Supporting Information

In situ abundance and carbon fixation activity of distinct anoxygenic phototrophs in the stratified seawater lake Rogoznica

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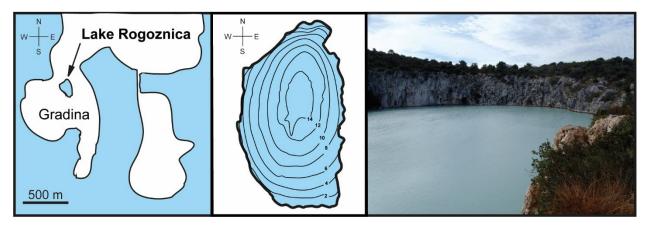


Figure S1.

Left panel: location of Lake Rogoznica on the Gradina peninsula. Middle panel: bathymetric map of Lake Rogoznica, depth given in meters. Right panel: photography of Lake Rogoznica from the south-eastern lake shore.

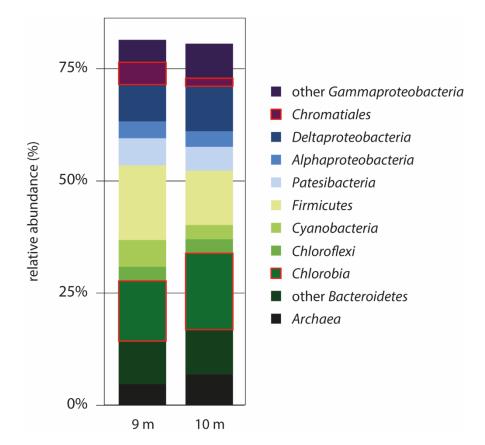


Figure S2.

Relative abundance of reads from the chemocline (9 m) and hypolimnion (10 m) metagenomes mapped to 16S rRNA gene sequences, clustered to represent major taxonomic groups in the sample. Sequences related to the order *Chromatiales* and the class *Chlorobia*, harboring the anoxygenic phototrophs occurring in Lake Rogoznica, are highlighted in red.

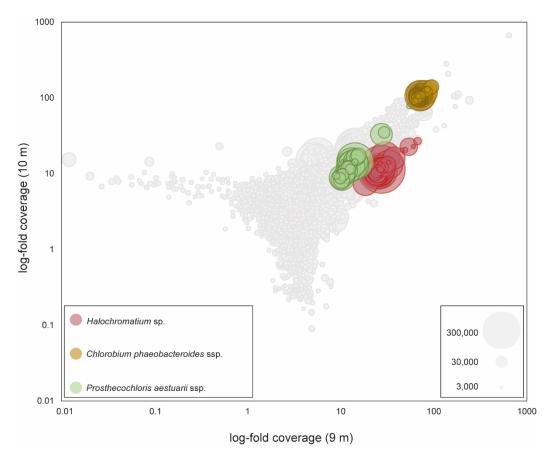


Figure S3.

Contigs (> 1,000 bp, min 0.01x/ max 1000x coverage) obtained from a combined bulk assembly of Lake Rogoznica chemocline and hypolimnion samples. The size of circles represents contig size. Larger clusters and clouds of circles indicate contigs with similar coverage. Contours of the three MAGs affiliated to anoxygenic phototrophs are highlighted in the respective colors.

	CHI.	uteolum Chi.	DSM2 ¹²	phaeobr	scheroides	phaeobe Chi.	oteroide Innicola Chi.	5DEM242	anoxide Pro.	estuarili Balance	13031 DSM211	tepidur	TLS eur	DSM NGB
Chl. luteolum DSM 273	100	81	82	77	77	77	77	77	76	77	77	77	77	
Chl. phaeovibrioides DSM 265	81	100	77	77	76	76	76	76	77	76	76	76	77	
Chl. phaeobacteroides BS1	82	77	100	98	80	77	79	77	79	80	78	77	77	
C10	77	77	98	100	78	76	76	78	77	78	77	76	76	
Chl. phaeobacteroides DSM 266	77	76	80	78	100	82	82	78	77	78	76	78	76	
Chl. limicola DSM 245	77	76	77	76	82	100	79	77	77	76	77	77	76	
Chl. phaeoclathratiforme BU-1	77	76	79	76	82	79	100	78	76	76	77	77	76	
Chl. ferrooxidans DSM 13031	77	76	77	78	78	77	78	100	75	76	76	76	76	
Pro. aestuarii DSM 271	76	77	79	77	77	77	76	75	100	98	77	77	76	
B10	77	76	80	78	78	76	76	76	98	100	77	76	77	
Chlo. tepidum TLS	77	76	78	77	76	77	77	76	77	77	100	85	84	
Chlor. limnaeum DSM 1677	77	76	77	76	78	77	77	76	77	76	85	100	82	
Chlo. pavum NCBI 8327	77	77	77	76	76	76	76	76	76	77	84	82	100	
					7	6							100	

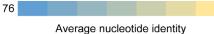


Figure S4.

Heatmap depicting average nucleotide identity (ANI) clustering across the *Chlorobiaceae*-related metagenome assembled genomes (MAGs) obtained from the Lake Rogoznica metagenome (C10 and B10) and genomes of other validly described *Chlorobiaceae* species. The color scale bar indicates percent identity.

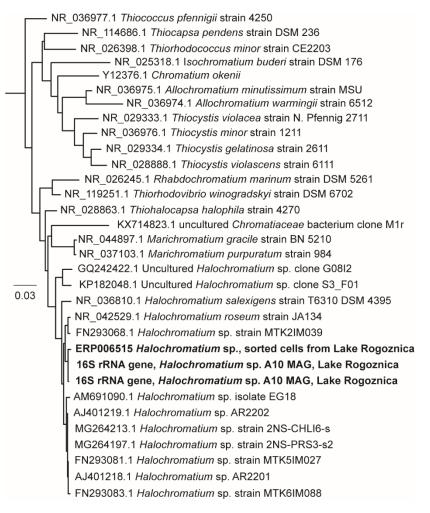


Figure S5.

Phylogenetic tree illustration the relation of the two 16S rRNA gene sequences obtained from the *Halochromatium* sp. metagenome assembled genome (in bold) to 16S rRNA gene sequences of isolates from the genus *Halochromatium* and other purple sulfur bacteria isolates (in cursive). The scale bar indicates a sequence dissimilarity of 3%. GenBank accession number are given for each sequence.