

Table S1. Review of the main described and revised *Synechococcus*–like cyanobacteria, selected from the literature. The taxonomic position was confirmed by molecular methods in the type species. Unrevised species are classified to revised genera, mostly only according to morphological and biological similarity.

	Thermostichaceae	Synechococcaceae	Prochlorococcaceae			Thermosynechococcaceae	Aphanothecaceae
Genus	<i>Thermostichus</i> gen. nov.	<i>Synechococcus</i> NÄGELI 1849	<i>Cyanobium</i> RIPPKA et COHEN-BAZIRE 1983	<i>Prochlorococcus</i> CHISHOLM et al. 1992	<i>Parasynechococcus</i> COUTINHO et. al. 2016 validation	<i>Thermosynechococcus</i> KATOH et al. 2001 validation	<i>Picosynechococcus</i> gen. nov.
Type species	vulcanus (Copeland) comb. n.	elongatus Nägeli 1849	gracile Rippka et Cohen-Bazire 1983	marinus Chisholm et al. 1992	marenigrum Coutinho et al. 2016 valid.	vestitus (Copeland) Katoh et al. 2001 valid.	fontinalis spec. nova
Species, mostly not evaluated by polyphasic approach	amphigranulatus (Copeland) comb. n.	endogloeicus Hindák 1996	diatomicola (Geitler) Komárek et al. 1999		africanus Coutinho et al. 2016 valid.	amethystinus (Copeland) comb. n.	
	arcuatus (Copeland) comb. n.	epigloeicus Hindák 1996	eximium (Copeland) Komárek et al. 1999		antarcticus Coutinho et al. 2016 valid.	thermalis (Geitler) comb. n.	
	bigranulatus (Skuja) comb. n.	intermedius Gardner 1927	gaarderi (Ålvik) Komárek et al. 1999		benguelii Coutinho et al. 2016 valid.		
	lividus (Copeland) comb. n.	mundulus Skuja 1964	oceanicum (Hall et Claus) Komárek et al. 1999		chillensis Coutinho et al. 2016 valid.		
	praelongus (Emoto et Yoneda) comb. n.	nidulans (Pringsheim) Komárek 1970	parvum (Migula) Komárek et al. 1999		equatorialis Coutinho et al. 2016 valid.		
	sublividus (Emoto et Yoneda) comb. n.	rhodobaktron Komárek et Anagnostidis 1995	plancticum (Drews et al.) Komárek et al. 1999		gyrus Coutinho et al. 2016 valid.		
	sulphuricus (Dor) comb. n.	roseo-purpureus G.S.West 1899	roseum (Copeland) Komárek et al. 1999		indicus Coutinho et al. 2016 valid.		
	vescus (Copeland) comb. n.	salinarum Komárek 1956	rubescens (Chang) Komárek et al. 1999		marearabicus Coutinho et al. 2016 valid.		
	viridissimus (Copeland) comb. n.	sciophilus Skuja 1964	virga-rosea (Chang) Komárek et al. 1999		mediterranei Coutinho et al. 2016 valid.		
		subsalsus Skuja 1939	waterburyi Komárek et al. 1999		nordiatlanticus Coutinho et al. 2016 valid.		
		violaceus Grunow 1868			pacificus Coutinho et al. 2016 valid.		
					subtropicalis Coutinho et al. 2016 valid.		
					sudiatlanticus Coutinho et al. 2016 valid.		
					sudipacificus Coutinho et al. 2016 valid.		