

Proposal of a genome-based taxonomy for the *Synechococcus* collective



PRESENTER
Vinícius W. Salazar

@vinisalazar_

AFFILIATION

Program of Systems and Computer Engineering, Federal University of Rio de Janeiro
Currently at the School of Mathematics & Statistics, University of Melbourne



DATA

1085 high quality genomes (GenBank)

196 *Synechococcus*

475 *Prochlorococcus*

414 other cyanobacteria

METHODS



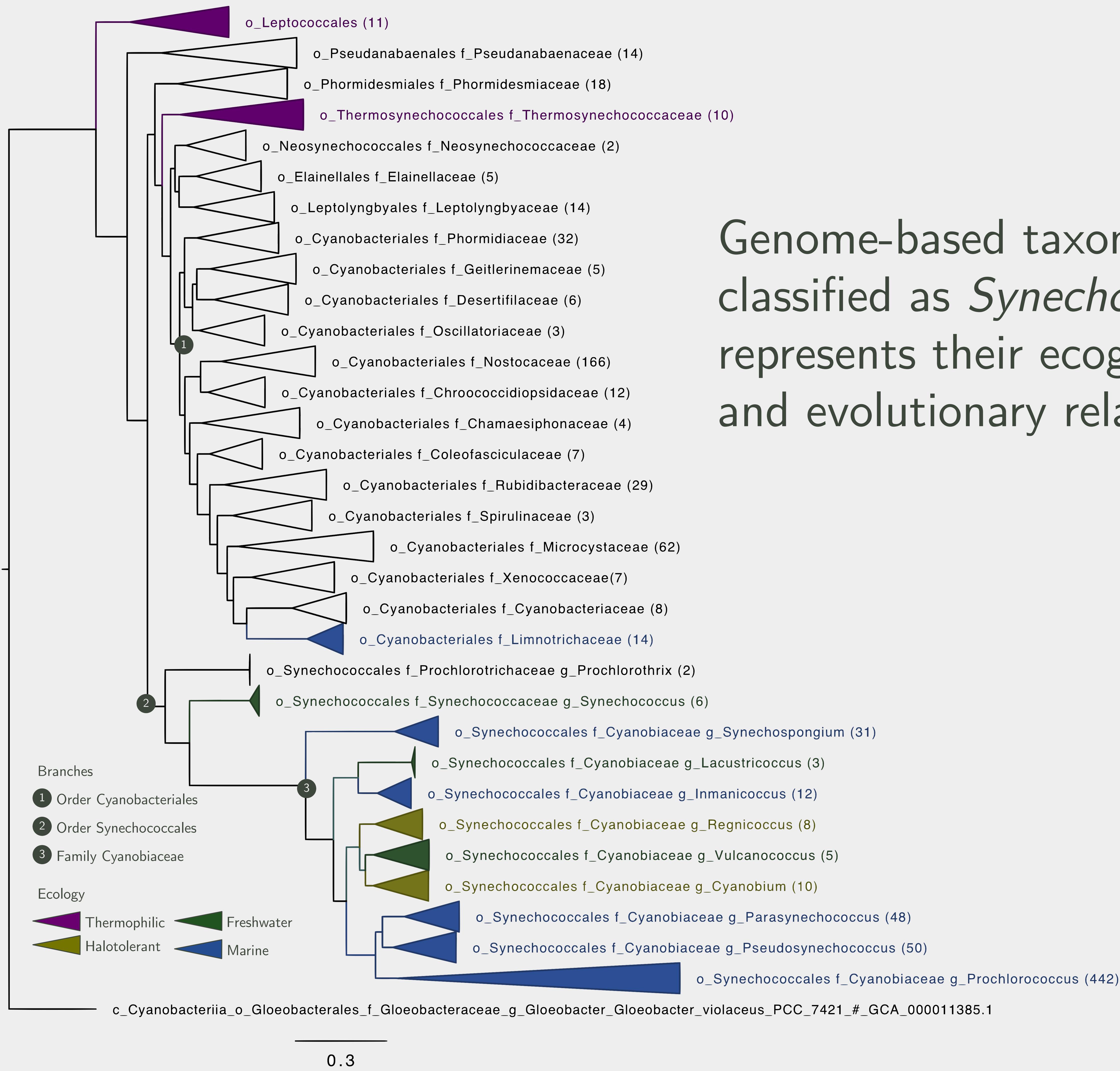
Classification
(Parks et al. 2018, Chaumeil et al. 2020)



Phylogenomic tree
(Lee et al., 2019)



Average Amino acid Identity
(Parks et al. 2014, Virtanen et al. 2020)



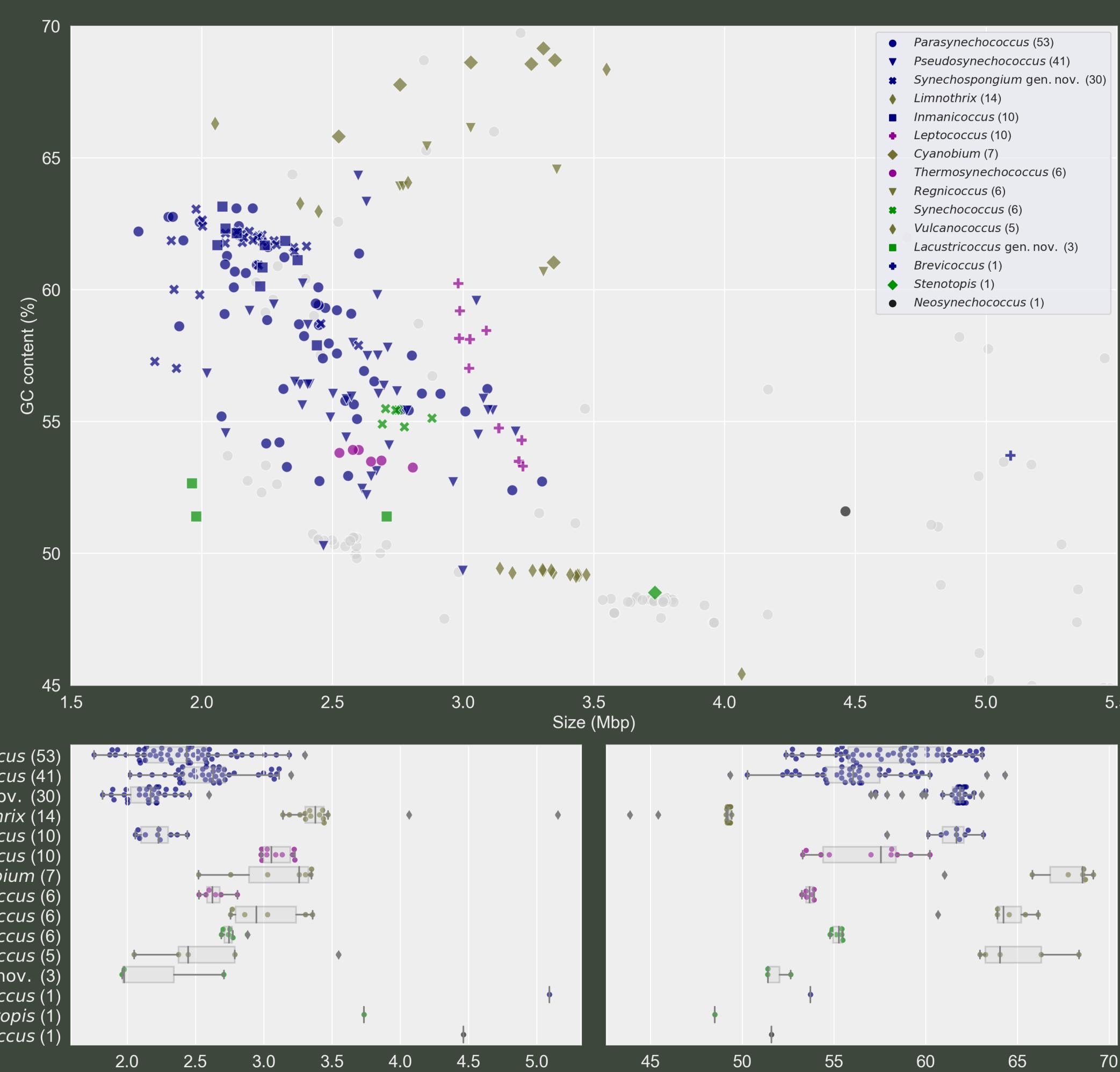
RESULTS

Phylogenomic reconstruction (above), genome level features (to the right) and ecological characteristics support that organisms classified as *Synechococcus* are polyphyletic at the order level, and are found in 5 orders, 7 families, and 15 genera.

Our system supports and expands previous works (Coutinho et al. 2016, Walter et al. 2017).

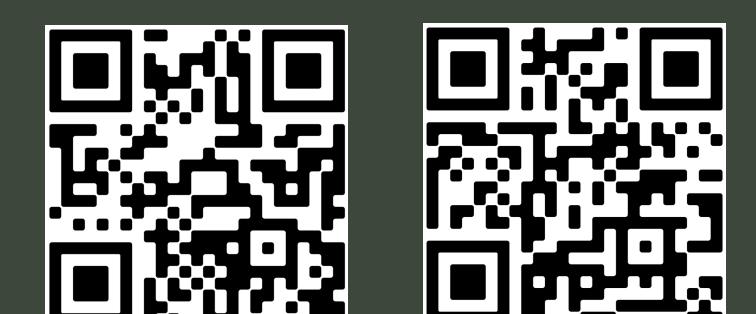
For more details please refer to the referenced publication.

Genome-based taxonomy of organisms classified as *Synechococcus* better represents their ecogenomic diversity and evolutionary relationships.



Salazar, V.W., Tschoeke, D.A., Swings, J., Cosenza, C.A., Mattoso, M., Thompson, C.C., and Thompson, F.L. (2020) A new genomic taxonomy system for the *Synechococcus* collective. *Environmental Microbiology*. DOI: 10.1111/1462-2920.15173

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ACKNOWLEDGEMENTS

