

Table S1 supp. Result of stepwise multiple regression analysis for the effect of microhabitat parameters on the measurement of the photosynthetic activity (the maximal quantum yields of photosystem II – Fv/F_M) of the study cryptogams species in aspect of daytime and seasons. Variables with significant effect ($p < 0.05$) are provided in bold.

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Summer	<i>Cladonia mitis</i>	9:00 am.: R = 0.2405 R ² = 0.0578	Baseground temperature	-0.010576	-1.65825	p = 0.0985
			Light intensity	0.000005	2.62078	p = 0.0093
			Tree height	0.001149	2.51861	p = 0.0124
		12:00 am.: R = 0.7654 R ² = 0.5859	Baseground temperature	-0.041380	-7.53142	p < 0.001
			Light intensity	0.000003	1.90672	p = 0.0577
			Tree height	-0.000347	-0.92938	p = 0.3536
		3:00 pm.: R = 0.1236 R ² = 0.0152	Baseground temperature	0.000128	0.04140	p = 0.9670
			Light intensity	0.000001	0.45620	p = 0.6486
			Tree height	-0.000334	-1.25939	p = 0.2090
	<i>Cladonia uncialis</i>	9:00 am.: R = 0.3974 R ² = 0.1579	Baseground temperature	-0.008665	-4.73353	p < 0.001
			Light intensity	0.000002	4.04792	p < 0.001
			Tree height	0.000597	4.55988	p < 0.001
		12:00 am.: R = 0.7674 R ² = 0.5889	Baseground temperature	-0.018695	-2.47611	p = 0.0139
			Light intensity	-0.000007	-3.30183	p = 0.0011
			Tree height	-0.001266	-2.46631	p = 0.0143
		3:00 pm.: R = 0.7105 R ² = 0.5049	Baseground temperature	-0.009755	-3.12862	p = 0.0019
			Light intensity	-0.000002	-1.69155	p = 0.0920
			Tree height	0.000102	0.38192	p = 0.7028

Table S1 Supplementary data continued

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Summer	<i>Dicranum scoparium</i>	9:00 am.: R = 0.4787 R ² = 0.2292	Baseground temperature	-0.043232	-3.34512	p = 0.0009
			Light intensity	-0.000003	-0.66591	p = 0.5060
			Tree height	-0.002853	-3.08481	p = 0.0022
		12:00 am.: R = 0.6279 R ² = 0.3943	Baseground temperature	0.018623	1.21605	p = 0.2251
			Light intensity	-0.000027	-4.42515	p < 0.001
			Tree height	-0.005173	-3.28685	p = 0.0011
		3:00 pm.: R = 0.6179 R ² = 0.3818	Baseground temperature	0.005436	0.33920	p = 0.7347
			Light intensity	-0.000022	-3.71203	p = 0.0002
			Tree height	-0.005114	-3.71340	p = 0.0002
	<i>Pleurozium schreberi</i>	9:00 am.: R = 0.5842 R ² = 0.3413	Baseground temperature	-0.018907	-3.16076	p = 0.0017
			Light intensity	0.000014	7.65427	p < 0.001
			Tree height	0.001749	4.08605	p < 0.001
		12:00 am.: R = 0.3006 R ² = 0.0903	Baseground temperature	-0.065571	-3.30870	p = 0.0010
			Light intensity	0.000014	2.63140	p = 0.0090
			Tree height	-0.005136	-3.81316	p = 0.0001
		3:00 pm.: R = 0.816 R ² = 0.1456	Baseground temperature	-0.013266	-0.84715	p = 0.3977
			Light intensity	0.000000	0.05494	p = 0.9562
			Tree height	-0.007386	-5.48912	p < 0.001

Table S1 Supplementary data continued

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Autumn	<i>Cladonia mitis</i>	9:00 am.: R = 0.6638 R ² = 0.4406	Baseground temperature	0.060456	5.35921	p < 0.001
			Light intensity	-0.000127	-8.17909	p < 0.001
			Tree height	-0.001574	-3.38277	p = 0.0008
		12:00 am.: R = 0.3992 R ² = 0.1593	Baseground temperature	0.007938	2.85719	p = 0.0046
			Light intensity	-0.000008	-4.06892	p = 0.0001
			Tree height	-0.001028	-4.61457	p < 0.001
		3:00 pm.: R = 0.4554 R ² = 0.074	Baseground temperature	0.009677	7.30242	p < 0.001
			Light intensity	-0.000001	-3.47203	p = 0.0006
			Tree height	0.000042	0.38477	p = 0.7007
	<i>Cladonia uncialis</i>	9:00 am.: R = 0.7571 R ² = 0.5732	Baseground temperature	0.134976	9.50280	p < 0.001
			Light intensity	-0.000170	-8.67264	p < 0.001
			Tree height	-0.001231	-2.10101	p = 0.0366
		12:00 am.: R = 0.5147 R ² = 0.2649	Baseground temperature	0.025865	9.31552	p < 0.001
			Light intensity	-0.000011	-5.57535	p < 0.001
			Tree height	0.000388	1.74206	p = 0.0827
		3:00 pm.: R = 0.4086 R ² = 0.1669	Baseground temperature	0.010657	4.02759	p < 0.001
			Light intensity	-0.000003	-4.05870	p < 0.001
			Tree height	-0.001198	-5.54902	p < 0.001

Table S1 Supplementary data continued

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Autumn	<i>Dicranum scoparium</i>	9:00 am.: R = 0.5183 R ² = 0.2686	Baseground temperature	0.000369	0.26236	p = 0.7932
			Light intensity	-0.000016	-8.16619	p < 0.001
			Tree height	-0.000058	-1.00383	p = 0.3164
		12:00 am.: R = 0.5063 R ² = 0.2563	Baseground temperature	-0.004903	-7.32423	p < 0.001
			Light intensity	0.000003	6.17684	p < 0.001
			Tree height	0.000154	2.86162	p = 0.0045
		3:00 pm.: R = 0.5683 R ² = 0.3230	Baseground temperature	0.000451	0.12722	p = 0.8988
			Light intensity	-0.000007	-6.17812	p < 0.001
			Tree height	0.001680	5.80343	p < 0.001
	<i>Pleurozium schreberi</i>	9:00 am.: R = 0.8058 R ² = 0.6493	Baseground temperature	0.043603	4.3695	p < 0.001
			Light intensity	-0.000218	-15.8678	p < 0.001
			Tree height	0.000983	2.3877	p = 0.0177
		12:00 am.: R = 0.2623 R ² = 0.0688	Baseground temperature	-0.008440	-0.829590	p = 0.4075
			Light intensity	0.000006	0.803644	p = 0.4223
			Tree height	0.003107	3.809669	p = 0.0001
		3:00 pm.: R = 0.1026 R ² = 0.0105	Baseground temperature	-0.005679	-0.683037	p = 0.4952
			Light intensity	0.000002	0.691906	p = 0.4896
			Tree height	0.000979	1.442622	p = 0.1504

Table S1 Supplementary data continued

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Winter	<i>Cladonia mitis</i>	9:00 am.: R = 0.3663 R ² = 0.1341	Baseground temperature	0.000439	0.2047	p = 0.8379
			Light intensity	0.000000	0.0638	p = 0.9491
			Tree height	0.000409	5.9844	p < 0.001
		12:00 am.: R = 0.7276 R ² = 0.5294	Baseground temperature	0.066059	11.1884	p < 0.001
			Light intensity	-0.000046	-16.4680	p < 0.001
			Tree height	-0.000123	-0.2795	p = 0.7800
		3:00 pm.: R = 0.7428 R ² = 0.5518	Baseground temperature	0.36809	10.20857	p < 0.001
			Light intensity	0.00004	12.15072	p < 0.001
			Tree height	0.00057	1.17339	p = 0.2417
	<i>Cladonia uncialis</i>	9:00 am.: R = 0.5712 R ² = 0.3263	Baseground temperature	0.049071	9.51578	p < 0.001
			Light intensity	0.000069	6.19748	p < 0.001
			Tree height	0.001132	6.89084	p < 0.001
		12:00 am.: R = 0.3567 R ² = 0.1272	Baseground temperature	0.026121	5.29344	p < 0.001
			Light intensity	-0.000013	-5.72590	p < 0.001
			Tree height	-0.000384	-1.04241	p = 0.2982
		3:00 pm.: R = 0.7825 R ² = 0.6124	Baseground temperature	0.170669	10.86229	0.000000
			Light intensity	0.000019	13.21218	0.000000
			Tree height	-0.000631	-2.95517	0.003431

Table S1 Supplementary data continued

Seasons	Species	Daytime and correlation coefficient	Variables	B	<i>t</i>	<i>p</i>
Winter	<i>Dicranum scoparium</i>	9:00 am.: R = 0.7887 R ² = 0.6221	Baseground temperature	-0.004949	-2.2063	p = 0.0282
			Light intensity	-0.000093	-19.2199	p < 0.001
			Tree height	-0.000033	-0.4646	p = 0.6426
		12:00 am.: R = 0.6996 R ² = 0.4895	Baseground temperature	0.035744	3.5340	p = 0.0004
			Light intensity	-0.000061	-12.5451	p < 0.001
			Tree height	-0.000398	-0.5272	p = 0.5985
		3:00 pm.: R = 0.7916 R ² = 0.6267	Baseground temperature	0.38369	11.42525	p < 0.001
			Light intensity	0.00004	13.14660	p < 0.001
			Tree height	-0.00163	-3.58509	p = 0.0004
	<i>Pleurozium schreberi</i>	9:00 am.: R = 0.2253 R ² = 0.507	Baseground temperature	0.000067	0.0403	p = 0.9678
			Light intensity	-0.000001	-0.3219	p = 0.7478
			Tree height	-0.000185	-3.4787	p = 0.0005
		12:00 am.: R = 0.6215 R ² = 0.3862	Baseground temperature	0.052825	9.3179	p < 0.001
			Light intensity	-0.000033	-12.3866	p < 0.001
			Tree height	-0.000511	-1.2077	p = 0.2283
		3:00 pm.: R = 0.8660 R ² = 0.500	Baseground temperature	0.63997	13.2507	p < 0.001
			Light intensity	0.00009	20.5047	p < 0.001
			Tree height	-0.00119	-1.8176	p = 0.0703