 2006**

Nomenclature:

Cyanogranis ferruginea

Notes: Moustaka-Gouni 1988

***Cyanosaccus aegaeus* Anagnostidis & Pantazidou, 1985**

Nomenclature:

Cyanosaccus aegaeus

Notes: Anagnostidis and Pantazidou 1985

***Cyanosaccus atticus* Anagnostidis & Pantazidou, 1988**

Nomenclature:

Cyanosaccus atticus

Notes: Anagnostidis and Pantazidou 1988c

***Cyanosarcina cf. burmensis* (Skuja) Kováčik, 1988**

Nomenclature:

Cyanosarcina cf. burmensis

Notes: Lamprinou et al. 2012

***Cyanosarcina cf. spectabilis* (Geitler) Kováčik, 1988**

Nomenclature:

Cyanosarcina cf. spectabilis

Notes: Lamprinou et al. 2012

***Cyanosarcina parthenonensis* Anagnostidis in Anagnostidis & Pantazidou, 1991**

Nomenclature:

Cyanosarcina parthenonensis

Notes: Lamprinou et al. 2012

***Cyanosarcina thalassia* Anagnostidis & Pantazidou, 1991**

Nomenclature:

Cyanosarcina thalassia

Notes: Anagnostidis and Pantazidou 1991b

***Cyanostylon microcystoides* Geitler, 1928**

Nomenclature:

Cyanostylon microcystoides

Notes: Anagnostidis 1968

***Cyanostylon plancticum* Hindák, 1988**

Nomenclature:

Cyanostylon plancticum

Notes: Hindák 1988

***Cyanothece aeruginosa* (Nägeli) Komárek 1976**

Nomenclature:

Synechococcus aeruginosus

Notes: Anagnostidis 1968

***Cyanothece halobia* Roussomoustakaki & Anagnostidis 1991**

Nomenclature:

Cyanothece halobia

Notes: Anagnostidis and Roussomoustakaki 1991

***Cyanothece major* (Schröter) Komárek, 1976**

Nomenclature:

Synechococcus maior

Notes: Anagnostidis 1968

***Cylindrospermopsis raciborskii* (Woloszynska) Seenayya & Subba Raju in Desikachary, 1972**

Nomenclature:

Cylindrospermopsis raciborskii

Notes: Moustaka-Gouni 1988

***Cylindrospermum licheniforme* Kützing ex Bornet & Flahault, 1886**

Nomenclature:

Cylindrospermum licheniforme

Notes: Economou-Amilli et al. 1984

***Cylindrospermum muscicola* Kützing ex Bornet & Flahault, 1886**

Nomenclature:

Cylindrospermum muscicola

Notes: Anagnostidis 1968

***Dactylococcopsis echini* Rosenvinge in Mortensen & Rosenvinge, 1934**

Nomenclature:

Dactylococcopsis echini

Notes: Anagnostidis 1968

***Dactylococcopsis raphidioides* Hansgirg, 1888**

Nomenclature:

Dactylococcopsis raphidioides

Notes: Anagnostidis 1968

***Dermocarpella prasina* (Reinsch) Komárek & Anagnostidis, 1995**

Nomenclature:

Dermocarpa prasina

Notes: Anagnostidis 1968

***Dichothrix compacta* Bornet & Flahault, 1886**

Nomenclature:

Dichothrix compacta

Notes: Anagnostidis 1968

***Dichothrix gypsophila* Bornet & Flahault, 1886**

Nomenclature:

Dichothrix gypsophila

Notes: Anagnostidis 1968

***Dolichospermum affine* (Lemmermann) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena affinis

Notes: Moustaka-Gouni and Nikolaidis 1990

***Dolichospermum crassum* (Lemmermann) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena crassa

Notes: Gkelis et al. 2014

***Dolichospermum flos-aquae* (Brébisson ex Bornet & Flahault) P. Wacklin, L. Hoffmann & J. Komárek, 2009**

Nomenclature:

Anabaena flos-aquae

Notes: Anagnostidis 1968

***Dolichospermum lemmermannii* (Richter) P. Wacklin, L. Hoffmann & J. Komárek, 2009**

Nomenclature:

Anabaena lemmermannii var. *minor*

Notes: Tryfon et al. 1997

***Dolichospermum mendotae* (W. Trelease) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena mendotae

Notes: Moustaka-Gouni et al. 2000

***Dolichospermum mucosum* (Komárková-Legnerová & Eloranta) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena mucosa

Notes: Tryfon et al. 1997

***Dolichospermum scheremetievii* (Elenkin) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena scheremetievii

Notes: Anagnostidis 1968

***Dolichospermum sigmoideum* (Nygaard) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena circinalis

Notes: Moustaka-Gouni 1988

***Dolichospermum solitarium* (Klebahn) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena solitaria

Notes: Hindák 1993

***Dolichospermum spiroides* (Klebahn) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena spiroides

Notes: Anagnostidis 1968

***Dolichospermum viguieri* (Denis & Frémy) Wacklin, L. Hoffmann & Komárek, 2009**

Nomenclature:

Anabaena viguieri

Notes: Lanaras et al. 1989

***Entophysalis deusta* (Meneghini) F. E. Drouet & W. A. Daily 1948:**

Nomenclature:

Entophysalis deusta

Notes: Anagnostidis 1968

***Entophysalis granulosa* Kützing 1843**

Nomenclature:

Entophysalis granulosa

Notes: Anagnostidis and Golubic 1966

***Epigloeosphaera cf. glebulenta* (Zalesky) J. Komárková-Legnerová, 1991**

Nomenclature:

Epigloeosphaera cf. grebulenta

Notes: Danielidis et al. 1996

***Eucapsis cf. terrestris* M. Akiyama, 1965**

Nomenclature:

Eucapsis cf. terrestris

Notes: Lamprinou et al. 2012

***Eucapsis minor* (Skuja) Elenkin, 1933**

Nomenclature:

Eucapsis minor

Notes: Anagnostidis and Economou-Amilli 1978

***Geitlerinema acutissimum* (Kufferath) Anagnostidis, 1989**

Nomenclature:

Oscillatoria acutissima

Notes: Anagnostidis and Golubic 1966

***Geitlerinema amphibium* (C. Agardh ex Gomont) Anagnostidis, 1989**

Nomenclature:

Oscillatoria amphibia f. *circinata*

Notes: Anagnostidis 1961

***Geitlerinema apolloniae* Anagnostidis, 2001**

Nomenclature:

Oscillatoria splendida f. *major*

Notes: Anagnostidis 1961

***Geitlerinema cf. lemmermannii* (Woloszynska) Anagnostidis, 1989**

Nomenclature:

Oscillatoria cf. lemmermannii

Notes: Hindak and Moustaka 1988

***Geitlerinema ionicum* (Skuja) Anagnostidis, 1989**

Nomenclature:

Oscillatoria ionica

Notes: Anagnostidis et al. 1981

***Geitlerinema lemmermannii* (Woloszynska) Anagnostidis, 1989**

Nomenclature:

Jaaginema cf. lemmermannii

Notes: Moustaka-Gouni 1993

***Geitlerinema numidicum* (Gomont) Anagnostidis, 1989**

Nomenclature:

Oscillatoria numidica

Notes: Anagnostidis 1961

***Geitlerinema splendidum* (Greville ex Gomont) Anagnostidis, 1989**

Nomenclature:

Oscillatoria splendida

Notes: Anagnostidis and Golubic 1966

***Geitlerinema sulphureum* (Strzeszewski) Anagnostidis 2001**

Nomenclature:

Oscillatoria geminata f. *sulphurea*

Notes: Anagnostidis 1961

***Glaucospira laxissima* (G.S.West) Simic, Komárek & Dordevic, 2014**

Nomenclature:

Spirulina laxissima

Notes: Anagnostidis 1961

***Gloeobacter violaceus* Rippka, J. B. Waterbury & Cohen-Bazire 1974**

Nomenclature:

Aphanothece caldariorum

Notes: Anagnostidis 1961

***Gloeocapsa aeruginosa* Kützing, 1843**

Nomenclature:

Gloeocapsa aeruginosa

Notes: Lamprinou et al. 2014

***Gloeocapsa arenaria* (Hassall) Rabenhorst, 1865**

Nomenclature:

Gloeocapsa arenaria

Notes: Anagnostidis 1961

***Gloeocapsa atrata* Kützing, 1843**

Nomenclature:

Gloeocapsa montana

Notes: Economou-Amilli et al. 1984

***Gloeocapsa biformis* Ercegovic, 1925**

Nomenclature:

Gloeocapsa biformis

Notes: Anagnostidis 1968

***Gloeocapsa bituminosa* (Bory) Kützing, 1849**

Nomenclature:

Gloeocapsa bituminosa

Notes: Lamprinou et al. 2012

***Gloeocapsa caldariorum* Rabenhorst, 1865**

Nomenclature:

Gloeocapsa caldariorum

Notes: Lamprinou et al. 2012

***Gloeocapsa compacta* Kützing, 1847**

Nomenclature:

Gloeocapsa compacta

Notes: Anagnostidis 1968

***Gloeocapsa decorticans* (A. Braun) P.Richter in Wille, 1925**

Nomenclature:

Gloeocapsa decorticans

Notes: Anagnostidis et al. 1983

***Gloeocapsa gelatinosa* Kützing, 1843**

Nomenclature:

Gloeocapsa gelatinosa

Notes: Anagnostidis 1961

***Gloeocapsa kuetzingiana* Nägeli ex Kützing, 1849**

Nomenclature:

Gloeocapsa kuetzingiana

Notes: Anagnostidis 1968

***Gloeocapsa punctata* Nägeli, 1849**

Nomenclature:

Gloeocapsa punctata

Notes: Lamprinou et al. 2012

***Gloeocapsa rupestris* Kützing, 1847**

Nomenclature:

Gloeocapsa rupestris

Notes: Anagnostidis 1961

***Gloeocapsa sanguinea* (C. Agardh) Kützing, 1843**

Nomenclature:

Gloeocapsa sanguinea

Notes: Anagnostidis 1968

***Gloeocapsa thermalis* Kützing, 1843**

Nomenclature:

Gloeocapsa thermalis

Notes: Anagnostidis 1968

***Gloeocapsa thermophila* (Wood) Claus, 1959**

Nomenclature:

Chroococcus thermophilus

Notes: Anagnostidis 1961

***Gloeocapsopsis crepidinum* (Thuret) Geitler ex Komárek, 1993**

Nomenclature:

Gloeocapsopsis crepidinum

Notes: Lamprinou et al. 2012

***Gloeocapsopsis cyanea* (Krieger) Komárek & Anagnostidis, 1995**

Nomenclature:

Gloeocapsopsis cyanea

Notes: Lamprinou et al. 2012

***Gloeocapsopsis pleurocapsoides* (Nováček) Komárek & Anagnostidis ex Komárek, 1993**

Nomenclature:

Gloeocapsopsis pleurocapsoides

Notes: Lamprinou et al. 2012

***Gloeothece cf. incerta* Skuja, 1964**

Nomenclature:

Gloeothece cf. incerta

Notes: Lamprinou et al. 2014

***Gloeotheca cf. tepidariorum* (A. Braun) Lagerheim 1883**

Nomenclature:

Gloeotheca cf. tepidariorum

Notes: Lamprinou et al. 2014

***Gloeotheca confluens* Nägeli, 1849**

Nomenclature:

Gloeotheca confluens

Notes: Anagnostidis 1968

***Gloeotheca fusco-lutea* (Nägeli ex Kützing) Nägeli, 1849**

Nomenclature:

Gloeotheca fusco-lutea

Notes: Anagnostidis 1968

***Gloeotheca palea* (Kützing) Nägeli, 1849**

Nomenclature:

Gloeotheca palea

Notes: Anagnostidis and Golubic 1966

***Gloeotheca rupestris* (Lyngbye) Bornet in Wittrock & Nordstedt, 1880**

Nomenclature:

Gloeotheca rupestris

Notes: Anagnostidis 1961

***Gloeotheca tepidariorum* (A. Braun) Lagerheim, 1883**

Nomenclature:

Gloeotheca rupestris var. *tepidariorum*

Notes: Anagnostidis 1961

***Gloeotrichia echinulata* P. G. Richter, 1894**

Nomenclature:

Gloeotrichia echinulata

Notes: Anagnostidis 1968

***Gloeotrichia pisum* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Gloeotrichia pisum

Notes: Anagnostidis 1968

***Gomphosphaeria aponina* Kützing, 1836**

Nomenclature:

Gomphosphaeria aponina

Notes: Anagnostidis 1968

***Hapalosiphon intricatus* W. & G. S. West, 1894**

Nomenclature:

Hapalosiphon intricatus

Notes: Anagnostidis 1968

***Hassallia byssoidea* Hassall ex Bornet & Flahault, 1886**

Nomenclature:

Tolypothrix byssoidea

Notes: Anagnostidis 1968

***Herpyzonema pulverulentum* M. Hernández-Mariné & T. Canals, 1994**

Nomenclature:

Herpyzonema pulverulentum

Notes: Lamprinou et al. 2012

***Heteroleibleinia infixa* (Frémy) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya infixa

Notes: Anagnostidis 1968

***Heteroleibleinia kuetzingii* (Schmidle) Compère, 1985**

Nomenclature:

Lyngbya kuetzingii

Notes: Anagnostidis 1968

***Homoeothrix caespitosa* Kirchner, 1898**

Nomenclature:

Homoeothrix caespitosa

Notes: Anagnostidis 1968

***Homoeothrix juliana* (Bornet & Flahault ex Gomont) Kirchner, 1898**

Nomenclature:

Homoeothrix juliana

Notes: Anagnostidis 1968

***Hormoscilla feldmannii* Anagnostidis, 2001**

Nomenclature:

Borzia spongelliae

Notes: Anagnostidis 1977

***Hydrococcus cesatii* Rabenhorst, 1860**

Nomenclature:

Hydrococcus cesatii

Notes: Anagnostidis 1968

***Hydrococcus rivularis* Kützing, 1833**

Nomenclature:

Hydrococcus rivularis

Notes: Anagnostidis 1968

***Hydrocoleum homoeotrichum* Kützing ex Gomont, 1892**

Nomenclature:

Hydrocoleum homoeotrichum

Notes: Anagnostidis 1968

***Hydrocoleum muscicola* Hansgirg ex Forti, 1907**

Nomenclature:

Hydrocoleum musciculum

Notes: Anagnostidis 1968

***Hydrocoleum stankovicii* Čado, 1958**

Nomenclature:

Hydrocoleum stankovicii

Notes: Lamprinou et al. 2012

***Hyella balani* Lehmann, 1903**

Nomenclature:

Hyella balani

Notes: Anagnostidis and Pantazidou 1985

***Hyella caespitosa* Bornet & Flahault, 1888**

Nomenclature:

Hyella caespitosa

Notes: Anagnostidis and Pantazidou 1988a

***Hyella fontana* Huber & Jadin, 1892**

Nomenclature:

Hyella fontana

Notes: Anagnostidis and Pantazidou 1988b

***Hyella inconstans* Al-Thukair & Golubic 1991**

Nomenclature:

Hyella inconstans

Notes: Pantazidou et al. 2006

***Hyella kalligrammos* Anagnostidis & Pantazidou, 1988**

Nomenclature:

Hyella kalligrammos

Notes: Anagnostidis and Pantazidou 1988b

***Hyella maxima* (Geitler) Anagnostidis & Pantazidou, 1988**

Nomenclature:

Hyella maxima

Notes: Anagnostidis and Pantazidou 1988b

***Hyella reptans* Al-Thukair & Golubic, 1991**

Nomenclature:

Hyella reptans

Notes: Pantazidou et al. 2006

***Ifinoe spelaea* Lamprinou & Pantazidou in Lamprinou et al. 2011**

Nomenclature:

Iphinoë spelaeobios

Notes: Lamprinou et al. 2011

***Isactis plana* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Calothrix plana

Notes: Anagnostidis and Golubic 1966

***Isocystis halobia* K. Anagnostidis & M. Roussomoustakaki, 1991**

Nomenclature:

Isocystis halobia

Notes: Anagnostidis and Roussomoustakaki 1991

***Isocystis pallida* (Voronichin) Woronichin, 1927**

Nomenclature:

Isocystis pallida

Notes: Anagnostidis 1961

***Jaaginema angustissimum* (W. & G. S. West) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria angustissima

Notes: Anagnostidis 1961

***Jaaginema geminatum* (Schwabe ex Gomont) Anagnostidis & Komárek 1988**

Nomenclature:

Oscillatoria geminata

Notes: Anagnostidis 1961

***Jaaginema mauchanum* (Claus) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria cf. *mauchiana*

Notes: Lamprinou et al. 2012

***Jaaginema minimum* (Gicklhorn) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria minima

Notes: Anagnostidis 1968

***Jaaginema profundum* (Schröter & Kirchner) Anagnostidis & Komárek, 1988**

Nomenclature:

Achroonema profundum

Notes: Anagnostidis and Economou–Amilli 1980

***Jaaginema pseudogeminatum* (G. Schmid) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria pseudogeminata

Notes: Anagnostidis and Golubic 1966

***Jaaginema subtilissimum* (Kützing ex Forti) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria subtilissima

Notes: Anagnostidis 1961

***Johanseninema constrictum* (Szafer) Hasler, Dvorák & Poulícková, 2014**

Nomenclature:

Pseudanabaena constricta

Notes: Anagnostidis and Economou–Amilli 1980

***Kamptonema animale* (C. Agardh ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria animalis

Notes: Anagnostidis 1961

***Kamptonema chlorinum* (Kützing ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria chlorina

Notes: Anagnostidis 1968

***Kamptonema cortianum* (Meneghini ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria cortiana

Notes: Anagnostidis 1961

***Kamptonema formosum* (Bory ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria formosa

Notes: Anagnostidis 1961

***Kamptonema jasorvense* (Vouk) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria jasorvensis

Notes: Anagnostidis and Golubic 1966

***Kamptonema laetevirens* (H.M.Crouan & P.L.Crouan ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Phormidium laetevirens

Notes: Anagnostidis and Roussomoustakaki 1988

***Kamptonema okenii* (C.Agardh ex Gomont) Strunecký, Komárek & J. Smarda, 2014**

Nomenclature:

Oscillatoria okenii

Notes: Anagnostidis 1961

***Komvophoron cf. crassum* (Vozzennikova) Anagnostidis & Komárek, 1988**

Nomenclature:

Komvophoron cf. crassum

Notes: Anagnostidis and Roussomoustakaki 1991

***Komvophoron pallidum* (Skuja) Anagnostidis & Komárek, 1988**

Nomenclature:

Pseudanabaena pallida

Notes: Anagnostidis and Economou–Amilli 1980

***Komvophoron schmidlei* (Jaag) Anagnostidis & Komárek, 1988**

Nomenclature:

Pseudanabaena schmidlei

Notes: Anagnostidis 1968

***Kyrtuthrix dalmatica* Ercegović, 1929**

Nomenclature:

Kyrtuthrix dalmatica

Notes: Anagnostidis 1968

***Leibleinia gracilis* (Rabenhorst ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya gracilis

Notes: Anagnostidis and Golubic 1966

***Leibleinia nordgaardii* Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya nordgardhii

Notes: Anagnostidis 1968

***Lemmermanniella pallida* (Lemmermann) Geitler, 1942**

Nomenclature:

Lemmermanniella pallida

Notes: Tryfon et al. 1997

***Leptolyngbya amplivaginata* (van Goor) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya amplivaginata

Notes: Anagnostidis 1968

***Leptolyngbya angustissima* (W. & G. S. West) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium angustissimum

Notes: Anagnostidis 1961

***Leptolyngbya antarctica* (W. & G. S. West) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium antarcticum

Notes: Anagnostidis et al. 1982

***Leptolyngbya boryana* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema boryanum

Notes: Anagnostidis et al. 1981

***Leptolyngbya calotrichoides* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema calotrichoides

Notes: Anagnostidis 1968

***Leptolyngbya cebennensis* (Gomont) I. Umezaki & M. Watanabe, 1994**

Nomenclature:

Leptolyngbya cebennensis

Notes: Lamprinou et al. 2012

***Leptolyngbya cf. carnea* (Kützing ex Lemmermann) Anagnostidis & Komárek, 1988**

Nomenclature:

Leptolyngbya cf. carnea

Notes: Lamprinou et al. 2012

***Leptolyngbya cf. laminosa* (Gomont ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Leptolyngbya cf. laminosa

Notes: Lamprinou et al. 2014

***Leptolyngbya compacta* (Kützing ex Hansgirg) Komárek in Anagnostidis, 2001**

Nomenclature:

Leptolyngbya compacta

Notes: Lamprinou et al. 2012

***Leptolyngbya ectocarp* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium ectocarp

Notes: Anagnostidis 1968

***Leptolyngbya ercegovicii* (Čado) Anagnostidis & Komárek, 1988**

Nomenclature:

Leptolyngbya ercegovicii

Notes: Lamprinou et al. 2012

***Leptolyngbya foveolarum* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium foveolarum

Notes: Anagnostidis 1961

***Leptolyngbya fragilis* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium fragile

Notes: Anagnostidis 1961

***Leptolyngbya gracillima* (Hansgirg) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema gracillimum

Notes: Anagnostidis et al. 1982

***Leptolyngbya halophila* (Hansgirg ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya halophila

Notes: Anagnostidis 1968

***Leptolyngbya lagerheimii* (Gomont ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya lagerheimii

Notes: Anagnostidis 1961

***Leptolyngbya laminosa* (Gomont ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium laminosum

Notes: Anagnostidis 1961

***Leptolyngbya lurida* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium luridum

Notes: Anagnostidis 1961

***Leptolyngbya nana* (Tilden) Anagnostidis & Komárek, 1988**

Nomenclature:

Leptolyngbya nana

Notes: Lamprinou et al. 2012

***Leptolyngbya norvegica* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema norvegicum

Notes: Anagnostidis 1968

***Leptolyngbya nostocorum* (Bornet ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema nostocorum

Notes: Anagnostidis and Golubic 1966

***Leptolyngbya notata* (Schmidle) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema notatum

Notes: Anagnostidis 1968

***Leptolyngbya ochracea* (Thuret ex Gomont) Anagnostidis & Komárek
1988**

Nomenclature:

Lyngbya ochracea

Notes: Anagnostidis 1968

***Leptolyngbya perelegans* (Lemmermann) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya perelegans

Notes: Anagnostidis and Golubic 1966

***Leptolyngbya perforans* (Geitler) Anagnostidis & Komárek, 1988**

Nomenclature:

Schizothrix perforans st. *typicus*

Notes: Anagnostidis 1968

***Leptolyngbya phormidioides* (Anagnostidis) Anagnostidis & Komárek,
1988**

Nomenclature:

Oscillatoria acuminata f. *phormidioides*

Notes: Anagnostidis 1961

***Leptolyngbya purpurascens* (Gomont ex Gomont) Anagnostidis &
Komárek, 1988**

Nomenclature:

Leptolyngbya purpurascens

Notes: Lamprinou et al. 2012

***Leptolyngbya rivulariarum* (Gomont) Anagnostidis & Komárek 1988**

Nomenclature:

Lyngbya rivulariarum

Notes: Anagnostidis 1968

***Leptolyngbya subtilissima* (Hansgirg) Komárek in Anagnostidis, 2001**

Nomenclature:

Leptolyngbya subtilissima

Notes: Lamprinou et al. 2014

***Leptolyngbya subuliformis* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium subuliforme

Notes: Anagnostidis 1961

***Leptolyngbya tenuis* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium tenue f. *circinata*

Notes: Anagnostidis 1961

***Leptolyngbya terebrans* (Bornet & Flahault ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema terebrans

Notes: Anagnostidis and Golubic 1966

***Leptolyngbya truncata* (Lemmermann) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium truncatum

Notes: Anagnostidis 1961

***Leptolyngbya undosa* (Čado) Anagnostidis & Komárek, 1988**

Nomenclature:

Leptolyngbya undosa

Notes: Lamprinou et al. 2012

***Leptolyngbya valderiana* (Gomont) Anagnostidis & Komárek 1988**

Nomenclature:

Phormidium valderianum

Notes: Anagnostidis 1961

***Leptolyngbya weedii* (Drouet) Anagnostidis 2001**

Nomenclature:

Phormidium weedii

Notes: Anagnostidis and Economou-Amilli 1978

***Limnococcus limneticus* (Lemmermann) Komárková, Jezberová, O. Komárek & Zapomelová, 2010**

Nomenclature:

Chroococcus limneticus

Notes: Anagnostidis 1968

***Limnothrix brachynema* (Skuja) Hindák & Trifonova, 1989**

Nomenclature:

Lyngbya brachynema

Notes: Anagnostidis 1968

***Limnothrix obliqueacuminata* (Skuja) Meffert 1988**

Nomenclature:

Oscillatoria obliqueacuminata

Notes: Anagnostidis 1968

***Limnothrix redekei* (Goor) Meffert, 1988**

Nomenclature:

Limnothrix redekei

Notes: Vardaka et al. 2000

Lyngbya f. minor Elenkin, 1949

Nomenclature:

Lyngbya aerugineo-coerulea f. *minor*

Notes: Anagnostidis 1961

Lyngbya aestuarii Liebman ex Gomont, 1892

Nomenclature:

Lyngbya aestuarii

Notes: Anagnostidis 1968

Lyngbya agardhii Gomont, 1892

Nomenclature:

Lyngbya agardhii

Notes: Anagnostidis and Golubic 1966

Lyngbya boryana Kirchner ex Hansgirg, 1892

Nomenclature:

Phormidium boryanum

Notes: Anagnostidis 1961

Lyngbya cf. spiralis Geitler, 1932

Nomenclature:

Lyngbya cf. *spiralis*

Notes: Overbeck et al. 1982

Lyngbya confervoides C. Agardh ex Gomont, 1892

Nomenclature:

Lyngbya confervoides

Notes: Anagnostidis and Golubic 1966

***Lyngbya lutea* Gomont ex Gomont, 1892**

Nomenclature:

Lyngbya lutea

Notes: Anagnostidis and Golubic 1966

***Lyngbya majuscula* Harvey ex Gomont, 1892**

Nomenclature:

Lyngbya majuscula

Notes: Anagnostidis 1968

***Lyngbya martensiana* Meneghini ex Gomont, 1892**

Nomenclature:

Lyngbya martensiana

Notes: Anagnostidis 1961

***Lyngbya palikiana* Claus, 1955**

Nomenclature:

Leptolyngbya palikiana

Notes: Lamprinou et al. 2012

***Lyngbya semiplena* J. Agardh ex Gomont, 1892**

Nomenclature:

Lyngbya semiplena

Notes: Anagnostidis and Golubic 1966

***Lyngbya sordida* Gomont, 1892**

Nomenclature:

Lyngbya sordida

Notes: Anagnostidis and Golubic 1966

***Mastigocladus laminosus* Cohn ex Kirchner, 1898**

Nomenclature:

Mastigocladus laminosus

Notes: Anagnostidis 1961

***Mastigocoleus testarum* Lagerheim ex Bornet & Flahault, 1887**

Nomenclature:

Mastigocoleus testarum

Notes: Anagnostidis 1968

***Merismopedia elegans* A. Braun ex Kützing, 1849**

Nomenclature:

Merismopedia elegans

Notes: Anagnostidis 1968

***Merismopedia glauca* (Ehrenberg) Kützing, 1845**

Nomenclature:

Merismopedia glauca

Notes: Anagnostidis 1968

***Merismopedia mediterranea* Nägeli, 1849**

Nomenclature:

Merismopedia glauca f. *mediterranea*

Notes: Anagnostidis and Golubic 1966

***Merismopedia minima* G. Beck 1897**

Nomenclature:

Merismopedia minima

Notes: Anagnostidis 1968

***Merismopedia punctata* Meyen, 1839**

Nomenclature:

Merismopedia punctata

Notes: Anagnostidis 1968

***Merismopedia smithii* De Toni, 1939**

Nomenclature:

Merismopedia maior

Notes: Anagnostidis 1968

***Merismopedia tenuissima* Lemmermann 1898**

Nomenclature:

Merismopedia tenuissima

Notes: Anagnostidis 1968

***Merismopedia trolleri* Bachmann, 1920**

Nomenclature:

Merismopedia trolleri

Notes: Anagnostidis 1968

***Merismopedia warmingiana* (Lagerheim) Forti, 1883**

Nomenclature:

Merismopedia warmingiana

Notes: Anagnostidis 1968

***Microchaete grisea* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Microchaete grisea

Notes: Anagnostidis 1968

***Microchaete tenera* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Microchaete tenera

Notes: Anagnostidis 1968

***Microcoleus amoenus* (Gomont) Strunecky, Komárek & J. R. Johansen, 2013**

Nomenclature:

Oscillatoria amoena

Notes: Anagnostidis 1968

***Microcoleus amoenus* (Gomont) Strunecky, Komárek & J. R. Johansen, 2013**

Nomenclature:

Phormidium amoenum

Notes: Anagnostidis and Roussomoustakaki 1991

***Microcoleus autumnalis* (Gomont) Strunecky, Komárek & J. R. Johansen, 2013**

Nomenclature:

Phormidium autumnale

Notes: Anagnostidis 1961

***Microcoleus ferrugineus* Frémy, 1936**

Nomenclature:

Microcoleus ferrugineus

Notes: Anagnostidis 1968

***Microcoleus lacustris* Farlow ex Gomont, 1892**

Nomenclature:

Microcoleus lacustris

Notes: Anagnostidis 1968

***Microcoleus paludosus* Gomont, 1892**

Nomenclature:

Microcoleus paludosus

Notes: Anagnostidis 1968

***Microcoleus setchellianus* (Gomont) Strunecky, Komárek & J. R. Johansen, 2013**

Nomenclature:

Phormidium setchellianum

Notes: Lamprinou et al. 2012

***Microcoleus steenstrupii* J. B. Petersen, 1923**

Nomenclature:

Microcoleus steenstrupii

Notes: Lamprinou et al. 2012

***Microcoleus vaginatus* Gomont ex Gomont, 1892**

Nomenclature:

Microcoleus vaginatus

Notes: Anagnostidis 1968

***Microcoleus vulgaris* Strunecky, Komárek & J. R. Johansen 2013**

Nomenclature:

Phormidium vulgare

Notes: Lamprinou et al. 2012

***Microcystis flos-aquae* (Wittrock) Kirchner, 1898**

Nomenclature:

Microcystis flos-aquae

Notes: Anagnostidis 1961

***Microcystis aeruginosa* (Kützing) Kützing, 1846**

Nomenclature:

Microcystis aeruginosa

Notes: Anagnostidis 1968

***Microcystis ichthyoblabe* (G.Kunze) Kützing, 1846**

Nomenclature:

Microcystis ichthyoblabe

Notes: Tryfon et al. 1997

***Microcystis incerta* (Lemmermann) Lemmermann, 1903**

Nomenclature:

Microcystis incerta

Notes: Overbeck et al. 1982

***Microcystis marginata* (Meneghini) Kützing, 1846**

Nomenclature:

Microcystis marginata

Notes: Anagnostidis 1968

***Microcystis novacekii* (Komárek) Compère, 1974**

Nomenclature:

Microcystis novacekii

Notes: Vardaka et al. 2000

***Microcystis panniformis* Komárek, Komárková-Legnerová, Sant'Anna, M. T. P. Azevedo, & P. A. C. Senna, 2002**

Nomenclature:

Microcystis panniformis

Notes: Papadimitriou et al. 2013

***Microcystis pulverea* (H. C. Wood) Forti, 1907**

Nomenclature:

Microcystis pulverea

Notes: Anagnostidis 1968

***Microcystis smithii* Komárek & Anagnostidis, 1995**

Nomenclature:

Aphanocapsa pulchra

Notes: Anagnostidis 1968

***Microcystis viridis* (A. Braun) Lemmermann, 1903**

Nomenclature:

Microcystis viridis

Notes: Anagnostidis 1968

***Microcystis wesenbergii* (Komárek) Komárek ex Komárek, 1968**

Nomenclature:

Microcystis wesenbergii

Notes: Tryfon et al. 1996

***Myxosarcina concinna* Printz, 1921**

Nomenclature:

Myxosarcina concinna

Notes: Anagnostidis et al. 1983

***Nodularia harveyana* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Nodularia harveyana

Notes: Anagnostidis 1968

***Nodularia spumigena* Mertens ex Bornet & Flahault 1888**

Nomenclature:

Nodularia spumigena

Notes: Anagnostidis 1968

***Nostoc calcicola* Brébisson ex Bornet & Flahault, 1886**

Nomenclature:

Nostoc calcicola

Notes: Anagnostidis 1961

***Nostoc commune* Vaucher ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc commune

Notes: Economou-Amilli et al. 1984

***Nostoc humifusum* Carmichael ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc humifusum

Notes: Anagnostidis 1961

***Nostoc letestui* Frémy, 1930**

Nomenclature:

Nostoc letestui

Notes: Lamprinou et al. 2012

***Nostoc linckia* Bornet ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc linckia

Notes: Anagnostidis 1968

***Nostoc microscopicum* Carmichael ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc microscopicum

Notes: Anagnostidis 1968

***Nostoc minutissimum* Kützing ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc minutissimum

Notes: Anagnostidis 1968

***Nostoc paludosum* Kützing ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc paludosum

Notes: Anagnostidis 1961

***Nostoc punctiforme* Hariot 1891**

Nomenclature:

Nostoc punctiforme

Notes: Anagnostidis et al. 1981

***Nostoc sphaericum* Vaucher ex Bornet & Flahault, 1888**

Nomenclature:

Nostoc sphaericum

Notes: Anagnostidis 1968

***Oculatella subterranea* Zammit, Billi & Albertano, 2012**

Nomenclature:

Oculatella subterranea

Notes: Christodoulou et al. 2015

***Oscillatoria anguina* Bory ex Gomont 1892**

Nomenclature:

Oscillatoria anguina

Notes: Anagnostidis 1961

***Oscillatoria bonnemaisonii* P. Crouan & H. Crouan ex Gomont, 1892**

Nomenclature:

Oscillatoria bonnemaisonii

Notes: Anagnostidis 1968

***Oscillatoria corallinae* Gomont ex Gomont, 1892**

Nomenclature:

Oscillatoria corallinae

Notes: Anagnostidis and Golubic 1966

***Oscillatoria crassa* (C. B. Rao) Anagnostidis, 2001**

Nomenclature:

Oscillatoria ornata var. *crassa*

Notes: Anagnostidis 1961

***Oscillatoria curviceps* C. Agardh ex Gomont, 1892**

Nomenclature:

Oscillatoria curviceps

Notes: Anagnostidis 1968

***Oscillatoria laetevirens* Hofman-Bang ex Forti 1892**

Nomenclature:

Oscillatoria laetevirens

Notes: Anagnostidis 1961

***Oscillatoria limosa* C. Agardh ex Gomont 1892**

Nomenclature:

Oscillatoria limosa

Notes: Anagnostidis and Golubic 1966

***Oscillatoria margaritifera* Kützing ex Gomont, 1892**

Nomenclature:

Oscillatoria margaritifera

Notes: Anagnostidis 1968

***Oscillatoria okenii* var. *gracilis* (Kützing) Kützing ex Forti, 1904**

Nomenclature:

Oscillatoria okenii f. *gracilis*

Notes: Anagnostidis 1961

***Oscillatoria ornata* Kützing ex Gomont, 1892**

Nomenclature:

Oscillatoria ornata

Notes: Anagnostidis 1961

***Oscillatoria princeps* Vaucher ex Gomont, 1892**

Nomenclature:

Oscillatoria princeps

Notes: Anagnostidis 1961

***Oscillatoria pseudoangusta* Claus, 1955**

Nomenclature:

Oscillatoria pseudoangusta

Notes: Anagnostidis 1961

***Oscillatoria putrida* Schmidle, 1901**

Nomenclature:

Oscillatoria putrida

Notes: Anagnostidis 1968

***Oscillatoria rhamphoidea* Anagnostidis, 2001**

Nomenclature:

Oscillatoria salina f. *major*

Notes: Anagnostidis et al. 1981

***Oscillatoria rupicola* (Hansgirg) Hansgirg ex Forti, 1907**

Nomenclature:

Oscillatoria rupicola

Notes: Lamprinou et al. 2012

***Oscillatoria sancta* Kützing ex Gomont 1892**

Nomenclature:

Oscillatoria sancta

Notes: Anagnostidis 1961

***Oscillatoria simplicissima* Gomont, 1892**

Nomenclature:

Oscillatoria simplicissima

Notes: Anagnostidis 1961

***Oscillatoria subbrevis* Schmidle, 1901**

Nomenclature:

Oscillatoria subbrevis

Notes: Anagnostidis et al. 1981

***Oscillatoria tenuis* C. Agardh ex Gomont, 1892**

Nomenclature:

Oscillatoria tenuis

Notes: Anagnostidis 1961

***Oscillatoria* var. *phormidioides* Hansgirg ex Drouet, 1957**

Nomenclature:

Oscillatoria okenii f. *phormidioides*

Notes: Anagnostidis 1961

***Oscillatoria trichoides* Szafer, 1910**

Nomenclature:

Oscillatoria trichoides

Notes: Anagnostidis and Golubic 1966

***Oxynema acuminatum* (Gomont) Chatchawan, Komárek, Strunecky, Smarda & Peerapornpisal, 2012**

Nomenclature:

Oscillatoria acuminata

Notes: Anagnostidis 1961

***Pannus spumosus* B.Hickel, 1991**

Nomenclature:

Pannus spumosus

Notes: Hindak and Moustaka 1988

***Petalonema densum* (Bornet ex Bornet & Flahault) Migula, 1907**

Nomenclature:

Petalonema densum

Notes: Anagnostidis 1968

***Phormidesmis molle* (Gomont) Turicchia, Ventura, Komárková & Komárek, 2009**

Nomenclature:

Phormidium molle

Notes: Anagnostidis 1961

***Phormidiochaete nordstedtii* (Bornet et Flahault) Komárek in Anagnostidis, 2001**

Nomenclature:

Phormidiochaete nordstedtii

Notes: Lamprinou et al. 2012

***Phormidium acuminatum* var. *longe-attenuatum* (Geitler & Ruttner) I. Umezaki & M. Watanabe, 1994**

Nomenclature:

Oscillatoria acuminata f. *longe-attenuata*

Notes: Anagnostidis 1961

***Phormidium aerugineo-caeruleum* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya aerugineo-coerulea

Notes: Anagnostidis 1961

***Phormidium ambiguum* Gomont, 1892**

Nomenclature:

Phormidium ambiguum

Notes: Anagnostidis 1961

***Phormidium articulatum* (N. L. Gardner) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium articulatum

Notes: Lamprinou et al. 2012

***Phormidium boryanum* Kützing, 1843**

Nomenclature:

Oscillatoria boryana

Notes: Anagnostidis and Golubic 1966

***Phormidium breve* (Kützing ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria brevis

Notes: Anagnostidis 1961

***Phormidium cf. griseoviolaceum* (Skuja) Anagnostidis, 2001**

Nomenclature:

Phormidium cf. griseoviolaceum

Notes: Lamprinou et al. 2012

***Phormidium chalybeum* (Mertens ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria chalybea

Notes: Anagnostidis 1961

***Phormidium corium* Gomont ex Gomont, 1892**

Nomenclature:

Phormidium corium

Notes: Anagnostidis 1961

***Phormidium diguetii* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya diguetii

Notes: Anagnostidis 1961

***Phormidium edessae* Skuja, 1937**

Nomenclature:

Phormidium edessae

Notes: Anagnostidis 1968

***Phormidium endophyticum* (W. & G. S. West) Skuja, 1956**

Nomenclature:

Phormidium endophyticum

Notes: Anagnostidis 1968

***Phormidium favosum* Gomont, 1892**

Nomenclature:

Phormidium favosum

Notes: Anagnostidis 1968

***Phormidium feldmanni* Frémy, 1937**

Nomenclature:

Phormidium feldmanni

Notes: Anagnostidis 1968

***Phormidium grunowianum* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria grunowiana

Notes: Anagnostidis 1961

***Phormidium henningsii* (Lemmermann) Anagnostidis, 2001**

Nomenclature:

Leptolyngbya henningsii

Notes:

1. Lamprinou et al. 2012

***Phormidium incrustatum* Gomont ex Gomont, 1892**

Nomenclature:

Phormidium incrustans

Notes: Anagnostidis 1968

***Phormidium interruptum* Kützing ex Gomont, 1892**

Nomenclature:

Phormidium interruptum

Notes: Lamprinou et al. 2012

***Phormidium inundatum* Kützing ex Gomont, 1892**

Nomenclature:

Phormidium inundatum

Notes: Anagnostidis 1961

***Phormidium janthiphorum* Elenkin, 1949**

Nomenclature:

Oscillatoria janthiphora

Notes: Anagnostidis and Golubic 1966

***Phormidium jenkelianum* Kützing ex Gomont, 1892**

Nomenclature:

Phormidium jenkelianum

Notes: Anagnostidis 1961

***Phormidium kuetzingianum* (Kirchner ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium kuetzingianum

Notes: Lamprinou et al. 2012

***Phormidium lacustre* (Čado) Anagnostidis, 2001**

Nomenclature:

Phormidium lacustre

Notes: Lamprinou et al. 2012

***Phormidium litorale* Golubic, 1960**

Nomenclature:

Phormidium litorale

Notes: Anagnostidis and Golubic 1966

***Phormidium macedonicum* (Čado), 1959**

Nomenclature:

Phormidium macedonicum

Notes: Lamprinou et al. 2012

***Phormidium melanochroun* Lamprinou & Pantazidou, 2013**

Nomenclature:

Phormidium melanochroun

Notes: Lamprinou et al. 2013b

***Phormidium minutum* Lindstedt, 1943**

Nomenclature:

Phormidium minutum

Notes: Anagnostidis 1968

***Phormidium molischii* (Vouk) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya molischi

Notes: Anagnostidis 1968

***Phormidium molle* var. *tenuior* W. & G. S. West ex Geitler, 1925**

Nomenclature:

Phormidium molle f. *tenuior*

Notes: Anagnostidis 1961

***Phormidium nigroviride* (Thwaites ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria nigroviridis

Notes: Anagnostidis and Golubic 1966

***Phormidium nigrum* (Vaucher ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria nigra

Notes: Anagnostidis 1968

***Phormidium pachydermaticum* Frémy, 1930**

Nomenclature:

Phormidium pachydermaticum

Notes: Anagnostidis 1961

***Phormidium papyraceum* Gomont ex Gomont, 1892**

Nomenclature:

Phormidium papyraceum

Notes: Anagnostidis 1961

***Phormidium priestleyi* F. E. Fritsch, 1917**

Nomenclature:

Phormidium priestleyi

Notes: Lamprinou et al. 2012

***Phormidium retzii* Kützing ex Gomont, 1892**

Nomenclature:

Phormidium retzii

Notes: Anagnostidis 1961

***Phormidium subfuscum* Kützing ex Gomont. 1892**

Nomenclature:

Phormidium subfuscum

Notes: Anagnostidis et al. 1981

***Phormidium submembranaceum* Gomont, 1892**

Nomenclature:

Phormidium submembranaceum

Notes: Anagnostidis 1968

***Phormidium tanganyikae* (G. S. West) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria tanganyikae

Notes: Anagnostidis et al. 1981

***Phormidium terebriforme* (C. Agardh ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria terebriformis

Notes: Anagnostidis 1961

***Phormidium tergestinum* Kützing ex Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium tergestinum

Notes: Lamprinou et al. 2012

***Phormidium thwaitesii* I. Umezaki & M. Watanabe, 1994**

Nomenclature:

Oscillatoria subuliformis

Notes: Anagnostidis 1968

***Phormidium uncinatum* Gomont ex Gomont, 1892**

Nomenclature:

Phormidium uncinatum

Notes: Anagnostidis 1968

***Phormidium willei* (N. L. Gardner) Anagnostidis & Komárek, 1988**

Nomenclature:

Oscillatoria willei

Notes: Anagnostidis and Golubic 1966

***Planktolyngbya bipunctata* (Lemmermann) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya bipunctata

Notes: Anagnostidis and Golubic 1966

***Planktolyngbya circumcreta* (G. S. West) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya circumcreta

Notes: Moustaka-Gouni 1988

***Planktolyngbya contorta* (Lemmermann) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya contorta

Notes: Anagnostidis 1968

***Planktolyngbya limnetica* (Lemmermann) Komárková- Legnerová & Cronberg, 1992**

Nomenclature:

Lyngbya limnetica

Notes: Anagnostidis 1961

***Planktothrix agardhii* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Planktothrix agardhii

Notes: Papadimitriou et al. 2013

***Planktothrix isothrix* (Skuja) Komárek & Komárková, 2004**

Nomenclature:

Oscillatoria cf. *agardhii* var. *isothrix*

Notes: Overbeck et al. 1982

***Planktothrix mougeotii* Anagnostidis & Komárek, 1988**

Nomenclature:

Planktothrix mougeotii

Notes: Anagnostidis and Pantazidou 1988b

***Planktothrix rubescens* (De Candolle ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Planktothrix rubescens

Notes: Vareli et al. 2009

***Plectonema araucanum* Schwabe, 1960**

Nomenclature:

Plectonema araucanum

Notes: Lamprinou et al. 2012

***Plectonematomassinianum* Bornet ex Gomont, 1893**

Nomenclature:

Plectonema tomassinianum

Notes: Anagnostidis and Economou-Amilli 1978

***Pleurocapsa fuliginosa* Hauck, 1885**

Nomenclature:

Pleurocapsa fuliginosa

Notes: Lamprinou et al. 2012

***Pleurocapsa minor* Hansgirg, 1891**

Nomenclature:

Scopulonema minus

Notes: Anagnostidis 1968

***Porphyrosiphon versicolor* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Lyngbya versicolor

Notes: Anagnostidis 1968

***Pseudanabaena amphigranulata* (Van Goor) Anagnostidis, 2001**

Nomenclature:

Pseudanabaena galeata f. *tenuis*

Notes: Anagnostidis 1961

***Pseudanabaena arcuata* (Skuja) Anagnostidis & Komárek, 1988**

Nomenclature:

Phormidium arcuatum

Notes: Anagnostidis 1968

***Pseudanabaena biceps* Böcher, 1946**

Nomenclature:

Pseudanabaena biceps

Notes: Anagnostidis 1968

***Pseudanabaena catenata* Lauterborn, 1915**

Nomenclature:

Pseudanabaena catenata

Notes: Anagnostidis 1961

***Pseudanabaena galeata* Böcher, 1949**

Nomenclature:

Pseudanabaena galeata

Notes: Anagnostidis 1961

***Pseudanabaena limnetica* (Lemmermann) Komárek, 1974**

Nomenclature:

Oscillatoria limnetica

Notes: Anagnostidis 1968

***Pseudanabaena lonchoides* Anagnostidis, 1961**

Nomenclature:

Pseudanabaena lonchoides

Notes: Anagnostidis 1961

***Pseudanabaena mucicola* (Naumann & Huber-Pestalozzi) Schwabe, 1964**

Nomenclature:

Phormidium mucicola

Notes: Anagnostidis 1968

***Pseudanabaena raphidioides* (Geitler) Anagnostidis & Komárek, 1988**

Nomenclature:

Pseudanabaena raphidioides

Notes: Montesanto et al. 1999

***Pseudocapsa dubia* Ercegovic, 1925**

Nomenclature:

Pseudocapsa dubia

Notes: Anagnostidis and Pantazidou 1991b

***Pseudophormidium battersii* (Gomont) Anagnostidis, 2001**

Nomenclature:

Plectonema battersii

Notes: Anagnostidis 1968

***Pseudophormidium golenkinianum* (Gomont) Anagnostidis, 2001**

Nomenclature:

Plectonema golenkinianum

Notes: Anagnostidis and Golubic 1966

***Pseudophormidium hollerbachianum* (Elenkin) Anagnostidis, 2001**

Nomenclature:

Plectonema boryanum f. *hollerbachianum*

Notes: Anagnostidis et al. 1983

***Pseudophormidium radiosum* (Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema radiosum

Notes: Anagnostidis 1968

***Pseudophormidium spelaeoides* (Čado) Anagnostidis, 2001**

Nomenclature:

Pseudophormidium spelaeoides

Notes: Lamprinou et al. 2012

***Pseudophormidium tenue* (Thuret ex Gomont) Anagnostidis & Komárek, 1988**

Nomenclature:

Plectonema tenue

Notes: Anagnostidis and Economou-Amilli 1978

***Pseudoscytonema endolithicum* (Ercegovic) Anagnostidis in Komárek & Anagnostidis, 2005**

Nomenclature:

Plectonema endolithicum

Notes: Anagnostidis 1968

***Radiocystis geminata* Skuja, 1948**

Nomenclature:

Radiocystis geminata

Notes: Anagnostidis 1968

***Raphidiopsis mediterranea* Skuja, 1937**

Nomenclature:

Raphidiopsis mediterranea

Notes: Anagnostidis 1968

***Rhabdoderma curtum* (Setchell) Komárek & Anagnostidis, 1995**

Nomenclature:

Synechococcus curtus

Notes: Anagnostidis and Golubic 1966

***Rhabdoderma lineare* Schmidle & Lauterborn in Schmidle, 1900**

Nomenclature:

Synechococcus linearis

Notes: Moustaka 1988

***Rhabdogloea cf. elenkinii* (Roll) Komárek & Anagnostidis, 1995**

Nomenclature:

Dactylococcopsis cf. elenkinii

Notes: Hindak and Moustaka 1988

***Rivularia atra* Roth ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia atra

Notes: Anagnostidis 1968

***Rivularia biasolettiana* Meneghini ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia biasolettiana

Notes: Anagnostidis 1968

***Rivularia bullata* Berkeley ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia bullata

Notes: Anagnostidis 1968

***Rivularia calcarata* (Woronichin) Poljankij in Hollerbach et al. 1953**

Nomenclature:

Dichothrix compacta var. *calcarata*

Notes: Anagnostidis 1968

***Rivularia haematites* C. Agardh ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia haematites

Notes: Anagnostidis 1968

***Rivularia nitida* C. Agardh ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia nitida

Notes: Anagnostidis 1968

***Rivularia polyotis* Roth ex Bornet & Flahault, 1886**

Nomenclature:

Rivularia polyotis

Notes: Anagnostidis and Golubic 1966

***Romeria gracilis* (Koczwara) Koczwara in Geitler, 1932**

Nomenclature:

Romeria gracilis

Notes: Tryfon et al. 1996

***Romeria simplex* (Hindák) Hindák, 1988**

Nomenclature:

Romeria simplex

Notes: Katsiapi et al. 2012

***Schizothrix affinis* Lemmermann, 1905**

Nomenclature:

Schizothrix affinis

Notes: Anagnostidis 1968

***Schizothrix arenaria* Gomont, 1892**

Nomenclature:

Schizothrix arenaria

Notes: Anagnostidis 1968

***Schizothrix bosniaca* (Forti) Geitler, 1932**

Nomenclature:

Schizothrix bosniaca

Notes: Anagnostidis et al. 1983

***Schizothrix calcicola* Gomont, 1892**

Nomenclature:

Schizothrix calcicola

Notes: Anagnostidis 1968

***Schizothrix coriacea* Gomont, 1892**

Nomenclature:

Schizothrix coriacea

Notes: Anagnostidis 1968

***Schizothrix delicatissima* W. & G. S. West, 1897**

Nomenclature:

Schizothrix delicatissima

Notes: Anagnostidis 1968

***Schizothrix fasciculata* Gomont ex Gomont, 1892**

Nomenclature:

Schizothrix fasciculata

Notes: Anagnostidis 1968

Schizothrix heufleri Grunow ex Gomont, 1892

Nomenclature:

Schizothrix heufleri

Notes: Anagnostidis 1968

Schizothrix lacustris A. Braun ex Gomont, 1892

Nomenclature:

Schizothrix lacustris

Notes: Anagnostidis 1968

Schizothrix lardacea Gomont, 1892

Nomenclature:

Schizothrix lardacea

Notes: Anagnostidis 1968

Schizothrix lateritia Gomont, 1892

Nomenclature:

Schizothrix lateritia

Notes: Anagnostidis 1968

Schizothrix lenormandiana Gomont, 1892

Nomenclature:

Schizothrix lenormandiana

Notes: Katsiapi et al. 2012

Schizothrix simplicior Skuja, 1964

Nomenclature:

Schizothrix simplicior

Notes: Anagnostidis 1968

Schizothrix tenuis Woronichin, 1923

Nomenclature:

Schizothrix tenuis

Notes: Anagnostidis 1968

Scytonema crispum Bornet ex De Toni, 1907

Nomenclature:

Scytonema crispum st. *chiastus*

Notes: Anagnostidis 1968

Scytonema hofmanii var. *calcicola* Agardh ex Bornet & Flahault, 1887

Nomenclature:

Scytonema hofmanii var. *calcicola*

Notes: Lamprinou et al. 2012

Scytonema julianum Meneghini ex B. A. Whitton, 2011

Nomenclature:

Scytonema julianum

Notes: Anagnostidis et al. 1982

Scytonema myochrous C. Agardh ex Bornet & Flahault, 1886

Nomenclature:

Scytonema myochrous

Notes: Anagnostidis 1968

Scytonema polycystum Bornet & Flahault, 1886

Nomenclature:

Scytonema polycystum

Notes: Anagnostidis 1968

***Scytonema wolleanum* Forti, 1907**

Nomenclature:

Scytonema mirabile

Notes: Anagnostidis 1968

***Scytonematopsis crustacea* (Thuret ex Bornet & Flahault) Koválik & Komárek, 1988.**

Nomenclature:

Calothrix crustacea

Notes: Anagnostidis and Golubic 1966

***Siphonema polonicum* (Raciborski) Geitler, 1925**

Nomenclature:

Siphononema polonicum

Notes: Anagnostidis 1968

***Snowella atomus* Komárek & Hindák, 1988**

Nomenclature:

Snowella atomus

Notes: Danielidis et al. 1996

***Snowella lacustris* (Chodat) Komárek & Hindák, 1988**

Nomenclature:

Gomphosphaeria lacustris

Notes: Anagnostidis 1968

***Snowella litoralis* (Häyrén) Komárek & Hindák, 1988**

Nomenclature:

Snowella litoralis

Notes: Hindak and Moustaka 1988

***Snowella septentrionalis* Komárek & Hindák, 1988**

Nomenclature:

Snowella septentrionalis

Notes: Montesanto et al. 1999

***Solentia paulocellularis* (Ercegovic) LeCampion-Alsumard & Golubic ex Belyakova, 1988**

Nomenclature:

Hormathonema paulocellulare

Notes: Anagnostidis and Pantazidou 1988a

***Sphaerocavum microcystiforme* (Hindák) Azevedo & Sant' Anna, 2003**

Nomenclature:

Pannus microcystiformis

Notes: Hindák 1993

***Sphaerospermopsis aphanizomenoides* (Forti) Zapomelová, Jezberová, Hrouzek, Hisem, Reháková & Komárková, 2010**

Nomenclature:

Anabaena aphanizomenoides

Notes: Moustaka-Gouni 1988

***Spirulina caldaria* Tilden, 1898**

Nomenclature:

Spirulina caldaria

Notes: Anagnostidis 1961

***Spirulina corakiana* Playfair, 1914**

Nomenclature:

Spirulina corakiana

Notes: Anagnostidis 1961

***Spirulina labyrinthiformis* Gomont, 1892**

Nomenclature:

Spirulina labyrinthiformis

Notes: Anagnostidis and Golubic 1966

***Spirulina major* Kützing ex Gomont, 1892**

Nomenclature:

Spirulina major

Notes: Anagnostidis 1961

***Spirulina meneghiniana* Zanardini ex Gomont, 1892**

Nomenclature:

Spirulina meneghiniana

Notes: Anagnostidis and Golubic 1966

***Spirulina princeps* W. & G. S. West, 1902**

Nomenclature:

Spirulina princeps

Notes: Anagnostidis 1961

***Spirulina robusta* H. Welsh, 1965**

Nomenclature:

Spirulina subsalsa var. *crassior*

Notes: Anagnostidis 1961

***Spirulina subsalsa* Oersted ex Gomont, 1892**

Nomenclature:

Spirulina subsalsa

Notes: Anagnostidis 1961

***Spirulina subtilissima* Kützing ex Gomont, 1892**

Nomenclature:

Spirulina subtilissima

Notes: Anagnostidis 1961

***Spirulina tenerrima* Kützing ex Gomont, 1892**

Nomenclature:

Spirulina tenerrima

Notes: Anagnostidis 1961

***Spirulina versicolor* Cohn ex Gomont, 1892**

Nomenclature:

Spirulina subsalsa st. *versicolor*

Notes: Anagnostidis 1968

***Staniera sublitoralis* (Lindstedt) Anagnostidis & Pantazidou, 1991**

Nomenclature:

Staniera sublitoralis

Notes: Anagnostidis and Pantazidou 1991b

***Staniera sphaerica* (Setchel & Gardner) Anagnostidis & Pantazidou, 1991**

Nomenclature:

Dermocarpa sphaerica

Notes: Anagnostidis and Golubic 1966

***Stichosiphon pseudopolymorphus* (F. E. Fritsch) Komárek, 1989**

Nomenclature:

Chamaesiphon pseudopolymorphus

Notes: Anagnostidis 1968

***Stigonema hormoides* Bornet & Flahault, 1886**

Nomenclature:

Stigonema hormoides

Notes: Anagnostidis and Economou-Amilli 1978

***Stigonema mamillosum* C. Agardh ex Bornet & Flahault, 1887**

Nomenclature:

Stigonema mamillosum

Notes: Anagnostidis 1968

***Stigonema minutum* Hassall ex Bornet & Flahault, 1887**

Nomenclature:

Stigonema minutum

Notes: Anagnostidis 1968

***Symploca dubia* Gomont, 1892**

Nomenclature:

Symploca dubia

Notes: Anagnostidis 1968

***Symploca elegans* Kützing ex Gomont, 1892**

Nomenclature:

Symploca elegans

Notes: Anagnostidis 1968

***Symploca hydroides* Kützing ex Gomont, 1892**

Nomenclature:

Symploca hydroides

Notes: Anagnostidis 1968

***Symploca lacrimans* Claus, 1962**

Nomenclature:

Symploca lacrimans

Notes: Lamprinou et al. 2012

***Symploca muralis* Kützing ex Gomont, 1892**

Nomenclature:

Symploca muralis

Notes: Lamprinou et al. 2012

***Symploca muscorum* Gomont ex Gomont, 1892**

Nomenclature:

Symploca muscorum

Notes: Anagnostidis 1968

***Symploca radians* (Kützing) Rabenhorst ex Gomont, 1892**

Nomenclature:

Symploca radians

Notes: Lamprinou et al. 2012

***Symploca thermalis* Gomont, 1892**

Nomenclature:

Symploca thermalis

Notes: Anagnostidis 1961

***Symplocastrum penicillatum* (Gomont) Anagnostidis, 2001**

Nomenclature:

Schizothrix penicillata

Notes: Anagnostidis 1968

***Synechococcus salinarum* Komárek, 1956**

Nomenclature:

Synechococcus salinarum

Notes: Anagnostidis and Roussomoustakaki 1991

***Synechococcus bigranulatus* Skuja, 1933**

Nomenclature:

Synechococcus elongatus f. *thermalis*

Notes: Anagnostidis 1961

***Synechococcus elongatus* Nägeli, 1849**

Nomenclature:

Synechococcus elongatus

Notes: Anagnostidis and Golubic 1966

***Synechocystis aquatilis* Sauvageau, 1892**

Nomenclature:

Synechocystis aquatilis

Notes: Anagnostidis 1961

***Synechocystis crassa* Woronichin, 1929**

Nomenclature:

Synechocystis crassa

Notes: Anagnostidis 1968

***Synechocystis diplococca* (Pringsheim) Burrelly, 1970**

Nomenclature:

Synechocystis diplococcus

Notes: Anagnostidis and Economou-Amilli 1978

***Synechocystis endobiotica* (Elenkin & Hollerbach) Elenkin, 1938**

Nomenclature:

Aphanocapsa endophytica

Notes: Anagnostidis 1968

***Synechocystis minuscula* Woronichin, 1926**

Nomenclature:

Synechocystis minuscula

Notes: Anagnostidis 1961

***Synechocystis pevalekii* Ercegovic 1925**

Nomenclature:

Synechocystis pevalekii

Notes: Anagnostidis 1968

***Synechocystis salina* Wislouch, 1924**

Nomenclature:

Synechocystis salina

Notes: Anagnostidis 1961

***Synechocystis sallensis* Skuja, 1930**

Nomenclature:

Synechocystis sallensis

Notes: Metaxatos et al. 2003

***Synechocystis thermalis* J. J. Copeland, 1936**

Nomenclature:

Synechocystis thermalis

Notes: Anagnostidis 1961

***Tapinothrix crustacea* (Woronichin) Bohunická & Johansen in Bohunická, Johansen & Fuciková, 2011**

Nomenclature:

Homoeothrix crustacea

Notes: Anagnostidis 1968

***Tapinothrix varians* (Geitler) Bohunická & J. R. Johansen in Bohunická, Johansen & Fuciková, 2011**

Nomenclature:

Homoeothrix varians

Notes: Anagnostidis 1968

***Tolypothrix cavernicola* Weber-van Bosse, 1913**

Nomenclature:

Tolypothrix cavernicola

Notes: Lamprinou et al. 2012

***Tolypothrix distorta* Kützing ex Bornet & Flahault, 1886**

Nomenclature:

Tolypothrix distorta

Notes: Anagnostidis 1968

***Tolypothrix elenkinii* Hollerbach, 1923**

Nomenclature:

Tolypothrix elenkinii

Notes: Anagnostidis 1968

***Tolypothrix fragilissima* Ercegovic, 1925**

Nomenclature:

Tolypothrix fragilissima

Notes: Lamprinou et al. 2012

***Tolypothrix penicillata* Thuret ex Bornet & Flahault, 1886**

Nomenclature:

Tolypothrix penicillata

Notes: Anagnostidis 1968

***Tolypothrix rivularis* Hansgirg, 1892**

Nomenclature:

Tolypothrix rivularis

Notes: Lamprinou et al. 2012

***Toxopsis calypsus* Lamprinou, Skaraki, Kotoulas, Economou-Amili & Pantazidou, 2012**

Nomenclature:

Toxopsis calypsus

Notes: Lamprinou et al. 2012

***Trichocoleus delicatulus* (W. & G. S. West) Anagnostidis, 2001**

Nomenclature:

Microcoleus delicatulus

Notes: Anagnostidis 1968

***Trichocoleus minimus* (Frémy) Anagnostidis, 2001**

Nomenclature:

Microcoleus minimus

Notes: Anagnostidis et al. 1982

***Trichocoleus sociatus* (W. & G. S. West) Anagnostidis, 2001**

Nomenclature:

Microcoleus sociatus

Notes: Anagnostidis 1961

***Trichocoleus tenerrimus* (Gomont) Anagnostidis, 2001**

Nomenclature:

Microcoleus tenerrimus

Notes: Anagnostidis and Economou-Amilli 1978

***Trichocoleus voukii* (Frémy) Anagnostidis, 2001**

Nomenclature:

Microcoleus voukii

Notes: Anagnostidis 1968

***Trichodesmium* cf. *iwanoффianum* Nygaard, 1926**

Nomenclature:

Oscillatoria cf. *iwanoффiana*

Notes: Moustaka 1988

***Trichodesmium erythraeum* Ehrenberg ex Gomont, 1892**

Nomenclature:

Trichodesmium erythraeum

Notes: Metaxatos et al. 2003

***Trichormus azollae* (Strasburger) Komárek & Anagnostidis, 1989**

Nomenclature:

Anabaena azollae

Notes: Anagnostidis et al. 1988b

***Trichormus thermalis* (V.Vouk) Komárek & Anagnostidis, 1989**

Nomenclature:

Anabaena thermalis

Notes: Anagnostidis 1961

***Trichormus variabilis* (Kützing ex Bornet & Flahault) Komárek & Anagnostidis, 1989**

Nomenclature:

Anabaena variabilis

Notes: Anagnostidis 1968

***Woronichinia compacta* (Lemmermann) Komárek & Hindák, 1988**

Nomenclature:

Woronichinia compacta

Notes: Tryfon et al. 1996

***Woronichinia naegeliana* (Unger) Elenkin, 1933**

Nomenclature:

Coelosphaerium naegelianum

Notes: Anagnostidis 1968

***Xenococcus cf. pyriformis* Setchell & N. L. Gardner in N. L. Gardner, 1918**

Nomenclature:

Xenococcus cf. pyriformis

Notes: Radea et al. 2010

***Xenococcus schousboei* Thuret in Bornet & Thuret, 1880**

Nomenclature:

Xenococcus schousboei

Notes: Anagnostidis and Golubic 1966

***Xenotholos keneri* (Hansgirg) M. Gold-Morgan, G. Montejano & J. Komárek, 1994**

Nomenclature:

Xenococcus keneri

Notes: Anagnostidis and Golubic 1966

***Yonedaella lithophila* (Ercegovic) Umezaki, 1962**

Nomenclature:

Sphaeronema lithophilum

Notes: Anagnostidis 1968

Analysis

A total of 543 species and 85 infraspecific taxa have been found in Greece up to date. The species are classified in 130 genera, 41 families, and 8 orders. The orders Synechococcales and Oscillatoriales have the highest number of species (158 and 153 species, respectively), whereas these two orders along with Nostocales and Chroococcales cover 93% of the known Greek cyanobacteria species (Fig. 1). The families Oscillatoriaceae, Leptolyngbyaceae, Microcoleaceae, and Chroococcaceae have the highest number of species (>30 each) (Fig. 2a); the genera *Phormidium*, *Leptolyngbya*, *Oscillatoria*, *Chroococcus*, *Aphanocapsa*, and *Gloeocapsa* have the highest number of species (>15 each) (Fig. 2b). Fourteen species were found to include 85 infraspecific taxa (Table 1); those infraspecific taxa were not included in the checklist. Furthermore, 21 species recorded in Greece are not valid or of uncertain taxonomic status (Table 2) and were not included in the checklist.

Discussion

A thorough review of the relevant literature revealed that 543 species of cyanobacteria have been reported up to date from Greece. The species recorded from this area are classified in 130 genera and 41 families, all of the 8 orders of the class Cyanophyceae (Komárek et al. 2014) being represented. In this checklist we have not included 85 infraspecific taxa mostly from the genera *Entophysalis*, *Gloeocapsa*, *Mastigocladus*, *Scytonema*, and *Siphononema* recorded in several habitats such as gulfs, waterfalls, caves, and lakes by Anagnostidis (Anagnostidis 1961, Anagnostidis 1968). In the genus *Mastigocladus* numerous taxa were described, which do not belong to this genus (Komárek 2013). Among the *formae* described by Anagnostidis, some are subject to revision [e.g. *M. fa. microchaetoides* is "surely not *Mastigocladus*, as it is morphologically similar to *Aulosira*" according to Komárek (2013)]. The great morphological variability of this chroococcalean and nostocalean species should be further investigated in the future.

A number of species reported in Greece were found to be of not valid or of uncertain taxonomic status: The species *Pleurocapsa crepidinum* is possibly a *Chroococcidiopsis* species and needs revision (Komárek and Anagnostidis 2005). The species *Hydrocoleus homoeotrichus sensu* Anagnostidis et al. (1983), probably belongs to the Oscillatoriaceae and into the genus *Blennothrix* (Komárek and Anagnostidis 2005) according to its trichome

structure. The taxon *Aphanothece nidulans* var. *nidulans* found in Lake Volvi (Hindak and Moustaka 1988) is not included either in the Chroococcales volume of Süsswasserflora von Mitteleuropa (Komárek and Anagnostidis 1999) nor in the AlgaeBase (Guiry and Guiry 2016); Algaebase contains only two valid *A. nidulans* varieties: var. *longissima* Nash and var. *thermalis* Hansgirg. *Gloeocapsa polydermatica* Kützing found in Nigrita hot springs (Anagnostidis 1961) is currently regarded as a taxonomic synonym of the chlorophyte *Sporotetras polydermatica* (Kützing) I.Kostikov, T.Darienko, A.Lukesová, & L.Hoffmann (Guiry and Guiry 2016). The taxon *Scolecia filosa* found in microbial bioerosion at an underwater marine site in Peloponnese (Färber et al. 2015) belongs to ichnotaxa produced by unknown heterotrophic organisms (Heindel et al. 2009), not cyanobacteria. The remaining 17 species belong to the family Pelonemataceae; this family, consisting of the genera *Achroonema*, *Pelonema*, *Peloploca*, and *Desmanthos*, was created to accommodate some colorless bacteria with multicellular filaments (trichomes), which were observed in hypolimnia of lakes and ponds or in sulfur springs (Hirsch 1981). At present, members of this family are considered unclassified below the Kingdom level (Guiry and Guiry 2016).

It is worth mentioning that 18 of the species included in the list have been initially described from Greek habitats. The marine epilithic *Ammatoidea aegaea* described from Saronikos Gulf (Aegean Sea) (Anagnostidis and Pantazidou 1991a) is considered endemic to this area (Komarek and Anagnostidis 2005). Interestingly, most of these new species were found in rarely sampled habitats, such as caves [e.g. *Toxopsis calypsus*, *Ilnoe spelaea* (Lamprinou et al. 2011)], marine coastal rocks [e.g. epilithic *Cyanosarcina thalassia* (Anagnostidis and Pantazidou 1991b) or endolithic *Cyanosaccus aegaeus* and *Cyanosaccus atticus* (Anagnostidis and Pantazidou 1985, Anagnostidis and Pantazidou 1988a)], archaeological sites [e.g. aerophytic, chasmoendolithic *Cyanosarcina parthenonensis* (Anagnostidis and Pantazidou 1991b)], heliothermal saltwork mats [*Cyanothece halobia* (Anagnostidis and Roussomoustakaki 1991)], and waterfalls [*Phormidium edessae* (Skuja 1937)], highlighting the need for further research to reveal the unknown diversity in these environments. A recent study by Bravakos et al. (2016) on cyanobacteria strains isolated from mats of thermal springs of Greece indicates at least six new taxa at the genus level. Furthermore, Konstantinou et al. (2016) report possible new species on cyanobacteria strains isolated from marine sponges from the Aegean Sea, thus corroborating the abundant diversity of lesser-known environments.

To the best of our knowledge, the list of Greek cyanobacteria compiled for the needs of the present study is the first list of both freshwater and marine Cyanophyceae in the Mediterranean. There is another list presenting 327 species from Israel (Tsarenko et al. 2000), but this refers only to the continental part of that country. The Egyptian list (Nassar 2014) contains 19 cyanobacteria species, whereas a phytoplankton checklist from the Eastern Adriatic (Vilicic et al. 2002) contains no cyanobacteria. Other local cyanobacterial lists were published in the past 15 years from continental parts of Europe, e.g. Slovakia, Sweden, Poland, Romania, Ukraine, Slovenia, the Netherlands, and the Czech Republic (Kaštovský et al. 2010 and references therein), as well as a checklist from the Baltic Sea reporting 172 cyanobacterial species (Hällfors 2004). The Czech Republic list comprises

505 species, 392 of which are considered recently present according to Kaštovský et al. 2010. The cyanobacteria checklist of Nepal (Rai et al. 2011) presents 274 species. **Therefore**, it appears that Greece hosts a comparatively high diversity of cyanobacteria, suggesting that the Mediterranean area is also a hot spot for the “substantially underestimated or unexplored” (Coll et al. 2010) microbes.

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Author contributions

SG conceived, designed and supervised this project, and prepared the manuscript. IO and NP collected the data. IO, MP, and SG and built the database.

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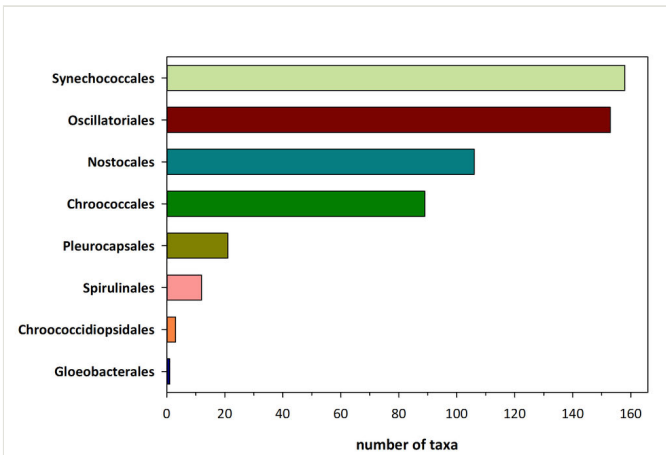


Figure 1.
Classification of cyanobacteria of Greece in orders.

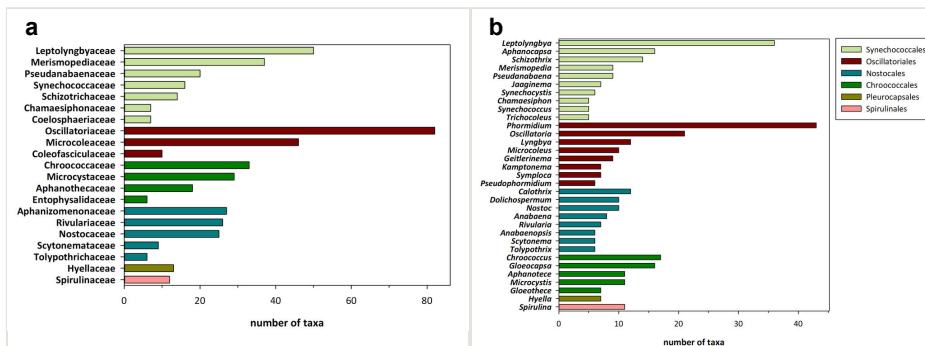


Figure 2. Classification of cyanobacteria of Greece in families (a) and genera (b). Only families and genera including more than five species are shown.

Table 1.

List of infraspecific cyanobacterial taxa known to occur in Greece. For each taxon the first publication mentioning its occurrence in Greece is given.

Species	Infraspecific epithet	Reference
<i>Anabaena torulosa</i>	var. <i>tenuis</i>	Anagnostidis 1961
<i>Anabaena oscillarioides</i>	fa. <i>circinalis</i>	Anagnostidis 1968
<i>Aphanothece microscopica</i>	fa. <i>endophytica</i>	Anagnostidis 1968
<i>Entophysalis deusta</i>	st. <i>solentiooides</i>	Anagnostidis 1968
	st. <i>dermatocarpoides</i>	Anagnostidis 1968
	st. <i>dermocarpoides</i>	Anagnostidis 1968
	st. <i>gloeocapsoides</i>	Anagnostidis 1968
	st. <i>hormathonematoides</i>	Anagnostidis 1968
	st. <i>hyelloides</i>	Anagnostidis 1968
	st. <i>pleurocapsoides</i>	Anagnostidis 1968
	st. <i>tryponematoides</i>	Anagnostidis 1968
<i>Gloeocapsa bififormis</i>	st. <i>derm. col. ralfsianus</i>	Anagnostidis 1968
	st. <i>derm. magma</i>	Anagnostidis 1968
	st. <i>dermochrous</i>	Anagnostidis 1968
	st. <i>nannocytosus</i>	Anagnostidis 1968
	st. <i>perdurans</i>	Anagnostidis 1968
	st. <i>punctatus</i>	Anagnostidis 1968
	<i>Gloeocapsa compacta</i>	st. <i>perdurans</i>
st. lam. col. <i>magma</i>		Anagnostidis 1968
st. lam. col. <i>typicus</i>		Anagnostidis 1968
st. lam. <i>coloratus</i>		Anagnostidis 1968
st. <i>nannocytosus</i>		Anagnostidis 1968
st. <i>perdurans</i>		Anagnostidis 1968
<i>Gloeocapsa kützingiana</i>	st. lam. col. <i>magma</i>	Anagnostidis 1968
	st. lam. <i>coloratus</i>	Anagnostidis 1968
	st. <i>perdurans</i>	Anagnostidis 1968
	st. <i>rupestris</i>	Anagnostidis 1968
<i>Gloeocapsa sanguinea</i>	st. col. alp. <i>magma</i>	Anagnostidis 1968
	st. col. alp. <i>ralfsianus</i>	Anagnostidis 1968
	st. col. <i>ralfsianus</i>	Anagnostidis 1968
	st. lam. col. alp. <i>magma</i>	Anagnostidis 1968

	st. lam. col. <i>alpinus</i>	Anagnostidis 1968
	st. lam. col. <i>magma</i>	Anagnostidis 1968
	st. lam. <i>coloratus</i>	Anagnostidis 1968
	st. <i>perdurans</i>	Anagnostidis 1968
	st. <i>simplex</i>	Anagnostidis 1968
<i>Mastigocladus laminosus</i>	fa. <i>oscillarioides</i> subfa. <i>subrecta</i>	Anagnostidis 1961
	fa. <i>oscillarioides</i> subfa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>oscillarioides</i> subfa. <i>spiroides</i>	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i>	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. <i>subrecta</i>	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. <i>spiroides</i>	Anagnostidis 1961
	fa. <i>lyngbyoides</i>	Anagnostidis 1961
	fa. <i>lyngbyoides</i> subfa. <i>subrecta</i>	Anagnostidis 1961
	fa. <i>lyngbyoides</i> subfa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>phormidioides</i>	Anagnostidis 1961
	fa. <i>phormidioides</i> subfa. <i>subrecta</i>	Anagnostidis 1961
	fa. <i>phormidioides</i> subfa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>plectonematoides</i>	Anagnostidis 1961
	fa. <i>symplocoides</i>	Anagnostidis 1961
	fa. <i>anabaenoides</i>	Anagnostidis 1961
	fa. <i>anabaenoides</i> subfa. <i>subrecta</i>	Anagnostidis 1961
	fa. <i>anabaenoides</i> subfa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>anabaenoides</i> subfa. <i>spiroides</i>	Anagnostidis 1961
	fa. <i>nostocoides</i>	Anagnostidis 1961
	fa. <i>aulosiroides</i>	Anagnostidis 1961
	fa. <i>stigonematoides</i>	Anagnostidis 1961
	fa. <i>microchaetoides</i>	Anagnostidis 1961
	fa. <i>tolypotrichoides</i>	Anagnostidis 1961
	fa. <i>scytonematoides</i>	Anagnostidis 1961
	fa. <i>typica</i>	Anagnostidis 1961
	fa. <i>typica</i> subfa. <i>normalis</i>	Anagnostidis 1961
	fa. <i>typica</i> subfa. <i>brachytrichoides</i>	Anagnostidis 1961
	fa. <i>pallidus</i>	Anagnostidis 1961
	fa. <i>oscillarioides</i>	Anagnostidis 1961
fa. <i>chroococcoides</i>	Anagnostidis 1961	
fa. <i>pleurocapsoides</i>	Anagnostidis 1961	

<i>Nostoc punctiforme</i>	var. <i>populorum</i> ¹	Anagnostidis and Economou-Amilli 1978
<i>Pseudanabaena articulata</i>	fa. ²	Anagnostidis 1968
<i>Pseudanabaena lonchoides</i>	fa. <i>circinata</i>	Anagnostidis 1961
	fa. <i>crassior</i>	Anagnostidis 1968
	fa. <i>tenuis</i>	Anagnostidis 1968
<i>Scytonema myochrous</i>	st. <i>crustaceus</i>	Anagnostidis 1968
	st. <i>petalonema</i>	Anagnostidis 1968
	st. <i>petalonema</i>	Anagnostidis 1968
	st. <i>petalonema</i>	Anagnostidis 1968
	st. <i>typicus</i>	Anagnostidis 1968
<i>Siphononema polonicum</i>	st. <i>chamaesiphonoides</i>	Anagnostidis 1968
	st. <i>juvenilis</i>	Anagnostidis 1968
	st. <i>scopulonematoides</i>	Anagnostidis 1968
	st. <i>stigonematoides</i>	Anagnostidis 1968
<i>Synechocystis aquatilis</i>	var. <i>minor</i>	Anagnostidis 1961

¹ The current taxonomic status is *Nostoc punctiforme* fa. *populorum*

² The author does not identify a certain forma

Table 2.

List of cyanobacterial taxa known to occur in Greece with uncertain or not valid taxonomic status. For each taxon the publication mentioning its occurrence in Greece and the current taxonomic status is given.

Taxon	Reference	Current taxonomic status
<i>Achroonema lentum</i>	Anagnostidis and Economou–Amilli 1980	unclassified below the Kingdom level (Guiry and Guiry 2016)
<i>Achroonema proteiforme</i>	Anagnostidis 1968	
<i>Achroonema angustum</i>	Anagnostidis 1968	
<i>Achroonema atriculatum</i>	Anagnostidis 1968	
<i>Achroonema splendens</i>	Anagnostidis 1968	
<i>Achroonema subsalsum</i>	Anagnostidis 1968	
<i>Desmanthos thiocrenophilum</i> (?)	Anagnostidis 1968	
<i>Pelonema aphone</i>	Anagnostidis 1968	
<i>Pelonema</i> cf. <i>subtilissimum</i>	Anagnostidis and Roussomoustakaki 1991	
<i>Pelonema pseudovaculatum</i>	Anagnostidis 1968	
<i>Pelonema subtilissimum</i>	Anagnostidis 1968	
<i>Pelonema tenue</i>	Anagnostidis 1968	
<i>Peloploca ferruginea</i> (?)	Anagnostidis 1968	
<i>Peloploca taeniata</i>	Anagnostidis 1968	
<i>Peloploca undulata</i>	Anagnostidis 1968	
<i>Pleurocapsa crepidinum</i>	Anagnostidis and Golubic 1966	needs revision; possibly a <i>Chroococciopsis</i> species (Komárek and Anagnostidis 2005)
<i>Aphanothece nidulans</i> var. <i>nidulans</i>	Hindak and Moustaka 1988	uncertain; Algbase (Guiry and Guiry 2016) contains only two valid <i>A. nidulans</i> varieties: var. <i>longissima</i> Nash and var. <i>thermalis</i> Hansgirg
<i>Hydrocoleus homoeotrichus</i>	Anagnostidis et al. 1983	needs revision; <i>sensu</i> Anagnostidis et al 1983, probably belongs to the Oscillatoriaceae according to trichome structure, and into the genus <i>Blennothrix</i> (Komárek and Anagnostidis 2005)
<i>Achroonema pseudangustum</i>	Anagnostidis and Economou–Amilli 1980	not valid (Guiry and Guiry 2016)
<i>Scolecia filosa</i>	Färber et al. 2015	Ichnotaxa produced by unknown heterotrophic organisms (Heindel et al. 2009)
<i>Gloeocapsa polydermatica</i>	Anagnostidis 1961	<i>Sporotetras polydermatica</i> [Chlorophyta] (Guiry and Guiry 2016)