

Hypoxia in deep waters of moderately eutrophic marine lakes, Island of Mljet, eastern Adriatic Sea

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Supplementary material

Table S1. – The yearly Avg±sd of the investigated parameters in Small Lake (SL), Big Lake (BL) and Gonoturska Bay (G); t, temperature; Δt, temperature change with depth; S, salinity; ΔS, salinity change with depth; σ_T, density; Δσ_T, density change with depth; AOU, apparent oxygen utilization; Chl *a*, chlorophyll *a*; DIN, dissolved inorganic nitrogen; P_{oth}, total phosphorus – PO₄, N_{oth}, total nitrogen – DIN; TRIX, index of eutrophication (Vollenweider et al. 1998); APF, biomass of autotrophic picoflagellates; Cyano, biomass of picocyanobacteria; HBa, biomass of heterotrophic bacteria; HPF, biomass of heterotrophic picoflagellates.

Parameter	Small Lake	Big Lake	Gonoturska
t (°C)	16.13±4.33	14.39±4.38	15.86±2.38
Δt (°C m ⁻¹)	-0.16±0.58	-0.15±0.34	-0.06±0.14
S	36.75±1.05	36.79±0.56	38.08±0.48
ΔS (m ⁻¹)	0.11±0.27	0.02±0.05	0.02±0.04
σ _T (kg m ⁻³)	26.98±1.32	27.40±1.04	28.12±0.63
Δσ _T (kg m ⁻⁴)	0.13±0.20	0.05±0.07	0.03±0.04
O ₂ (mg l ⁻¹)	7.16±2.19	7.08±2.06	8.41±0.44
O ₂ saturation (%)	91.82±28.91	88.82±27.29	108.39±6.15
AOU (μmol kg ⁻¹)	21.56±69.64	30.51±68.72	-19.47±13.88
Chl <i>a</i> (μg l ⁻¹)	0.53±0.33	0.39±0.24	0.22±0.18
NH ₄ (μmol l ⁻¹)	0.49±0.61	0.24±0.14	0.20±0.11
NO ₂ (μmol l ⁻¹)	0.19±0.44	0.08±0.06	0.07±0.07
NO ₃ (μmol l ⁻¹)	0.62±0.78	1.03±1.34	0.48±0.63
DIN (μmol l ⁻¹)	1.30±1.40	1.35±1.38	0.75±0.63
PO ₄ (μmol l ⁻¹)	0.07±0.09	0.06±0.06	0.06±0.06
P _{oth} (μmol l ⁻¹)	0.09±0.09	0.12±0.17	0.08±0.15
N _{oth} (μmol l ⁻¹)	5.41±3.09	5.82±4.48	5.01±3.80
DIN/PO ₄	28.44±27.63	28.39±30.42	18.25±14.03
SiO ₄ (μmol l ⁻¹)	13.62±9.27	13.96±11.92	2.92±1.43
SiO ₄ /DIN	17.72±15.20	16.62±15.45	7.41±7.53
TRIX	3.24±0.89	3.17±0.98	2.19±0.73
APF (μg C l ⁻¹)	2.98±4.69	1.41±1.91	1.62±2.67
Cyano (μg C l ⁻¹)	53.40±60.66	95.75±106.73	80.90±82.04
HBa (μg C l ⁻¹)	4.12±2.21	3.82±2.11	3.41±0.83
HPF (μg C l ⁻¹)	2.15±2.04	1.66±1.12	0.99±0.76

Table S2. – Significant (p<0.05) differences among the explored locations in Mljet waters (SL, Small Lake; BL, Big Lake; G, Gonoturska Bay). See the list of abbreviations in Table S1.

Parameter	Location	BL	SL
t	G	0.000022	
	BL		8×10 ⁻⁶
Δt	G	3×10 ⁻⁶	4×10 ⁻³
S	G	9×10 ⁻⁶	2×10 ⁻⁵
ΔS	G		5×10 ⁻⁸
	BL		4×10 ⁻⁸
σ _T	G	2×10 ⁻⁵	8×10 ⁻⁶
	BL		9×10 ⁻⁶
Δσ _T	G	7×10 ⁻⁷	1×10 ⁻¹⁵
	BL		1×10 ⁻¹⁰
O ₂	G	4×10 ⁻⁴	6×10 ⁻⁴
AOU	G	2×10 ⁻¹¹	1×10 ⁻⁵
Chl <i>a</i>	G	2×10 ⁻⁵	8×10 ⁻⁶
	BL		9×10 ⁻⁶
NH ₄	G		3×10 ⁻⁵
	BL		8×10 ⁻⁴
NO ₂	G		2×10 ⁻²
	BL		2×10 ⁻²
SiO ₄	G	2×10 ⁻⁵	8×10 ⁻⁶
SiO ₄ /DIN	G	3×10 ⁻⁴	2×10 ⁻⁵
TRIX	G	8×10 ⁻⁶	2×10 ⁻⁵
HPF	G		6×10 ⁻³

Table S3. – Mean±sd of the analysed parameters in the mixing period (October 2009-March 2010); n/a, not analysed; OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate. See the list of abbreviations in Table S1.

Parameter/Location	Small Lake	Big Lake	Gonoturska
t (°C)	13.60±1.84	12.23±1.64	14.21±1.37
Δt (°C m ⁻¹)	0.17±0.43	0.02±0.12	0.02±0.08
S	36.78±1.38	36.88±0.65	37.87±0.49
ΔS (m ⁻¹)	0.20±0.38	0.04±0.05	0.02±0.05
σ _T (kg m ⁻³)	27.62±0.82	27.99±0.38	28.36±0.35
Δσ _T (kg m ⁻⁴)	0.12±0.24	0.03±0.03	0.01±0.02
O ₂ (mg l ⁻¹)	7.11±2.42	6.80±2.32	8.30±0.51
O ₂ saturation (%)	85.94±27.67	81.89±27.01	103.89±4.81
AOU (μmol kg ⁻¹)	34.01±68.01	46.40±69.25	-9.35±9.89
OUR (μmol kg ⁻¹ year ⁻¹)	153.04±306.05	243.36±363.20	n/a
OCRR (μmol kg ⁻¹ year ⁻¹)	105.60±211.18	167.92±250.61	n/a
Chl <i>a</i> (μg l ⁻¹)	0.40±0.28	0.37±0.20	0.29±0.18
NH ₄ (μmol l ⁻¹)	0.63±0.81	0.23±0.09	0.21±0.09
NO ₂ (μmol l ⁻¹)	0.27±0.58	0.10±0.06	0.11±0.08
NO ₃ (μmol l ⁻¹)	0.98±0.92	1.60±1.61	0.83±0.73
DIN (μmol l ⁻¹)	1.88±1.70	1.93±1.64	1.15±0.68
PO ₄ (μmol l ⁻¹)	0.09±0.12	0.09±0.07	0.08±0.07
P _{oth} (μmol l ⁻¹)	0.11±0.11	0.11±0.16	0.09±0.21
N _{oth} (μmol l ⁻¹)	5.74±2.88	7.46±4.94	6.45±4.60
DIN/PO ₄	27.57±20.48	26.27±16.84	17.35±10.84
SiO ₄ (μmol l ⁻¹)	15.88±10.16	17.02±13.76	3.18±1.63
SiO ₄ /DIN	12.77±9.24	14.09±16.05	4.16±3.25
TRIX	3.54±0.80	3.57±0.67	2.74±0.47
APF (μg C l ⁻¹)	2.90±4.90	1.29±2.20	2.12±3.65
Cyano (μg C l ⁻¹)	53.08±59.14	98.13±88.22	123.92±90.66
HBa (μg C l ⁻¹)	3.65±1.44	3.81±2.65	3.01±0.56
HPF (μg C l ⁻¹)	1.92±1.57	1.22±0.82	0.78±0.76

Table S4. – Mean±sd of the analysed parameters in the stratification period (April 2010-September 2010). See the list of abbreviations in Table S1.

Parameter	Small Lake	Big Lake	Gonoturska
t (°C)	17.96±4.68	15.89±5.02	16.94±2.27
Δt (°C m ⁻¹)	-0.38±0.57	-0.25±0.40	-0.12±0.15
S	36.73±0.72	36.73±0.48	38.21±0.42
ΔS (m ⁻¹)	0.05±0.13	0.00±0.05	0.02±0.03
σ _T (kg m ⁻³)	26.52±1.43	26.99±1.16	27.97±0.72
Δσ _T (kg m ⁻⁴)	0.14±0.16	0.07±0.08	0.04±0.05
O ₂ (mg l ⁻¹)	7.20±1.97	7.37±1.74	8.52±0.44
O ₂ saturation (%)	96.72±28.38	94.59±26.38	112.02±4.96
AOU (μmol kg ⁻¹)	11.18±70.22	17.27±65.95	-27.65±10.95
Chl <i>a</i> (μg l ⁻¹)	0.62±0.33	0.40±0.26	0.18±0.17
NH ₄ (μmol l ⁻¹)	0.35±0.24	0.24±0.18	0.20±0.12
NO ₂ (μmol l ⁻¹)	0.12±0.20	0.06±0.05	0.03±0.02
NO ₃ (μmol l ⁻¹)	0.27±0.34	0.45±0.61	0.13±0.11
DIN (μmol l ⁻¹)	0.75±0.65	0.75±0.68	0.35±0.18
PO ₄ (μmol l ⁻¹)	0.04±0.04	0.04±0.05	0.03±0.04
P _{oth} (μmol l ⁻¹)	0.08±0.06	0.12±0.17	0.08±0.06
N _{oth} (μmol l ⁻¹)	5.08±3.30	4.19±3.26	3.57±1.96
DIN/PO ₄	29.34±33.73	30.51±39.67	19.26±16.99
SiO ₄ (μmol l ⁻¹)	11.29±7.72	10.90±8.85	2.65±1.19
SiO ₄ /DIN	22.81±18.31	19.14±14.52	10.66±9.07
TRIX	3.02±0.90	2.90±1.07	1.71±0.56
APF (μg C l ⁻¹)	3.06±4.55	1.53±1.60	1.18±1.29
Cyano (μg C l ⁻¹)	53.71±63.19	93.37±123.60	43.75±51.53
HBa (μg C l ⁻¹)	4.59±2.72	3.82±1.43	3.76±0.87
HPF (μg C l ⁻¹)	2.37±2.43	2.09±1.21	1.17±0.73

Table S5. – Significant (p<0.05) differences in the study locations between the periods of mixing (October 2009-March 2010) and stratification (April 2010-September 2010). See the list of abbreviations in Table S1.

	Small Lake	Big Lake	Gonoturska Bay
differences at p<0.05	t, Δt, σ _T , ΔS, Chl <i>a</i> , NO ₃ , NH ₄ , PO ₄ , SiO ₄ , SiO ₄ /DIN, TRIX	S, ΔS, t, Δt, σ _T , Δσ _T , AOU, O ₂ sat., NO ₃ , NO ₂ , PO ₄ , SiO ₄ , N _{oth} , SiO ₄ /DIN, TRIX, HPF	S, t, Δt, σ _T , Δσ _T , O ₂ , AOU, O ₂ sat., Chl <i>a</i> , NO ₃ , NO ₂ , PO ₄ , SiO ₄ , N _{oth} , SiO ₄ /DIN, TRIX, Cyano, HBa

Table S6. – Mean±sd of the analysed parameters in the upper waters of the study locations within the stratification period (April 2010-September 2010); n/a, not analysed; OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate. See the list of abbreviations in Table S1.

Parameter	Small Lake ≤10 m	Big Lake ≤17 m	Gonoturska ≤20 m
t (°C)	22.78±3.88	21.14±3.83	18.73±2.39
Δt (°C m ⁻¹)	-0.45±0.61	-0.31±0.35	-0.18±0.19
S	36.33±0.99	36.72±0.72	37.94±0.51
ΔS (m ⁻¹)	0.08±0.19	0.00±0.05	0.03±0.04
σ _T (kg m ⁻³)	24.94±0.94	25.70±0.73	27.31±0.67
Δσ _T (kg m ⁻⁴)	0.19±0.23	0.08±0.08	0.07±0.06
O ₂ (mg l ⁻¹)	8.25±0.73	8.33±0.72	8.49±0.51
O ₂ saturation (%)	117.22±8.36	116.55±6.57	114.03±4.74
AOU (μmol kg ⁻¹)	-36.66±17.32	-35.97±13.89	-31.76±10.52
OUR (μmol kg ⁻¹ year ⁻¹)	-307.29±145.17	-364.29±140.75	n/a
OCRR (μmol kg ⁻¹ year ⁻¹)	-212.03±100.17	-251.36±97.12	n/a
Chl <i>a</i> (μg l ⁻¹)	0.53±0.37	0.19±0.14	0.04±0.06
NH ₄ (μmol l ⁻¹)	0.29±0.17	0.21±0.10	0.22±0.15
NO ₂ (μmol l ⁻¹)	0.03±0.02	0.02±0.010	0.02±0.01
NO ₃ (μmol l ⁻¹)	0.13±0.14	0.09±0.07	0.14±0.12
DIN (μmol l ⁻¹)	0.46±0.29	0.33±0.13	0.38±0.19
PO ₄ (μmol l ⁻¹)	0.04±0.05	0.03±0.01	0.03±0.04
P _{oth} (μmol l ⁻¹)	0.08±0.07	0.12±0.24	0.07±0.03
N _{oth} (μmol l ⁻¹)	5.03±2.14	4.13±3.67	3.68±1.90
DIN/PO ₄	17.68±18.18	16.06±13.31	18.40±16.11
SiO ₄ (μmol l ⁻¹)	6.89±3.29	3.70±1.41	2.67±1.06
SiO ₄ /DIN	20.99±16.56	13.28±7.31	10.66±10.06
TRIX	2.40±0.56	2.00±0.61	1.40±0.53
APF (μg C l ⁻¹)	4.11±5.52	1.12±0.87	0.96±0.95
Cyano (μg C l ⁻¹)	75.00±74.79	117.20±133.10	44.21±56.16
HBa (μg C l ⁻¹)	4.66±2.92	3.73±1.17	3.77±0.90
HPF (μg C l ⁻¹)	2.42±2.98	1.95±1.07	1.11±0.72

Table S7. – Mean±sd of the analysed parameters in the deep waters of the study locations within the stratification period (April 2010-September 2010). See the list of abbreviations in Table S1.

Parameter	Small Lake ≥15 m	Big Lake ≥21 m	Gonoturska ≥21 m
t (°C)	14.39±0.79	12.27±1.36	15.74±1.12
Δt (°C m ⁻¹)	-0.16±0.32	-0.15±0.35	-0.08±0.09
S	37.06±0.27	36.74±0.15	38.39±0.19
ΔS (m ⁻¹)	0.06±0.06	0.01±0.05	0.01±0.01
σ _T (kg m ⁻³)	27.69±0.34	27.88±0.29	28.41±0.30
Δσ _T (kg m ⁻⁴)	0.08±0.06	0.04±0.06	0.03±0.03
O ₂ (mg l ⁻¹)	6.16±2.27	6.27±1.76	8.58±0.27
O ₂ saturation (%)	76.22±28.58	73.42±21.06	108.78±3.42
AOU (μmol kg ⁻¹)	59.03±70.73	69.45±54.87	-21.02±8.18
Chl <i>a</i> (μg l ⁻¹)	0.66±0.29	0.55±0.22	0.26±0.16
NH ₄ (μmol l ⁻¹)	0.42±0.29	0.26±0.24	0.16±0.06
NO ₂ (μmol l ⁻¹)	0.20±0.26	0.09±0.06	0.03±0.03
NO ₃ (μmol l ⁻¹)	0.41±0.41	0.83±0.68	0.12±0.09
DIN (μmol l ⁻¹)	1.03±0.78	1.18±0.75	0.31±0.15
PO ₄ (μmol l ⁻¹)	0.04±0.04	0.05±0.06	0.03±0.04
P _{oth} (μmol l ⁻¹)	0.08±0.03	0.14±0.11	0.10±0.10
N _{oth} (μmol l ⁻¹)	5.01±4.13	4.48±3.15	3.39±2.08
DIN/PO ₄	42.67±40.82	44.21±51.00	20.51±18.63
SiO ₄ (μmol l ⁻¹)	15.36±8.51	17.39±8.22	2.63±1.32
SiO ₄ /DIN	24.32±19.81	22.56±17.56	10.67±7.49
TRIX	3.65±0.71	3.72±0.74	2.00±0.42
APF (μg C l ⁻¹)	1.57±2.08	1.99±2.27	2.16±2.25
Cyano (μg C l ⁻¹)	60.64±72.65	83.43±128.79	41.67±26.69
HBa (μg C l ⁻¹)	4.49±2.54	3.48±1.05	3.73±0.85
HPF (μg C l ⁻¹)	2.31±1.45	2.32±1.54	1.44±0.85

Table S8. – Significant (p<0.05) differences at the study locations above and below the thermocline during the stratification period (April 2010-September 2010). See the list of abbreviations in Table S1.

	Small Lake	Big Lake	Gonoturska Bay
Parameters with differences at p<0.05	t, Δt, S, σ _T , Δσ _T , O ₂ , AOU, O ₂ sat., Chl <i>a</i> , NO ₃ , NO ₂ , SiO ₄ , DIN/PO ₄ , TRIX, Cyano, APF	t, Δt, σ _T , Δσ _T , O ₂ , AOU, O ₂ sat., Chl <i>a</i> , NO ₃ , NO ₂ , PO ₄ , DIN/PO ₄ , SiO ₄ , SiO ₄ /DIN, TRIX	t, Δt, S, ΔS, σ _T , Δσ _T , AOU, O ₂ sat., Chl <i>a</i> , NO ₂ , NH ₄ , TRIX

Table S9. – Mean±sd of the analysed parameters in the upper waters of the study locations within the mixing period (October 2009-March 2010); n/a, not analysed; OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate. See the list of abbreviations in Table S1.

Parameter/Location	Small Lake ≤10 m	Big Lake ≤17 m	Gonoturska ≤20 m
t (°C)	12.75±2.33	12.13±2.06	14.13±1.74
Δt (°C m ⁻¹)	0.42±0.65	0.05±0.11	0.02±0.06
S	35.70±1.70	36.45±0.71	37.65±0.54
ΔS (m ⁻¹)	0.46±0.55	0.06±0.07	0.02±0.04
σ _T (kg m ⁻³)	26.95±0.99	27.67±0.33	28.20±0.37
Δσ _T (kg m ⁻⁴)	0.29±0.35	0.04±0.05	0.01±0.02
O ₂ (mg l ⁻¹)	8.67±0.97	8.57±0.81	8.32±0.44
O ₂ saturation (%)	103.62±7.69	102.35±6.13	103.88±3.74
AOU (μmol kg ⁻¹)	-9.66±20.32	-6.28±16.14	-9.39±8.64
OUR (μmol kg ⁻¹ year ⁻¹)	-43.47±91.43	-32.92±84.68	n/a
OCRR (μmol kg ⁻¹ year ⁻¹)	-30.00±63.09	-22.72±58.43	n/a
Chl <i>a</i> (μg l ⁻¹)	0.30±0.15	0.34±0.17	0.27±0.18
NH ₄ (μmol l ⁻¹)	0.36±0.14	0.24±0.07	0.21±0.09
NO ₂ (μmol l ⁻¹)	0.06±0.03	0.08±0.04	0.11±0.08
NO ₃ (μmol l ⁻¹)	0.66±0.60	1.02±0.90	0.87±0.72
DIN (μmol l ⁻¹)	1.08±0.66	1.34±0.95	1.19±0.68
PO ₄ (μmol l ⁻¹)	0.10±0.15	0.08±0.09	0.09±0.08
P _{oth} (μmol l ⁻¹)	0.11±0.10	0.15±0.25	0.05±0.04
N _{oth} (μmol l ⁻¹)	5.84±2.74	8.72±6.35	6.04±3.96
DIN/PO ₄	18.10±11.05	22.57±15.48	18.03±11.94
SiO ₄ (μmol l ⁻¹)	11.94±5.54	8.27±4.02	3.65±1.83
SiO ₄ /DIN	15.52±10.42	10.64±8.95	4.75±3.66
TRIX	3.02±0.68	3.10±0.58	2.70±0.48
APF (μg C l ⁻¹)	2.53±5.15	1.57±2.84	2.12±3.81
Cyano (μg C l ⁻¹)	47.96±40.27	108.63±94.97	139.18±91.65
HBa (μg C l ⁻¹)	3.76±1.30	4.14±3.31	3.03±0.50
HPF (μg C l ⁻¹)	1.77±1.12	1.18±0.89	0.79±0.78

Table S10. – Mean±sd of the analysed parameters in the deep waters of the study locations within the mixing period (October 2009-March 2010); n/a, not analysed; OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate. See the list of abbreviations in Table S1.

Parameter/Location	Small Lake ≥15 m	Big Lake ≥21 m	Gonoturska ≥21 m
t (°C)	14.26±1.25	12.26±1.12	14.27±1.00
Δt (°C m ⁻¹)	0.06±0.12	-0.00±0.10	0.02±0.09
S	37.56±0.42	37.18±0.40	38.04±0.37
ΔS (m ⁻¹)	0.07±0.06	0.03±0.03	0.02±0.05
σ _T (kg m ⁻³)	28.11±0.20	28.23±0.23	28.48±0.29
Δσ _T (kg m ⁻⁴)	0.04±0.04	0.02±0.02	0.01±0.02
O ₂ (mg l ⁻¹)	5.57±2.46	5.15±2.17	8.26±0.41
O ₂ saturation (%)	68.26±29.28	62.61±26.03	103.92±5.06
AOU (μmol kg ⁻¹)	77.68±71.29	95.98±66.42	-9.28±12.09
OUR (μmol kg ⁻¹ year ⁻¹)	349.56±320.80	503.40±348.37	n/a
OCRR (μmol kg ⁻¹ year ⁻¹)	241.20±221.35	347.35±240.37	n/a
Chl <i>a</i> (μg l ⁻¹)	0.46±0.35	0.38±0.22	0.30±0.17
NH ₄ (μmol l ⁻¹)	0.90±1.08	0.23±0.10	0.22±0.10
NO ₂ (μmol l ⁻¹)	0.48±0.78	0.11±0.06	0.12±0.09
NO ₃ (μmol l ⁻¹)	1.30±1.08	2.20±1.92	0.76±0.76
DIN (μmol l ⁻¹)	2.68±2.04	2.54±1.94	1.10±0.68
PO ₄ (μmol l ⁻¹)	0.09±0.06	0.09±0.05	0.08±0.05
P _{oth} (μmol l ⁻¹)	0.11±0.13	0.09±0.03	0.16±0.34
N _{oth} (μmol l ⁻¹)	5.64±3.08	6.64±3.81	7.16±5.62
DIN/PO ₄	37.04±23.49	29.25±16.99	16.15±8.78
SiO ₄ (μmol l ⁻¹)	19.83±12.20	25.94±14.33	2.35±0.64
SiO ₄ /DIN	10.01±7.14	17.58±20.62	3.11±2.09
TRIX	4.06±0.53	4.01±0.50	2.81±0.47
APF (μg C l ⁻¹)	3.49±4.65	0.87±0.63	2.13±3.53
Cyano (μg C l ⁻¹)	61.46±83.13	67.23±71.17	66.67±67.68
HBa (μg C l ⁻¹)	3.46±1.70	3.36±1.39	2.92±0.86
HPF (μg C l ⁻¹)	2.17±2.17	1.37±0.87	0.73±0.76

Table S11. – Significant (p<0.05) differences between upper and deep waters at the study locations during the mixing period (October 2009-March 2010). OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate; OUR and OCRR were not estimated for Gonoturska Bay. See the list of abbreviations in Table S1.

	Small Lake	Big Lake	Gonoturska
Parameters with differences at p<0.05	t, Δt, S, ΔS, σ _T , Δσ _T , O ₂ , O ₂ sat., AOU, OUR, OCRR, Chl <i>a</i> , TRIX, SiO ₄ , NO ₃ , NO ₂ , NH ₄ , DIN/PO ₄	Δσ _T , O ₂ , O ₂ sat., Δt, S, ΔS, σ _T , SiO ₄ , NO ₃ , NO ₂	S, σ _T , SiO ₄

Table S12. – Significant ($p < 0.05$) differences within the specified water layers between the periods of mixing and stratification at the study locations. OUR, oxygen utilization rate; OCRR, organic carbon remineralization rate; OUR and OCRR were not estimated for Gonoturska Bay. See the list of abbreviations in Table S1.

	Layer	Small Lake	Big Lake	Gonoturska
Parameters with differences ($p < 0.05$)	Upper water	t, Δt , S, ΔS , σ_T , O ₂ sat., AOU, OUR, OCRR, Chl <i>a</i> , TRIX, NO ₃ , NO ₂ , SiO ₄	t, Δt , S, ΔS , σ_T , $\Delta\sigma_T$, O ₂ sat., AOU, OUR, OCRR, Chl <i>a</i> , TRIX, NO ₃ , NO ₂ , PO ₄ , SiO ₄ , N _{oth} , HPF	t, Δt , S, ΔS , σ_T , $\Delta\sigma_T$, O ₂ sat., AOU, Chl <i>a</i> , TRIX NO ₂ , NO ₃ , SiO ₄ , PO ₄ , SiO ₄ /DIN, N _{oth} , Cyano, HBa
	Deep water	S, Δt , σ_T , $\Delta\sigma_T$, Chl <i>a</i> , NO ₃ , PO ₄ , SiO ₄ /DIN	Δt , S, ΔS , σ_T , $\Delta\sigma_T$, O ₂ , Chl <i>a</i> , NO ₃ , PO ₄ , SiO ₄ , N _{oth} , P _{oth}	t, Δt , S, O ₂ , O ₂ sat., AOU, NO ₂ , NO ₃ , NH ₄ , PO ₄ , N _{oth} , SiO ₄ /DIN, TRIX