



# Cyanobacteria of Greece: an annotated checklist

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Academic editor: Vasilis Gerovasileiou

Received: 04 Aug 2016 | Accepted: 24 Aug 2016 | Published: 01 Nov 2016

Citation: Gkelis S, Ourailidis I, Panou M, Pappas N (2016) Cyanobacteria of Greece: an annotated checklist. Biodiversity Data Journal 4: e10084. <https://doi.org/10.3897/BDJ.4.e10084>

## 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 8<sup>th</sup> 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 Voultsiadou 2007) reported "red snow" in 4<sup>th</sup> 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 20<sup>th</sup> 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 1991a, Anagnostidis and Pantazidou 1991b, 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, epizoic 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](#), DOI: [10.15468/lkj0mr](#)).

## List of Cyanobacteria known to occur in Greece

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

**Nomenclature:**

*Ammatoidea aegaea*

**Notes:** Anagnostidis and Pantazidou 1991b

### ***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

***Anabaenopsis cf. circularis* (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 favaloroi* S.H.Otaño, 2012**

**Nomenclature:**

*Aphanizomenon favaloroi*

**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***Chroococcidiopsis doonensis* R. B. Singh, 1968****Nomenclature:***Chroococcidiopsis doonensis***Notes:** Lamprinou et al. 2009***Chroococcidiopsis kashayi* Friedmann, 1961****Nomenclature:***Chroococcidiopsis kashaii***Notes:** Lamprinou et al. 2012***Chroococcidiopsis thermalis* Geitler, 1933****Nomenclature:***Chroococcidiopsis thermalis***Notes:** Anagnostidis and Pantazidou 1988a***Chroococcidium gelatinosum* Geitler, 1933****Nomenclature:***Chroococcidium gelatinosum*

**Notes:** Metaxatos et al. 2003

***Chroococcus* cf. *aphanocapsoides* Skuja ex Joosten, 2006**

**Nomenclature:**

*Chroococcus* cf. *aphanocapsoides*

**Notes:** Lamprinou et al. 2012

***Chroococcus* cf. *subsphaericus* 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

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

Nomenclature:

*Anabaena bergii*

Notes: Katsiapi et al. 2011

***Chrysochloris 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 kützingianum* 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 issatschenkoï* (Usachev) P. Rajaniemi, Komárek, R. Willame, P. Hrouzek, K. Kastovská, L. Hoffmann & K. Sivonen, 2005****Nomenclature:***Aphanizomenon issatschenkoï***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 1988b

***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 1991a

***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* (Klebhan) 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. grebulenta* (Zalessky) 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***Gloebacter 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

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

**Nomenclature:**

*Gloeothece cf. tepidariorum*

**Notes:** Lamprinou et al. 2014

***Gloeothece confluens* Nägeli, 1849**

**Nomenclature:**

*Gloeothece confluens*

**Notes:** Anagnostidis 1968

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

**Nomenclature:**

*Gloeothece fusco-lutea*

**Notes:** Anagnostidis 1968

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

**Nomenclature:**

*Gloeothece palea*

**Notes:** Anagnostidis and Golubic 1966

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

**Nomenclature:**

*Gloeothece rupestris*

**Notes:** Anagnostidis 1961

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

**Nomenclature:**

*Gloeothece rupestris* var. *tepidariorum*

**Notes:** Anagnostidis 1961

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

**Nomenclature:**

*Gloetrichia echinulata*

**Notes:** Anagnostidis 1968

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

**Nomenclature:**

*Gloetrichia 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 1988c***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 1988c***Hyella maxima* (Geitler) Anagnostidis & Pantazidou, 1988****Nomenclature:***Hyella maxima***Notes:** Anagnostidis and Pantazidou 1988c***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 projundum***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 ectocarpi* (Gomont) Anagnostidis & Komárek, 1988**

**Nomenclature:**

*Phormidium ectocarpi*

**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 bonnemaisionii* P. Crouan & H. Crouan ex Gomont, 1892****Nomenclature:***Oscillatoria bonnemaisionii*

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 spumosos* B.Hickel, 1991**

**Nomenclature:**

*Pannus spumosos*

**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:** 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 1988c

***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

***Plectonema tomasinianum* 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 1991a***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. chiasmus

**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 1991a

***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) Bourrelly, 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. iwanoffianum* Nygaard, 1926****Nomenclature:***Oscillatoria cf. iwanoffiana***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.

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>solentioides</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 biformis</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. <i>lam. col. magma</i>		Anagnostidis 1968

	st. lam. col. <i>typicus</i>	Anagnostidis 1968
	st. lam. <i>coloratus</i>	Anagnostidis 1968
	st. nannocytosus	Anagnostidis 1968
	st. perdurans	Anagnostidis 1968
	st. simplex	Anagnostidis 1968
<i>Gloeocapsa kützingiana</i>	st. lam. col. <i>magma</i>	Anagnostidis 1968
	st. lam. <i>coloratus</i>	Anagnostidis 1968
	st. perdurans	Anagnostidis 1968
	st. rupestris	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. perdurans	Anagnostidis 1968
	st. simplex	Anagnostidis 1968
<i>Mastigocladus laminosus</i>	fa. <i>oscillarioides</i> subfa. subrecta	Anagnostidis 1961
	fa. <i>oscillarioides</i> subfa. circinata	Anagnostidis 1961
	fa. <i>oscillarioides</i> subfa. spiroides	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i>	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. subrecta	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. circinata	Anagnostidis 1961
	fa. <i>pseudanabaenoides</i> subfa. spiroides	Anagnostidis 1961
	fa. <i>lyngbyoides</i>	Anagnostidis 1961
	fa. <i>lyngbyoides</i> subfa. subrecta	Anagnostidis 1961
	fa. <i>lyngbyoides</i> subfa. circinata	Anagnostidis 1961
	fa. <i>phormidioides</i>	Anagnostidis 1961
	fa. <i>phormidioides</i> subfa. subrecta	Anagnostidis 1961
	fa. <i>phormidioides</i> subfa. circinata	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. subrecta	Anagnostidis 1961
	fa. <i>anabaenoides</i> subfa. circinata	Anagnostidis 1961
	fa. <i>anabaenoides</i> subfa. spiroides	Anagnostidis 1961

	<i>fa. nostocoides</i>	Anagnostidis 1961
	<i>fa. aulosiroides</i>	Anagnostidis 1961
	<i>fa. stigonematoides</i>	Anagnostidis 1961
	<i>fa. microchaetoides</i>	Anagnostidis 1961
	<i>fa. tolypotrichoides</i>	Anagnostidis 1961
	<i>fa. scytonematoides</i>	Anagnostidis 1961
	<i>fa. typica</i>	Anagnostidis 1961
	<i>fa. typica</i> subfa. <i>normalis</i>	Anagnostidis 1961
	<i>fa. typica</i> subfa. <i>brachytrichoides</i>	Anagnostidis 1961
	<i>fa. pallidus</i>	Anagnostidis 1961
	<i>fa. oscillariodes</i>	Anagnostidis 1961
	<i>fa. chroococcoides</i>	Anagnostidis 1961
	<i>fa. pleurocapsoides</i>	Anagnostidis 1961
<i>Nostoc punctiforme</i>	var. <i>populorum</i> <sup>1</sup>	Anagnostidis and Economou-Amilli 1978
<i>Pseudanabaena articulata</i>	<i>fa.</i> <sup>2</sup>	Anagnostidis 1968
<i>Pseudanabaena lonchoides</i>	<i>fa. circinata</i>	Anagnostidis 1961
	<i>fa. crassior</i>	Anagnostidis 1968
	<i>fa. 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

<sup>1</sup> The current taxonomic status is *Nostoc punctiforme* *fa. populorum*

<sup>2</sup> 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 aphane</i>	Anagnostidis 1968	
<i>Pelonema</i> cf. <i>subtilissimum</i>	Anagnostidis and Roussomoustakaki 1991	
<i>Pelonema pseudovacuoletum</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>Chroococcidiopsis</i> species (Komárek and Anagnostidis 2005)
<i>Aphanothece nidulans</i> var. <i>nidulans</i>	Hindak and Moustaka 1988	uncertain; Algabase (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	lchnotaxa produced by unknown heterotrophic organisms (Heindel et al. 2009)
<i>Gloeocapsa polydermatica</i>	Anagnostidis 1961	<i>Sporotetras polydermatica</i> [Chlorophyta] (Guiry and Guiry 2016)

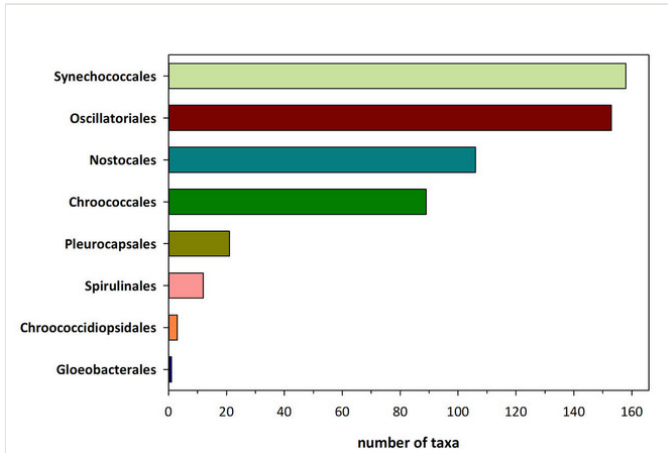


Figure 1. Classification of cyanobacteria of Greece in orders.

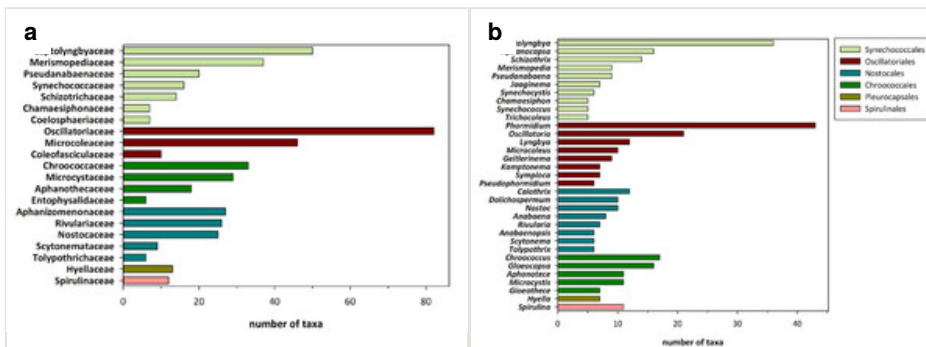


Figure 2. Classification of cyanobacteria of Greece in families (a) and genera (b). Only families and genera including more than five species are shown.

## 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 *Chroococciopsis* 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 aegea* 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*, *Ifinoe 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 1988c)], 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.

## Acknowledgements

This paper is dedicated to the memory of Professor Konstantinos Anagnostidis (12 December 1924-9 December 1994), whose pioneer work on cyanobacterial diversity has paved the way for modern cyanobacterial taxonomy and the study of Phycology in Greece.

This study was supported by the LifeWatchGreece Infrastructure, (MIS 384676), funded by the Greek Government under the General Secretariat of Research and Technology (GSRT), ESFRI Projects, National Strategic Reference Framework (NSRF).

SG gratefully acknowledges Prof. Eleni Voultsiadou for critically reading the manuscript, useful suggestions, and fruitful discussions. We thank Dr. Vasilis Gerovasileiou for his support.

## 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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