

**Spatio-temporal distribution of *Diaphanosoma brachyurum* (Cladocera: Sididae) in
freshwater reservoir ecosystems: importance of maximum water depth and macrophyte
beds for avoidance of fish predation**

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Supplementary Tab. 1. Spatial and temporal distribution of water temperature at each study site.

Site number	Layer	Depth (m)	Winter (Feb.)		Spring (May)		Summer (Aug.)		Autumn (Nov.)	
			Day	Night	Day	Night	Day	Night	Day	Night
1	S	0.5	5.6	5.5	20.2	20.0	28.9	28.7	14.3	14.1
	M	13.3	5.6	5.5	18.4	18.5	26.0	26.0	13.8	13.7
	B	29.6	5.1	5.0	17.6	17.7	23.6	23.7	13.5	13.5
2	S	0.5	5.4	5.3	16.5	16.3	27.6	27.2	14.4	14.5
	M	13.1	5.1	5.1	15.6	15.6	24.3	24.3	14.0	14.0
	B	26.2	5.2	5.1	14.3	14.3	22.3	22.3	13.6	13.6
3	S	0.5	4.6	4.5	21.6	21.7	29.4	29.3	16.4	16.2
	M	12.4	4.3	4.3	17.7	17.7	26.2	26.2	15.1	15.0
	B	24.8	4.4	4.3	16.2	16.2	24.5	24.5	14.8	14.8
4	S	0.5	4.4	4.3	17.6	17.5	27.6	27.4	17.5	17.4
	M	10.4	4.2	4.2	15.3	15.2	25.8	25.7	15.3	15.4
	B	20.8	4.2	4.1	14.5	14.5	24.4	24.5	15.0	14.8
5	S	0.5	5.4	5.3	16.1	16.1	29.6	29.5	15.8	15.8
	M	9	5.2	5.2	14.8	14.6	26.1	26.0	14.1	14.2
	B	18	5.1	5.0	14.0	13.8	24.5	24.5	13.6	13.5
6	S	0.5	4.8	4.8	22.8	22.7	26.3	26.2	17.4	17.3
	M	8.1	4.3	4.2	19.4	19.4	24.3	24.3	15.9	15.8
	B	16.3	4.3	4.2	18.7	18.7	23.6	23.5	14.3	14.3
7	S	0.5	5.1	5.0	20.1	19.9	29.5	29.2	13.5	13.3
	M	5.4	4.6	4.5	17.5	17.5	28.2	28.2	13.1	13.0
	B	10.9	4.3	4.3	16.9	16.8	27.4	27.5	12.7	12.8
8	S	0.5	5.4	5.3	18.4	18.2	28.8	28.6	16.5	16.3
	M	3.5	5.0	4.9	16.6	16.7	26.5	26.5	14.7	14.7
	B	7	4.6	4.5	15.2	15.1	25.4	25.4	14.2	14.1
9	S	0.5	4.7	4.5	19.8	19.7	27.4	27.4	18.5	18.3
	M	3.3	4.2	4.2	17.6	17.6	25.8	25.8	16.2	16.2
	B	6.7	4.2	4.2	16.2	16.1	24.2	24.2	15.4	15.4
10	S	0.5	5.0	4.8	18.7	18.6	26.1	26.0	15.8	15.7
	M	3.3	4.8	4.8	16.2	16.2	24.6	24.5	14.4	14.4
	B	6.6	4.5	4.5	15.7	15.7	23.3	23.3	13.8	13.7
11	S	0.5	9.4	9.1	20.5	20.1	31.6	30.8	12.3	11.8
	B	5	9.3	9.0	19.2	19.4	28.4	28.5	10.2	10.2
12	S	0.5	10.6	10.6	18.4	18.1	28.7	28.5	14.6	14.5
	B	4.8	10.5	10.4	17.8	17.7	28.4	28.4	13.4	13.4
13	S	0.5	9.8	9.8	17.3	16.8	30.4	29.7	16.4	16.3
	B	4.3	9.8	9.7	15.9	16.0	27.6	27.7	14.7	14.8
14	S	0.5	8.9	8.8	18.7	18.2	26.8	26.0	15.4	14.8
	B	4.1	8.8	8.8	17.4	17.3	25.4	25.3	13.8	13.8
15	S	0.5	10.0	9.9	19.2	19.1	27.8	27.3	17.2	16.8
	B	3.8	9.8	9.8	19.1	19.0	26.9	26.7	16.7	16.6
16	S	0.5	8.6	8.5	18.4	18.3	28.4	28.0	15.8	15.4
	B	3.4	8.5	8.5	18.1	18.1	27.8	27.7	14.3	14.2
17	S	0.5	9.4	9.3	17.5	17.3	30.4	29.6	16.8	16.1
	B	3.3	9.3	9.3	17.2	17.1	28.8	28.7	15.4	15.4
18	S	0.5	8.5	8.4	20.5	19.9	31.4	30.6	17.4	17.0
	B	3.1	8.4	8.3	19.1	19.1	29.6	29.4	15.3	15.2
19	S	0.5	9.6	9.5	18.4	18.0	29.1	28.5	16.8	16.4
	B	2.8	9.4	9.4	17.6	17.6	27.6	27.4	16.0	15.9
20	S	0.5	10.7	10.6	18.8	18.5	28.8	28.2	16.2	15.7
	B	2.6	10.6	10.6	18.0	17.9	27.6	27.5	14.7	14.5
21	S	0.5	8.9	8.8	20.5	20.0	28.5	28.1	15.5	14.9
	B	2.2	8.8	8.8	19.3	19.3	27.4	27.4	14.1	14.0

S, surface; M, middle; B, bottom.

Supplementary Tab. 2. Spatial and temporal distribution of dissolved oxygen (in percentage) at each study site.

Site number	Layer	Depth (m)	Winter (Feb.)		Spring (May)		Summer (Aug.)		Autumn (Nov.)	
			Day	Night	Day	Night	Day	Night	Day	Night
1	S	0.5	91.9	92.0	108.2	110.4	94.1	93.8	114.6	114.3
	M	13.3	92.3	92.3	100.8	100.5	83.4	83.6	111.5	115.4
	B	29.6	92.3	92.1	100.2	100.6	80.1	80.4	108.6	108.3
2	S	0.5	95.6	95.8	104.4	104.2	100.2	100.0	108.6	108.2
	M	13.1	95.5	95.4	102.3	102.1	98.2	98.5	103.4	103.2
	B	26.2	95.1	95.2	99.5	99.5	96.5	96.2	101.2	101.4
3	S	0.5	88.6	88.7	98.4	98.3	97.3	97.1	112.3	112.5
	M	12.4	86.7	86.4	95.2	95.6	92.2	92.1	104.5	104.5
	B	24.8	86.1	86.2	92.4	92.5	92.6	92.2	101.5	101.6
4	S	0.5	96.4	96.5	105.2	105.7	100.2	100.5	109.4	109.6
	M	10.4	97.2	97.3	100.4	100.6	92.3	92.4	102.1	102.3
	B	20.8	97.5	97.2	98.6	98.5	89.4	89.6	98.4	98.5
5	S	0.5	94.5	94.3	102.4	102.6	95.2	95.3	112.2	112.4
	M	9	94.2	94.3	95.2	95.3	91.1	91.2	106.3	106.5
	B	18	94.8	94.6	92.4	92.3	88.4	88.6	102.5	102.7
6	S	0.5	97.5	97.6	108.8	108.5	104.3	104.1	111.6	111.7
	M	8.1	98.4	98.1	102.4	100.5	98.6	98.7	103.4	103.5
	B	16.3	97.3	97.6	98.3	98.4	96.7	96.8	102.5	102.6
7	S	0.5	98.6	98.7	111.1	111.4	94.2	94.4	102.5	102.3
	M	5.4	97.3	97.5	105.3	105.5	78.6	78.8	97.5	97.8
	B	10.9	94.4	94.6	103.5	103.2	72.4	72.5	96.7	96.9
8	S	0.5	88.4	88.3	103.4	103.5	98.6	98.4	110.5	110.4
	M	3.5	89.2	89.5	101.2	101.1	91.5	91.3	96.5	96.7
	B	7	89.4	89.6	99.4	99.6	86.3	86.2	91.3	91.4
9	S	0.5	92.4	92.5	102.4	102.6	98.6	98.4	108.6	100.4
	M	3.3	92.5	92.8	96.7	96.8	92.3	92.4	103.2	103.5
	B	6.7	91.4	91.5	91.2	91.3	87.3	97.6	99.4	99.6
10	S	0.5	86.4	86.7	96.7	96.8	92.4	92.3	105.8	105.7
	M	3.3	86.5	86.4	92.4	92.5	89.4	89.6	101.3	101.5
	B	6.6	86.2	86.5	88.7	88.6	85.3	85.4	96.4	96.5
11	S	0.5	65.3	65.7	34.5	34.6	23.2	23.4	22.5	22.6
	B	5	64.5	64.6	29.4	29.1	18.4	18.6	17.3	17.5
12	S	0.5	77.6	77.5	52.3	52.5	58.4	58.2	40.1	40.5
	B	4.8	77.1	77.3	51.6	51.5	57.8	57.9	38.4	38.1
13	S	0.5	55.2	55.4	32.5	32.8	27.8	27.6	22.3	22.5
	B	4.3	54.8	55.0	28.4	28.1	25.1	25.1	18.5	18.7
14	S	0.5	61.3	61.1	31.2	31.5	24.4	24.2	21.6	21.8
	B	4.1	61.0	61.1	26.4	26.1	23.5	23.7	16.9	16.7
15	S	0.5	70.1	70.8	68.6	68.4	61.2	61.5	57.6	57.5
	B	3.8	69.7	69.5	66.4	66.8	60.7	60.3	55.3	55.1
16	S	0.5	62.3	62.5	43.7	43.1	35.4	35.2	38.7	38.6
	B	3.4	62.0	62.1	40.6	40.2	34.2	34.1	35.2	35.3
17	S	0.5	68.3	68.4	51.3	51.7	38.2	38.6	32.1	32.3
	B	3.3	68.2	68.5	48.5	48.4	37.6	37.8	30.5	30.6
18	S	0.5	74.6	74.5	45.3	45.2	36.1	36.5	28.9	28.4
	B	3.1	74.1	74.3	39.2	39.3	35.4	35.6	23.1	23.4
19	S	0.5	62.4	62.1	44.6	44.4	34.7	34.3	28.4	28.5
	B	2.8	62.1	62.0	41.5	41.6	33.2	33.1	25.7	25.6
20	S	0.5	66.8	66.8	53.2	53.4	47.6	47.5	44.5	44.1
	B	2.6	66.2	66.3	51.7	51.4	45.2	45.6	42.1	41.9
21	S	0.5	75.1	75.5	41.8	41.7	33.4	33.1	25.8	25.4
	B	2.2	74.8	74.9	38.5	38.1	32.8	32.5	22.8	22.5

S, surface; M, middle; B, bottom.

Supplementary Tab. 3. Spatial and temporal distribution of turbidity at each study site.

Site number	Layer	Depth (m)	Winter (Feb.)		Spring (May)		Summer (Aug.)		Autumn (Nov.)	
			Day	Night	Day	Night	Day	Night	Day	Night
1	S	0.5	0.6	0.7	1.8	1.9	13.8	13.9	8.6	8.4
	M	13.3	0.7	0.8	1.5	1.5	13.2	13.1	6.5	6.4
	B	29.6	0.6	0.7	1.3	1.4	12.5	12.6	5.9	5.8
2	S	0.5	1.1	1.0	3.3	3.6	16.5	16.4	11.2	11.4
	M	13.1	0.5	0.6	2.1	2.2	16.8	16.7	9.6	9.4
	B	26.2	0.6	0.7	2.2	2.5	15.5	15.6	9.9	9.8
3	S	0.5	1.6	1.6	7.8	7.9	15.2	15.4	10.6	10.2
	M	12.4	0.7	0.8	6.5	6.4	14.5	14.5	9.1	9.3
	B	24.8	0.5	0.6	6.2	6.1	13.4	13.5	10.6	10.4
4	S	0.5	1.4	1.5	2.7	2.6	15.8	15.9	11.4	11.6
	M	10.4	1.0	1.1	2.0	2.1	15.3	15.2	9.5	9.3
	B	20.8	0.4	0.6	1.4	1.5	13.6	13.8	8.7	8.8
5	S	0.5	2.2	2.3	3.7	3.9	17.8	17.9	13.4	13.6
	M	9	2.0	2.0	3.5	3.4	17.2	17.4	11.2	11.4
	B	18	2.2	2.1	2.9	3.0	15.9	15.8	11.7	11.9
6	S	0.5	1.8	1.9	4.8	4.6	21.6	21.8	16.4	16.5
	M	8.1	1.6	1.5	4.4	4.1	20.6	20.9	15.8	15.5
	B	16.3	1.4	1.5	3.7	3.8	21.1	20.9	14.2	14.7
7	S	0.5	2.6	2.7	6.4	6.7	14.8	14.5	10.9	10.2
	M	5.4	2.5	2.4	6.5	6.2	14.3	14.8	10.6	10.5
	B	10.9	2.4	2.6	5.7	5.9	14.7	14.5	10.3	10.4
8	S	0.5	2.7	2.9	7.2	7.5	13.8	13.9	18.7	18.6
	M	3.5	2.6	2.5	7.3	7.1	13.5	13.4	17.4	17.8
	B	7	1.8	1.9	6.9	6.7	12.8	12.9	17.2	17.8
9	S	0.5	2.8	2.9	4.3	4.4	18.4	18.7	12.6	12.7
	M	3.3	2.1	2.5	4.8	4.5	18.3	18.2	12.4	12.1
	B	6.7	2.3	2.4	4.4	4.2	17.9	18.0	11.9	12.1
10	S	0.5	4.5	4.8	7.8	7.9	14.7	14.9	11.4	11.6
	M	3.3	4.2	4.5	7.3	7.4	14.5	14.1	11.3	11.2
	B	6.6	3.9	4.0	6.9	6.8	14.6	14.5	10.9	11.1
11	S	0.5	4.2	4.5	8.4	8.6	13.6	13.8	10.8	10.9
	B	5	4.8	4.7	8.0	8.2	13.5	13.2	9.1	9.2
12	S	0.5	3.4	3.6	10.3	10.6	16.7	16.9	12.9	13.0
	B	4.8	3.2	3.1	9.9	10.0	16.4	16.3	12.2	12.0
13	S	0.5	3.8	3.9	8.9	9.1	14.5	14.6	12.6	12.9
	B	4.3	3.6	3.5	8.2	8.3	14.1	14.3	10.6	10.3
14	S	0.5	2.3	2.5	7.6	7.7	12.5	12.6	10.8	10.6
	B	4.1	2.2	2.6	7.2	7.3	12.1	12.4	8.4	8.7
15	S	0.5	4.7	4.8	12.4	12.6	22.4	22.6	16.8	16.9
	B	3.8	4.5	4.6	12.8	12.1	22.1	22.0	16.4	16.6
16	S	0.5	2.1	2.3	8.6	8.8	17.6	17.8	14.3	14.5
	B	3.4	2.0	2.2	8.3	8.4	17.6	17.5	14.1	14.3
17	S	0.5	3.5	3.6	9.4	9.5	18.6	18.4	14.3	14.5
	B	3.3	3.8	3.6	9.2	9.3	18.3	18.3	14.2	14.1
18	S	0.5	2.6	2.7	6.4	6.6	11.4	11.6	8.7	8.8
	B	3.1	2.3	2.5	6.1	6.2	11.2	11.1	7.9	7.7
19	S	0.5	3.1	3.0	8.4	8.6	15.3	15.5	11.4	11.5
	B	2.8	2.9	2.8	8.2	8.3	15.8	15.6	10.6	10.6
20	S	0.5	5.3	5.5	9.6	9.4	19.3	19.4	14.2	14.5
	B	2.6	5.3	5.3	9.5	9.4	19.2	19.3	14.0	14.1
21	S	0.5	4.3	4.5	8.3	8.6	15.1	15.4	11.0	10.9
	B	2.2	4.1	4.3	8.5	8.3	14.8	14.9	10.3	10.1

S, surface; M, middle; B, bottom.

Supplementary Tab. 4. Spatial and temporal distribution of chlorophyll-*a* concentration ($\mu\text{g}\cdot\text{L}^{-1}$) at each study site.

Site number	Layer	Depth (m)	Winter (Feb.)		Spring (May)		Summer (Aug.)		Autumn (Nov.)	
			Day	Night	Day	Night	Day	Night	Day	Night
1	S	0.5	1.9	1.9	13.3	13.6	11.7	12.1	17.6	17.8
	M	13.3	1.6	1.7	10.3	10.0	10.4	10.9	15.3	15.5
	B	29.6	1.5	1.5	9.1	9.5	8.3	8.4	14.8	14.9
2	S	0.5	3.1	3.4	10.5	10.8	12.8	13.1	16.4	16.3
	M	13.1	2.8	2.9	8.7	8.8	11.7	11.8	14.4	14.7
	B	26.2	2.5	2.6	7.9	7.1	8.9	8.0	13.6	13.8
3	S	0.5	3.5	3.6	14.6	14.8	15.6	15.8	18.2	18.5
	M	12.4	2.2	2.1	11.8	11.9	14.5	14.1	15.5	15.2
	B	24.8	-	-	11.4	11.6	11.8	11.4	15.5	15.8
4	S	0.5	1.6	1.4	11.2	10.9	13.7	13.4	18.1	18.8
	M	10.4	1.4	1.2	9.6	9.9	12.5	12.6	15.6	15.5
	B	20.8	1.1	1.1	8.2	8.5	11.8	11.2	14.4	14.8
5	S	0.5	1.3	1.5	7.8	7.7	13.2	13.4	16.4	16.3
	M	9	1.1	1.3	5.6	5.8	11.9	12.0	13.5	13.3
	B	18	0.9	0.8	5.5	5.2	11.8	11.4	12.4	12.2
6	S	0.5	2.7	1.6	16.5	16.3	17.4	17.3	20.5	20.4
	M	8.1	1.8	1.7	14.3	14.3	17.2	17.4	16.4	16.5
	B	16.3	1.0	1.1	13.7	13.7	15.4	15.5	15.5	15.3
7	S	0.5	1.2	1.3	15.7	15.8	13.5	13.6	19.4	19.5
	M	5.4	1.1	1.0	13.7	13.8	12.3	12.5	16.4	16.2
	B	10.9	0.2	0.3	13.7	13.9	10.7	10.9	15.8	15.7
8	S	0.5	2.5	2.4	12.3	12.4	17.5	17.7	21.5	21.3
	M	3.5	2.1	2.1	11.5	11.6	16.6	16.5	18.2	18.4
	B	7	1.7	1.7	11.5	11.5	16.4	16.3	17.7	17.8
9	S	0.5	1.9	2.0	14.3	14.2	15.2	15.4	19.4	19.5
	M	3.3	1.5	1.6	12.6	12.5	15.6	15.5	18.5	18.4
	B	6.7	1.5	1.5	10.6	10.7	15.5	15.4	18.3	18.5
10	S	0.5	2.6	2.8	12.4	12.5	16.2	16.3	19.5	19.4
	M	3.3	2.4	2.5	11.5	11.3	16.7	16.5	17.9	17.8
	B	6.6	2.0	2.1	11.6	11.7	16.2	16.5	18.2	18.4
11	S	0.5	2.7	2.6	18.5	18.7	23.4	23.5	25.7	25.8
	B	5	2.5	2.5	16.4	16.6	22.4	22.3	20.7	20.6
12	S	0.5	4.3	4.0	14.3	14.4	19.7	19.9	23.4	23.5
	B	4.8	4.1	4.1	14.0	14.1	18.4	18.2	22.1	22.3
13	S	0.5	3.3	3.5	16.6	16.4	21.8	21.5	26.6	25.4
	B	4.3	3.1	3.2	14.5	14.5	20.3	20.5	20.1	20.3
14	S	0.5	3.7	3.6	13.2	13.4	18.4	18.1	21.5	21.6
	B	4.1	3.4	3.5	11.3	11.1	17.4	17.2	16.3	16.4
15	S	0.5	2.3	2.5	8.6	8.7	16.4	16.6	23.6	23.7
	B	3.8	2.4	2.6	8.5	8.5	16.5	16.6	21.3	21.4
16	S	0.5	4.3	4.4	11.5	11.7	16.4	16.5	19.4	19.6
	B	3.4	3.9	3.7	10.6	10.4	16.5	16.7	19.5	19.4
17	S	0.5	3.6	3.7	10.8	10.9	14.7	14.3	18.4	18.5
	B	3.3	3.2	3.1	10.3	10.5	13.9	14.0	16.8	16.7
18	S	0.5	4.2	4.3	9.4	9.5	13.8	13.8	23.4	23.5
	B	3.1	4.0	4.1	7.6	7.4	12.5	12.2	20.1	20.4
19	S	0.5	2.1	2.0	14.2	14.3	19.4	19.2	24.8	24.6
	B	2.8	2.0	1.9	12.6	12.5	19.4	19.2	20.6	20.4
20	S	0.5	3.4	3.3	8.4	8.6	14.5	14.6	22.8	22.7
	B	2.6	3.2	3.2	8.3	8.2	14.0	14.1	21.2	21.1
21	S	0.5	3.6	3.7	10.7	10.8	13.4	13.7	16.4	16.5
	B	2.2	3.5	3.6	8.6	8.4	13.4	13.2	14.6	14.5

S, surface; M, middle; B, bottom.

Supplementary Tab. 5. Diversity index (H') and evenness value (J) of zooplankton at each study site.

Site number	Winter		Spring		Summer		Autumn	
	H'	J	H'	J	H'	J	H'	J
1	0.3	0.16	1.6	0.37	2.2	0.31	3.8	0.42
2	0.5	0.12	2.0	0.38	2.3	0.28	3.6	0.43
3	0.3	0.17	1.4	0.34	2.8	0.30	3.1	0.46
4	0.6	0.16	1.2	0.36	2.1	0.31	2.6	0.41
5	0.1	0.05	1.3	0.34	3.4	0.38	3.1	0.34
6	0.1	0.08	1.7	0.32	2.7	0.34	2.8	0.38
7	0.3	0.14	1.8	0.34	2.6	0.26	2.9	0.36
8	0.2	0.16	2.0	0.35	2.8	0.31	2.7	0.38
9	0.3	0.17	1.1	0.42	2.8	0.28	2.8	0.53
10	0.6	0.13	1.3	0.37	2.3	0.31	3.1	0.51
11	0.7	0.11	2.8	0.47	3.6	0.36	5.7	0.76
12	0	0.17	2.2	0.45	4.7	0.51	3.5	0.61
13	1.3	0.28	2.3	0.47	3.4	0.34	5.7	0.65
14	0.5	0.08	2.6	0.41	5.3	0.62	5.3	0.61
15	0.1	0.02	2.6	0.47	4.8	0.52	3.8	0.41
16	0.2	0.05	1.8	0.32	5.1	0.5	2.6	0.43
17	0.7	0.14	1.8	0.36	4.3	0.43	2.7	0.38
18	1.1	0.22	3.6	0.56	2.9	0.36	4.3	0.72
19	0.8	0.16	3.1	0.52	3.5	0.43	3.5	0.62
20	0.6	0.11	2.4	0.45	3.7	0.41	2.7	0.34
21	0.4	0.08	3.1	0.51	2.8	0.30	3.8	0.53

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Supplementary Tab. 6. The percentage of zooplankton species in the guts of fish collected from each study site in spring.

Taxa	Sampling points																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Aschelminthes																					
<i>Brachionus angularis</i> (Gosse, 1851)			6				3														
<i>Brachionus calyciflorus</i> (Pallas, 1766)							2		6	6								8			
<i>Keratella cochlearis</i> (Gosse, 1851)					6																
Arthropoda																					
<i>Acanthocyclops vernalis</i> (Fischer, 1853)						6	2				7	8	6								
<i>Acropenus harpae</i> (Baird, 1835)											4		2		8						
<i>Alona guttata</i> (Sars, 1862)											11		14	11	10	10		13		15	
<i>Alona rectangular</i> (Sars, 1862)												8				8		8	5		
<i>Bosmina longirostris</i> (Müller, 1785)	27	18	24	21		12	6	13		8		12	11		10						16
<i>Bosminopsis deitersi</i> (Richard, 1895)			3		5			8	16	13											
<i>Camptocercus rectirostris</i> (Schoedler, 1862)											9			8		8	9		8	11	
<i>Ceriodaphnia reticulate</i> (Jurine, 1820)							6						16		7				11		
<i>Ceriodaphnia dubia</i> (Richard, 1894)									4	6			12	2		10		8			8
<i>Cyclops vicinus</i> (Uijanian, 1875)					27	17		19			9	18			13				8	10	
<i>Chydorus sphaericus</i> (Müller, 1785)												13									16
<i>Daphnia galeata</i> (Sars, 1864)		13	6	8		3	1				8		10	14	11	10	8				
<i>Daphnia obtusa</i> (Kurz, 1874)			13	9	12			10		13	9		8			8		5	14	17	
<i>Diacyclops crassicaudis</i> (Sars, 1863)											7										
<i>Diaphanosoma brachyurum</i> (Liévin, 1848)	5			2	3	4	12	14	12	2		16	3	2		8	15	7	4	18	10
<i>Eucyclops serrulatus</i> (Fischer, 1851)						11								8			3		11		
<i>Graptoleveris testudinaria</i> (Fischer, 1848)													7					8	7		
<i>Itocryptus spinifer</i> (Herrick, 1882)													11		8	3				8	11
<i>Macrothrix rosea</i> (Jurine, 1820)													11						6		
<i>Mesocyclops leuckarti</i> (Claus, 1857)	16	23	19	21	14	17	26	9						9	13					11	10
<i>Moina macrocopa</i> (Straus, 1820)											4								7		8
<i>Pleuxus aduncus</i> (Jurine, 1820)												8		13		11	9		14		13
<i>Pleuxus laevis</i> (Sars, 1862)														7	8	13	13				
<i>Sida crystalina</i> (Müller, 1776)																		11			
<i>Simocephalus vetulus</i> (Müller, 1776)											21			16	11		18	7	12	10	8
<i>Scapholeberis kingi</i> (Sars, 1903)											9					11					
<i>Thermocyclops crassus</i> (Fischer, 1853)	14	12	3	16	8	11	8	4	13	24		6		10						18	
<i>Thermocyclops taihokuensis</i> (Harada, 1931)	38	34	26	23	25	19	34	23	49	28	2				1		7	11			

Supplementary Tab. 7. The percentage of zooplankton species in the guts of fish collected from each study site in summer.

Taxa	Sampling points																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Aschelminthes																					
<i>Brachionus angularis</i> (Gosse, 1851)				4			5														
<i>Brachionus calyciflorus</i> (Pallas, 1766)	8	9																			
<i>Keratella cochlearis</i> (Gosse, 1851)		2	3			6				6			3						1		
Arthropoda																					
<i>Acanthocyclops vernalis</i> (Fischer, 1853)	16		8	10		9	14	12	8		4	9				11		8			
<i>Acropenus harpae</i> (Baird, 1835)											3			14	9		8	6		11	7
<i>Alona guttata</i> (Sars, 1862)											8		8	8			7		9	5	
<i>Alona rectangularis</i> (Sars, 1862)												11		8	8	8			10		
<i>Bosmina longirostris</i> (Müller, 1785)	21	2	11		8	12	8	11	7		8						8			7	4
<i>Bosminopsis deitersi</i> (Richard, 1895)		8		3						7						10			2		
<i>Camptocercus rectirostris</i> (Schoedler, 1862)													10		10		2	6	5	9	
<i>Ceriodaphnia reticulata</i> (Jurine, 1820)			8	13	10	14			1	9	6	2		6		8	9	8		6	3
<i>Ceriodaphnia dubia</i> (Richard, 1894)		6	3		9	15		8	6		1	7	4	8	6			5			
<i>Cyclops vicinus</i> (Uijjanin, 1875)																					
<i>Chydorus sphaericus</i> (Müller, 1785)											8				13	12	7	6	8	7	5
<i>Daphnia galeata</i> (Sars, 1864)	28		4			6															
<i>Daphnia obtusa</i> (Kurz, 1874)		10			4	11						8	3								
<i>Diacyclops crassicaudis</i> (Sars, 1863)											5	7	1						2	10	8
<i>Diaphanosoma brachyurum</i> (Liévin, 1848)	5	6	3	8	5	6	34	30		6	5	43	4	7	12	40	36	4	3	21	6
<i>Eucyclops serrulatus</i> (Fischer, 1851)		11	5	16		4								6	11			5			
<i>Graptoleveris testudinaria</i> (Fischer, 1848)													3				6	8	6		
<i>Iltoleptus spinifer</i> (Herrick, 1882)											6		8	7	6						
<i>Macrothrix rosea</i> (Jurine, 1820)											10			6		11	8	7	22		13
<i>Mesocyclops leuckarti</i> (Claus, 1857)	12		14		30	17	12		21	23			7							6	
<i>Moina macrocopa</i> (Straus, 1820)											9	6	8							5	
<i>Pleuxus aduncus</i> (Jurine, 1820)											8	7		5	2			8	6		9
<i>Pleuxus laevis</i> (Sars, 1862)													13	6	6			13	2		
<i>Sida crystalina</i> (Müller, 1776)											5		10						8		
<i>Simocephalus vetulus</i> (Müller, 1776)											11		11	9	11					9	8
<i>Scapholeberis kingi</i> (Sars, 1903)														2	6						21
<i>Thermocyclops crassus</i> (Fischer, 1853)	10	18	14	15	5		6	11	23	28	3		7	8				11	9	12	11
<i>Thermocyclops taihokuensis</i> (Harada, 1931)		28	27	31	29		21	28	34	21								5		13	

Supplementary Tab. 8. The percentage of zooplankton species in the guts of fish collected from each study site in summer.

Taxa	Sampling points																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Aschelminthes																					
<i>Brachionus angularis</i> (Gosse, 1851)																					
<i>Brachionus calyciflorus</i> (Pallas, 1766)		3											2								
<i>Keratella cochlearis</i> (Gosse, 1851)				1		8															
Arthropoda																					
<i>Acanthocyclops vernalis</i> (Fischer, 1853)	11				16	13	8	11	17					4			6				
<i>Acropenus harpae</i> (Baird, 1835)							6		11		3	6	6	6	8		3			8	
<i>Alona guttata</i> (Sars, 1862)											4		7	8		6		6	6	6	
<i>Alona rectangularis</i> (Sars, 1862)											2	5			6	7	8	8	2	12	11
<i>Bosmina longirostris</i> (Müller, 1785)	7	12	16		8	5	6	3	4	4	7		5	6					7		
<i>Bosminopsis deitersi</i> (Richard, 1895)				4		8	4	4			9			7			7				
<i>Camptocercus rectirostris</i> (Schoedler, 1862)												6	6	10	7	12		3		8	8
<i>Ceriodaphnia reticulata</i> (Jurine, 1820)		11	7								5				5	8		7	3		8
<i>Ceriodaphnia dubia</i> (Richard, 1894)													5	8	3			2	4	6	
<i>Cyclops vicinus</i> (Uijjanin, 1875)	32	14	9	25	17	17	12		13	14	8	2	8	3			5			7	
<i>Chydorus sphaericus</i> (Müller, 1785)							1	6	8	2	2	8	11	4	9	7	2	6	8		11
<i>Daphnia galeata</i> (Sars, 1864)	12	7				5	2		2	8											
<i>Daphnia obtusa</i> (Kurz, 1874)																					6
<i>Diacyclops crassicaudis</i> (Sars, 1863)															7		4	6	2		10
<i>Diaphanosoma brachyurum</i> (Liévin, 1848)	4	6	5	7	8	5	29	31	3	7	4	37	13	10		35	29	7	6	18	6
<i>Eucyclops serrulatus</i> (Fischer, 1851)		13	11								6	3		6				5			
<i>Graptoleveris testudinaria</i> (Fischer, 1848)												7			4		3	7	6	5	6
<i>Iltoleptus spinifer</i> (Herrick, 1882)											6	2			3	6	4	6	8	13	8
<i>Macrothrix rosea</i> (Jurine, 1820)												11		8	7	3	6		4	8	
<i>Mesocyclops leuckarti</i> (Claus, 1857)		7	5	11				24	17	6	13			7							10
<i>Moina macrocopa</i> (Straus, 1820)													3	8	2	9	2	5	5		
<i>Pleuxus aduncus</i> (Jurine, 1820)											2	3	6	5	7			6	6	6	8
<i>Pleuxus laevis</i> (Sars, 1862)					2						9	7			6	2	7		8	5	5
<i>Sida crystalina</i> (Müller, 1776)											8		8		8	4					
<i>Simocephalus vetulus</i> (Müller, 1776)											2	3	13		6	1	2	8	7		2
<i>Scapholeberis kingi</i> (Sars, 1903)				10	9								7			8	4	4			5
<i>Thermocyclops crassus</i> (Fischer, 1853)	13		12	16	24	21	18		11	24	2				5		6	8	8		
<i>Thermocyclops taihokuensis</i> (Harada, 1931)	21	27	35	26	16	18	14	21	14	35	8				7			6	2		2