

Year-round micrometeorological data from the habitats of terrestrial photosynthetic organisms in Langhovde, East Antarctica, during 2013

Makiko Kosugi¹, now at^{5*}, Norio Kurosawa³, Akinori Kawamata⁴,

Sakae Kudoh^{1, 2} and Satoshi Imura^{1, 2}

¹ National Institute of Polar Research, Research Organization of Information and Systems, 10–3, Midori-cho, Tachikawa, Tokyo 190-8518.

² Department of Polar Science, School of Multidisciplinary Science, SOKENDAI (The Graduate University for Advanced Studies), 10–3, Midori-cho, Tachikawa-shi, Tokyo 190-8518.

³ Department of Environmental Engineering for Symbiosis, Faculty of Engineering, Soka University, 1–236 Tangi-machi, Hachioji, Tokyo 192-8577.

⁴ Ehime Prefectural Science Museum, 2133–2 Ojoin Niihama-shi, Ehime, 792-0060.

⁵ Department of Biological Sciences, Faculty of Science and Engineering, Chuo University, 1–13–27, Kasuga, Bunkyo-ku, Tokyo 112-8551.

Corresponding author. E-mail: kosugi@bio.chuo-u.ac.jp

1. Introduction

This report presents micrometeorological data from the habitats of terrestrial photosynthetic organisms at Yukidori Zawa (Yukidori Valley), Langhovde, on the Sôya Coast of East Antarctica. Data were collected continuously throughout 2013 by the 54th and 55th Japanese Antarctic Research Expeditions (JARE). This study, which is part of the NIPR project “Responses of Polar Ecosystems to Environmental Change (KP-8),” has the aim of the monitoring long-term environmental conditions associated with photosynthetic organisms growing in ice-free terrestrial habitats. Air temperature, humidity, photosynthetically active radiation (PAR), and organism temperature were measured automatically every 10–45 min. We also took time-lapse photographs of the site using a stationary camera to assess snow cover.

2. Materials and methods

Observation sites: Yukidori Zawa (Yukidori Valley), located in central Langhovde, is a registered (No. 141) Antarctic Specially Protected Area (ASPA) (Kanda and Inoue, 1994). For this study, we selected a richly vegetated site in the central part of the valley ($69^{\circ}14'24.90''S$, $39^{\circ}44'20.16''E$; 88 m elevation) ([Fig. 1](#)). The vegetation-habitat occupies the northern valley slope and is most prominent in the vicinity of a large boulder (2 m high, 3.5 m wide), around which snow drifts accumulate during winter. During summer, as the snow melts, the run-off water from these drifts contains high levels of mineral nutrients because snow petrels are nesting under the boulder during summer season ([Fig. 2A and B](#)). We confirmed that there were a parent bird and the chick there during January 2013. The site does not receive water directly from the main stream in Yukidori Zawa (53 m elevation), which originates from a branch of the Langhovde Glacier.

Observation systems and setting of the data loggers: [Fig. 2B](#) shows the position of each observation site. Site 1 is on a small rock, whereas Sites 2–5 are located on sandy–gravel ground. The distances from Site 2 to Site 4 and from Site 4 to Site 5 are 2 m and 1.5 m, respectively. The elevation of Site 1 is 1 m higher than that of Site 2, and slope angles at Site 1, Sites 2–3, and Sites 4–5 are approximately 29° , 19° , and 20° , respectively.

I. Main system: The main micrometeorological observation system consisted of a logger (CR1000-4M-XT, Campbell Scientific Inc., UT, USA), a 25-channel thermocouple multiplexer (AM25T, Campbell Scientific Inc., UT, USA), three air temperature–humidity sensors (EE-06, E+E Elektronik Corp, Engerwitzdorf, Austria), three PAR sensors (SQ-110, Apogee Instruments, UT, USA), eight K-type thermocouple thermometers, and a lithium battery (three 12V batteries connected in parallel with a total 19Ah). The logger, the thermocouple multiplexer, and batteries were placed in a watertight plastic container (PELICAN™ case, PELICAN products, California, USA). The logger system was designed and programmed, by Senecom Corporation (Tokyo, Japan).

The PAR sensors initially had a signal range of 0–1200 $\mu\text{mol photons/m}^2/\text{s}$ between January 2nd and July 29th 2013. However some data collected during this time period was outside this range to resolve this issue and the signal range was extended to 0–2000 $\mu\text{mol photons/m}^2/\text{s}$ after July 29. The K-type thermocouples attached to the surface or interior of colonies of organisms were

configured at ϕ 0.25 mm or ϕ 0.5 mm. Temperature–humidity sensors were fixed to the bottom of a flower-pot saucer (ϕ 11.7 cm, depth 2 cm) to avoid direct contact with water, and the sensors were installed 1 cm above the substratum (gravel ground or rock surface). To secure the sensors to the ground, we used stainless steel wire pegs for gravel surfaces ([Fig. 3-2B and C](#)) and anchor bolts for rock surfaces ([Fig. 3-1D and E](#)).

Six sites were monitored for one year. [Table 1](#) lists the monitoring items at each observation site. Site 1 represents a habitat of *Umbilicaria decussata* (Vill.) Zahlbr., which has colonized the upper surface of a rock located in front of the large boulder mentioned above. We also observed *Usnea sphacelata* R.Br. on the same rock surface. The setting of Site 1 is depicted in [Fig. 3-1A–E](#). Site 2 is a habitat of *Ceratodon purpureus* (Hedw.) Brid. The sole moss species confirmed in the observation area, *C. purpureus* grows around rocks embedded in sandy gravel. The setting of Site 2 is shown in [Fig. 3-2A–E](#). Site 3, the setting of which is shown in [Fig. 3-3A and B](#), is a habitat for the green-algae species *Prasiola crispa* (Lightf.) Menegh. Site 4 represents a second *C. purpureus* habitat and is located down-slope of Site 2 ([Fig. 3-4](#)). A third *C. purpureus* habitat, Site 5, is more exposed than Sites 1–3 and also includes lichen habitat. Finally, Site 6 comprises the bottom surface of a quartz stone, which is an environment commonly associated with Antarctic soil algae, cyanobacteria, and bryophytes (Broady, 1981). For the purpose of this study, we verified the growth of micro-algae and cyanobacteria beneath the stone. [Fig. 3-5](#) shows the setting of Sites 5 and 6. Air temperature–humidity and PAR sensors were installed at Sites 1–3 ([Fig. 3-1A, 3-2A, and 3-3A](#)). Thermocouples were attached to the upper and basal surfaces of *U. decussata* thalli (Site 1; [Fig. 3-1B](#)) and *P. crispa* (Site 3), and to the upper surface and interior of *C. purpureus* (Sites 2–5) ([Fig. 3-2D, E, 3-3B, 3-4, and 3-5](#)), as well as beneath the quartz stone (Site 6).

II. Mini temperature–humidity sensors: We used mini digital temperature–humidity sensors (manufactured by SHTDL-3, YMATIC, Tokyo, Japan; configured by SHT7x, Sensirion, Tokyo, Japan) to measure temperature and humidity in the hard-to-reach interior parts of organisms ([Fig. 3-2D and E](#)) and in the immediate vicinity of organisms ([Fig. 3-1C](#)). Such data enabled us to assess the state of hydration of the organisms. The sensor head measures $3.7 \times 6.4 \times 2.2$ mm (W \times D \times H). The

measurement interval was 10 min during January and 45 min thereafter. Each module was powered by an 8V lithium battery for entire year.

III. Stationary camera: A HC600 HyperFire (RECONYX, Inc., Wisconsin, USA) was attached to a tripod located ~7.5 m from the boulder ([Fig. 2B](#)). During poor light conditions, the infrared mode of the camera was triggered automatically to capture images. To capture images at hourly intervals, the camera employed twelve 1.5V AA lithium batteries (Energizer, Missouri, USA). Batteries were changed in July.

3. Data

The raw data from the main system and the mini sensors of temperature and relative humidity sensors were uploaded as electronic data ([Raw data 1](#) and [Raw data 2](#), respectively), and serial photographs taken by the stationary camera were uploaded in [Movie 1](#) format. Daily average, maximum, and minimum values were calculated from the raw data (omitting erroneous data) using Excel (Microsoft, USA). Daily integrated values of PAR were also calculated. The full raw, which includes erroneous data and outliers can be viewed in Raw_data 1. In the case of excluded data, the applicable exclusion criterion is noted in right-hand column of the raw data;

Annotation (reasons for data exclusion):

*1: Value was recorded prior to or immediately after recording began.

*2: Value appears to be an outlier.

*3: Numerical value is potentially erroneous because (i) it is temporally close to an outlier value (see *2) and (ii) it differs from both thermocouples by more than 2°C.

*4: Value was not collected owing to equipment maintenance.

*5: Value was not collected owing to loss of power to the logger. (In late December, a loss of battery power caused the main system to shut down.)

*6: The PAR sensor was obscured by a protector.

*7: PAR value exceeds the maximum value in the range (1200 $\mu\text{mol}/\text{m}^2/\text{s}$).

I. [Table 2](#) lists the daily average, maximum, and minimum air temperatures at Sites 1–3, measured at 1 cm above the substratum (ground or rock surface). Seasonal temperature variability is shown in [Fig. 4](#).

II. [Table 3](#) lists the daily average, maximum, and minimum relative humidity at Sites 1–3, measured at 1 cm above the substratum (ground or rock surface). Seasonal variability in relative humidity is shown in [Fig. 5](#).

III. [Table 4](#) lists the daily average, maximum, and minimum PAR, and integrated PAR values at Sites 1–3. Seasonal variability in integration values is shown in [Fig. 6](#).

IV. [Table 5](#) lists the daily average, maximum, and minimum organism temperatures at Sites 1–6, measured by thermocouples. Seasonal temperature variability is shown in [Fig. 7](#).

V. [Table 6](#) lists the daily average, maximum, and minimum temperatures of immediate vicinity of organism at Sites 1, 2, and 6, measured by mini sensors. Seasonal temperature variability is shown in [Fig. 8](#).

VI. [Table 7](#) lists the daily average, maximum, and minimum relative humidity of immediate vicinity of organism at Sites 1, 2, and 6, measured by mini sensors. Seasonal variability in relative humidity is shown in [Fig. 9](#).

4. Participating members who conducted the field study

Installation of the micrometeorological observation system was carried out by 54th JARE members Makiko Kosugi, Norio Kurosawa, Akinori Kawamata, Yosuke Kokubo, and Shuichi Hasegawa. Data acquisition was conducted by Makiko Kosugi, Norio Kurosawa, Akinori Kawamata, Noriaki Obara, Yukiko Hayakawa, and Yosuke Kokubo (54th JARE members), and by Sakae Kudoh, Kunio Takahashi, and Tomoko Ishihara (55th JARE members).

5. Data policy

Prior to using these data in a publication or presentation, please obtain permission in writing. Inquiries should be addressed to:

Makiko KOSUGI

Chuo University, Graduate School of Science and Engineering

1-13-27, Kasuga, Bunkyo-ku, Tokyo 112-8551, Japan

Telephone +81-3-3817-7174/ Facsimile +81-3-3817-7102

E-mail; kosugi@bio.chuo-u.ac.jp / makiko.kosugi@gmail.com

or

Satoshi IMURA

National Institute of Polar Research, Research Organization of Information and Systems, Inter-

university Research Institute Corporation

10-3, Midori-cho, Tachikawa-shi, Tokyo 190-8518, Japan

Telephone +81-42-512-0737 / Facsimile +81-42-528-3492

E-mail; imura@nipr.ac.jp

Acknowledgements

We thank all members of JARE-54 and JARE-55 for their support. We also thank the captain and crew of the icebreaker *Shirase*.

This study is supported by Japan Society for the Promotion of Science (Grant Number: 24770030).

References

- Broady, P.A (1981): The ecology of sublithic terrestrial algae at the Vestfold Hills, Antarctica. British Phycological Journal, **16**, 231–240, doi:10.1080/00071618100650241.
- Kanda, H. and Inoue, M. (1994): Ecological monitoring of moss and lichen vegetation in the Syowa Station area, Antarctica. Proc. NIPR Symp. Polar Biol., **7**, 221–231.



Fig. 1. Map showing the micrometeorological observation area (pink star) at Yukidori Zawa, Langhovde. Also shown are the principal observation route in the ASPA (black line), Yukidori hut (a field laboratory and camp site; purple star), and the location of a weather station (orange circle). Original base map was published by the Geospatial Information Authority of Japan in 2013.



Fig. 2A. Landscape around the observation area on December 22, 2012.

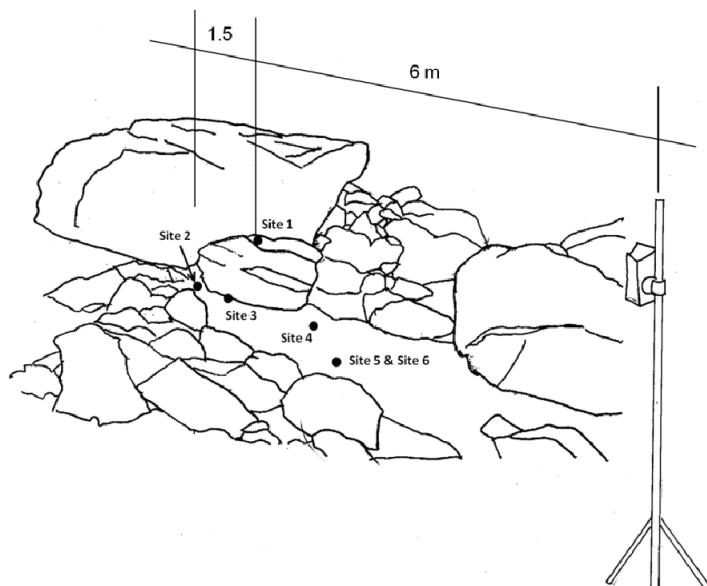


Fig. 2B. Positions of each observation site in the study area. To provide complete visual coverage, the stationary camera was installed downslope (southward) of the study area. The distance from the camera to Site 1 was 6 m; and the camera to the large boulder located behind Site 1 was 7.5 m. The distance between Site 2 and Site 4 was 3 m; and between Site 4 and Sites 5–6 was 1.5 m.

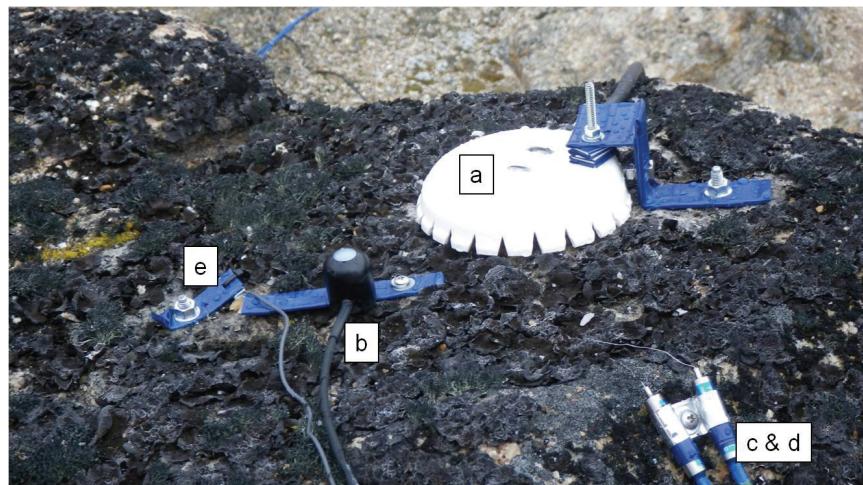


Fig. 3-1A. Sensors installed at Site 1. (a) Temperature–humidity sensor within a flower-pot saucer, (b) PAR sensor, (c, d) two thermocouples, and (e) the compact temperature–humidity sensor. Each sensor was attached to the rock surface by anchor bolts, screws, or clasps.



Fig. 3-1B. Thermocouples at Site1. Two sensor bodies were fixed to the rock surface using a thin aluminum plate and screw. The upper and lower sensors were attached to the lichen thallus directly in order to measure the temperatures at the surface and beneath the thallus, respectively.



Fig. 3-1C. Mini temperature–humidity sensor for measuring the water condition in the immediate vicinity of the lichen thallus at Site 1. The sensor was attached to a metal plate and anchored to the rock surface using a bolt.

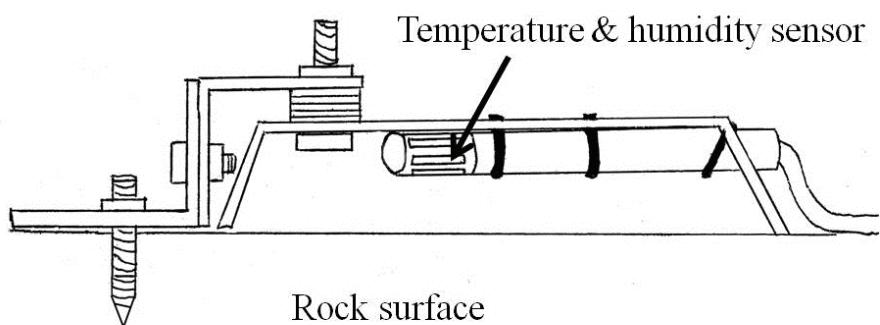


Fig. 3-1D. Section view of the temperature–humidity sensor. The sensor was attached to the base of the flower-pot saucer and fixed to the rock surface using an anchor bolt and L-shaped clasps.

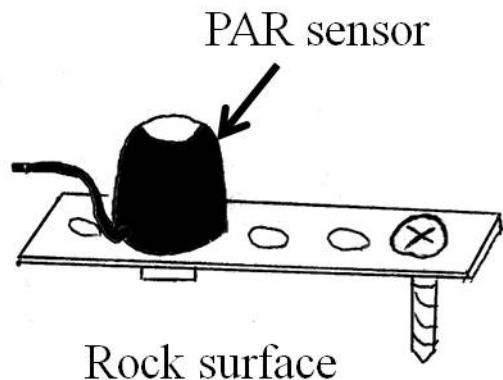


Fig. 3-1E. The PAR sensor was attached to a metallic plate and fixed to the rock surface using a screw.

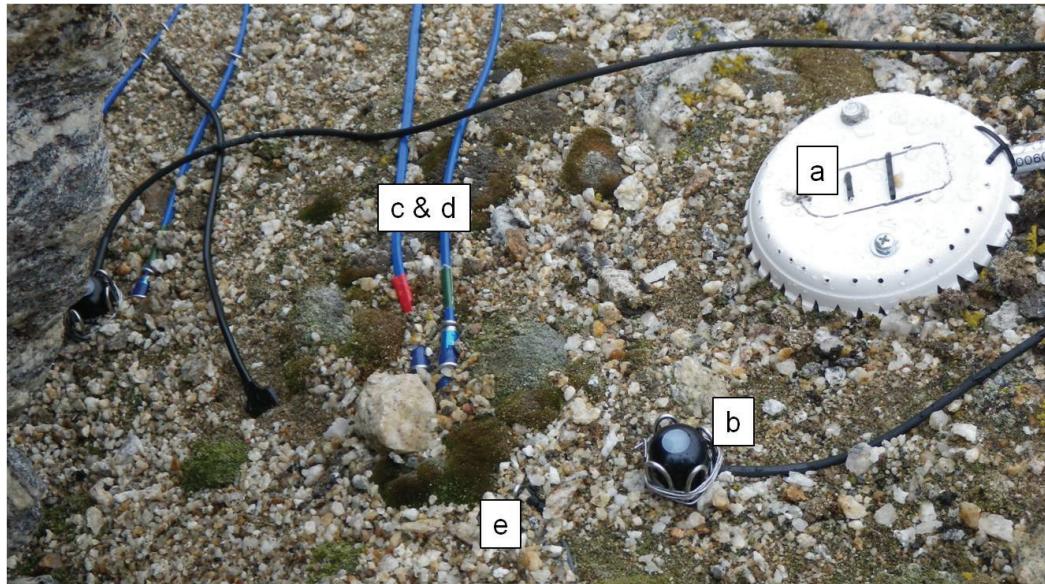


Fig. 3-2A. Sensors at Site 2. (a) Temperature-humidity sensor within a flower-pot saucer for shading, (b) PAR sensor, (c, d) two thermocouples (blue cables), and (e) the compact temperature-humidity sensor.



Fig. 3-2B. Interior view of the temperature–humidity sensors attached to the flower-pot saucer.

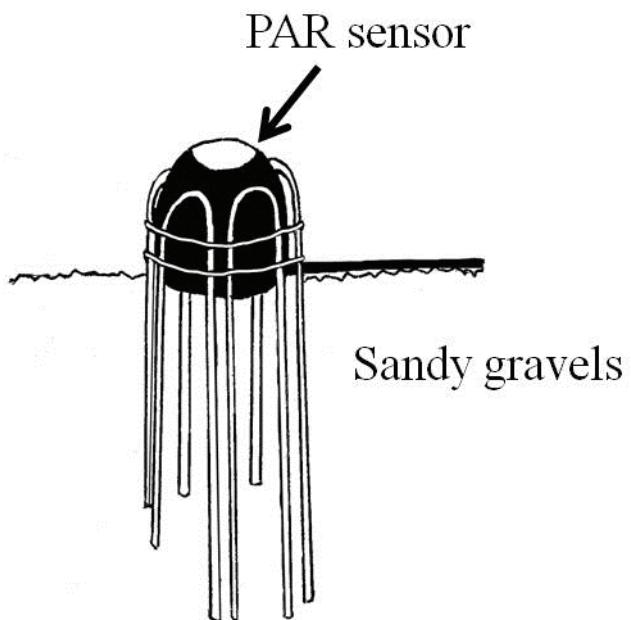


Fig. 3-2C. PAR sensors were installed on sandy gravel using U-shaped stainless steel pegs and wire.



Fig. 3-2D. Thermocouples (two blue bodies at center) and the compact temperature–humidity sensor (black sensor at upper left). Probes from the right and left thermocouples in this photograph were attached to the surface and to the inside of a moss colony to monitor surface and interior temperatures, respectively.

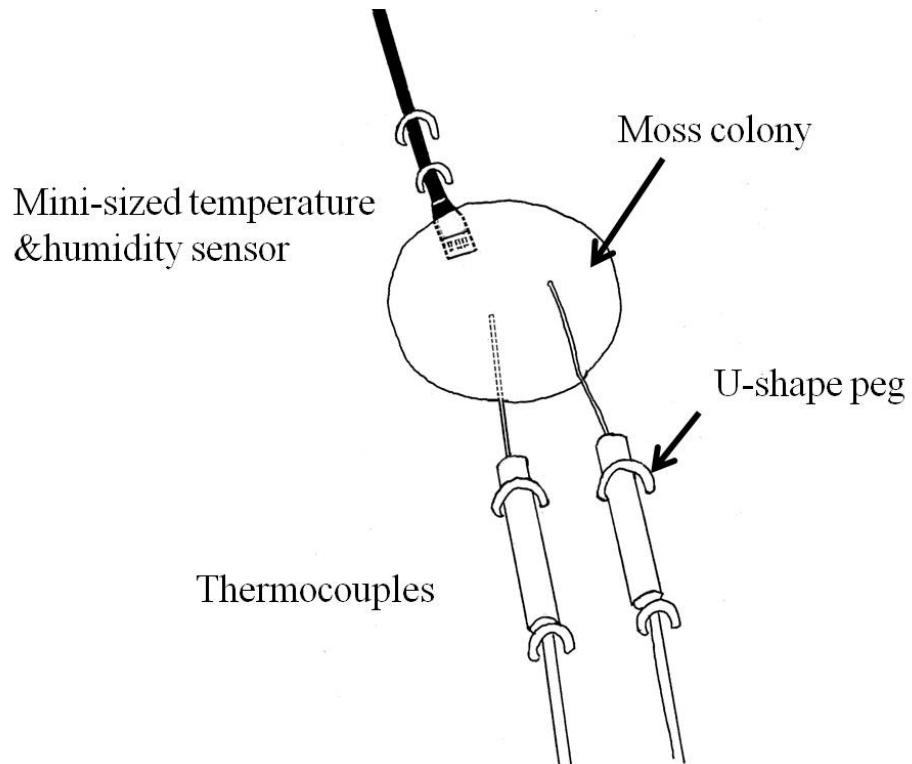


Fig. 3-2E. Compact temperature–humidity sensor and thermocouples attached to a moss colony using U-shape pegs.



Fig. 3-3A. Sensors around Site 2 (lower part of photograph) and Site 3 (upper part of photograph).



Fig. 3-3B. Thermocouples and the PAR sensor at Site 3. The probes of an upper and a lower thermocouple, seen in this photograph, monitored basal and surface temperatures at the algal colony, respectively.

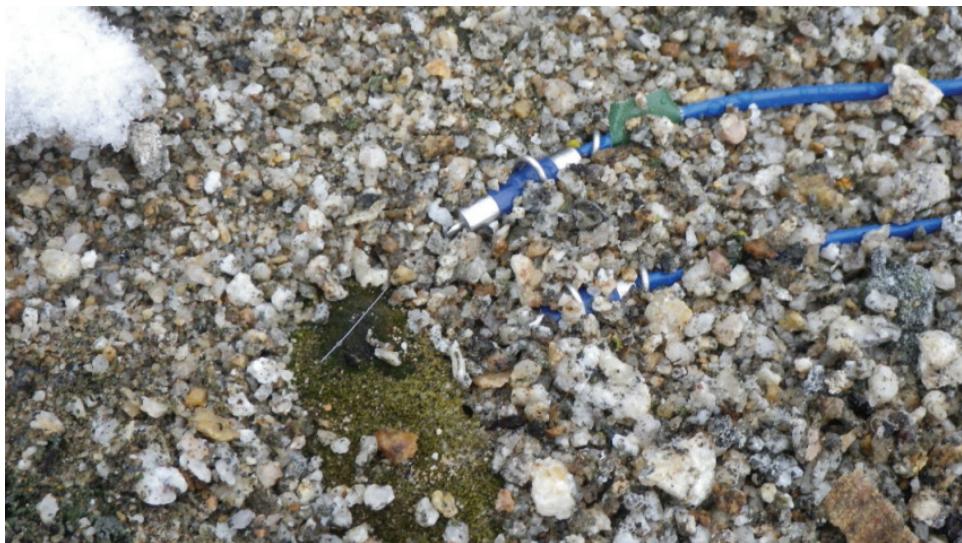


Fig. 3-4. Thermocouples at Site 4. The upper and lower probes from sensors in this photograph monitored the surface and interior temperatures of the moss colony, respectively.

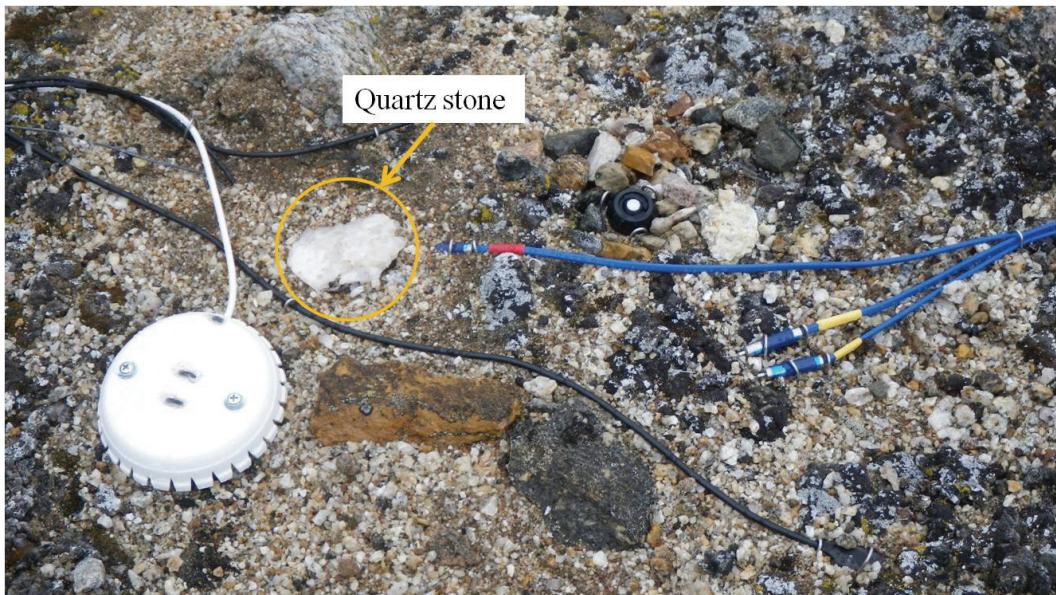


Fig. 3-5. Sensors around Site 5 and Site 6. The PAR and temperature–humidity sensors at these sites were regulated by an additional system (HOBO weather station, Onset, Massachusetts, USA), although those data are not included in this report. The thermocouple cable wrapped with red tape monitored the temperature underneath the quartz stone (orange circle).

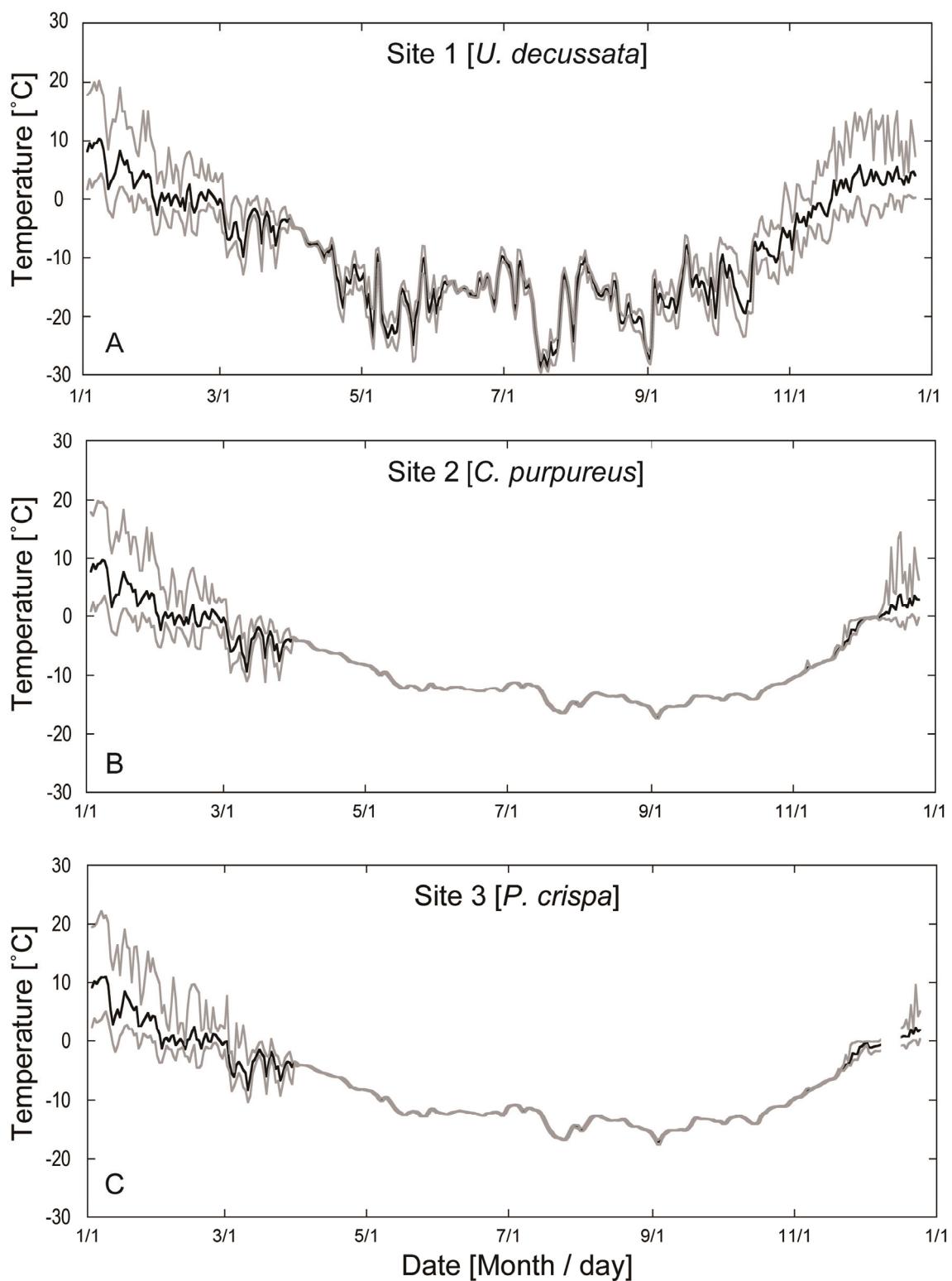


Fig. 4. Seasonal temperature variability at Site 1 (A), Site 2 (B), and Site 3 (C) during 2013. Daily average, maximum, and minimum values were calculated from data collected at 10 min intervals.

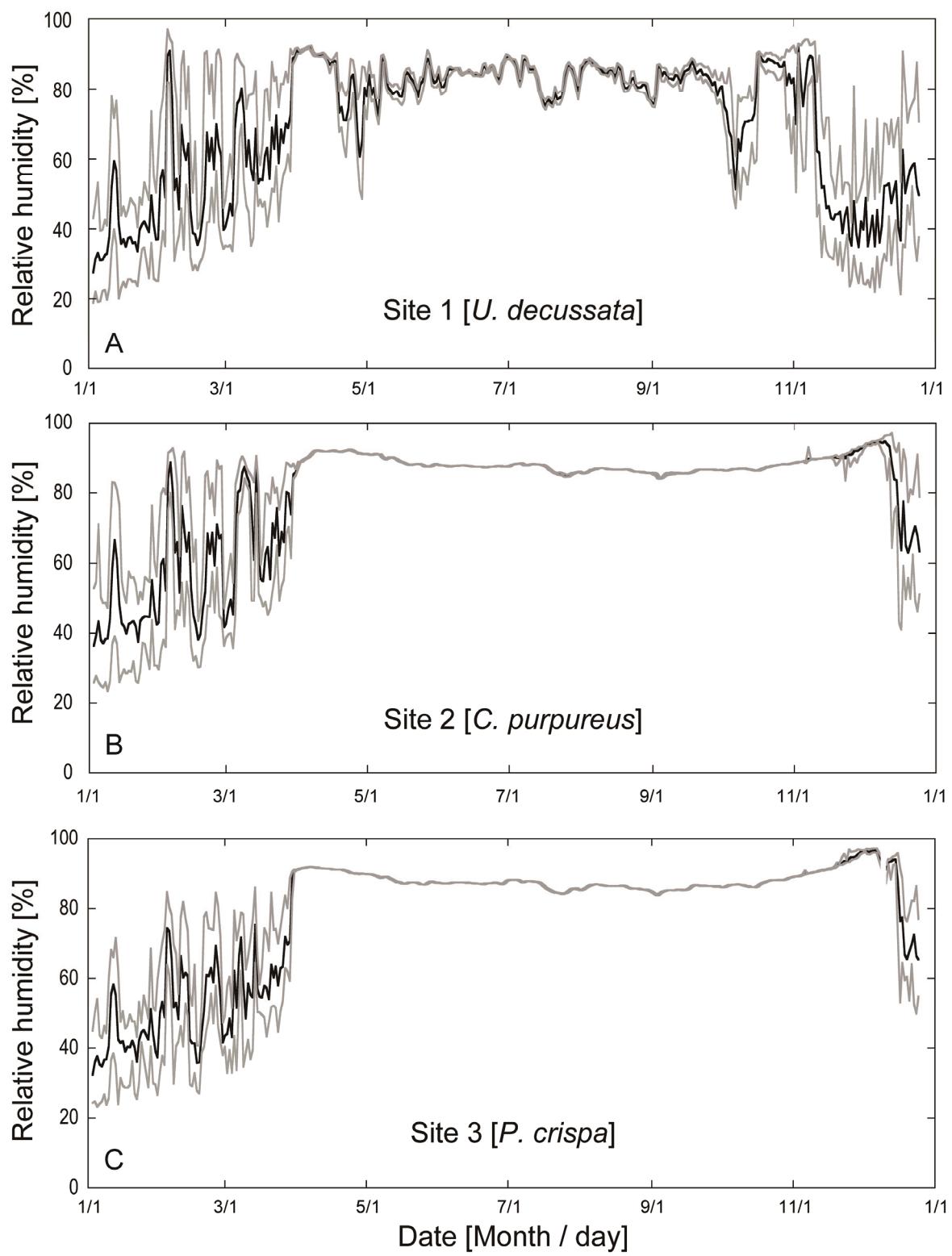


Fig. 5. Seasonal variability in relative humidity at Site 1 (A), Site 2 (B), and Site 3 (C) during 2013. Daily average, maximum, and minimum values were calculated from data collected at 10 min intervals.

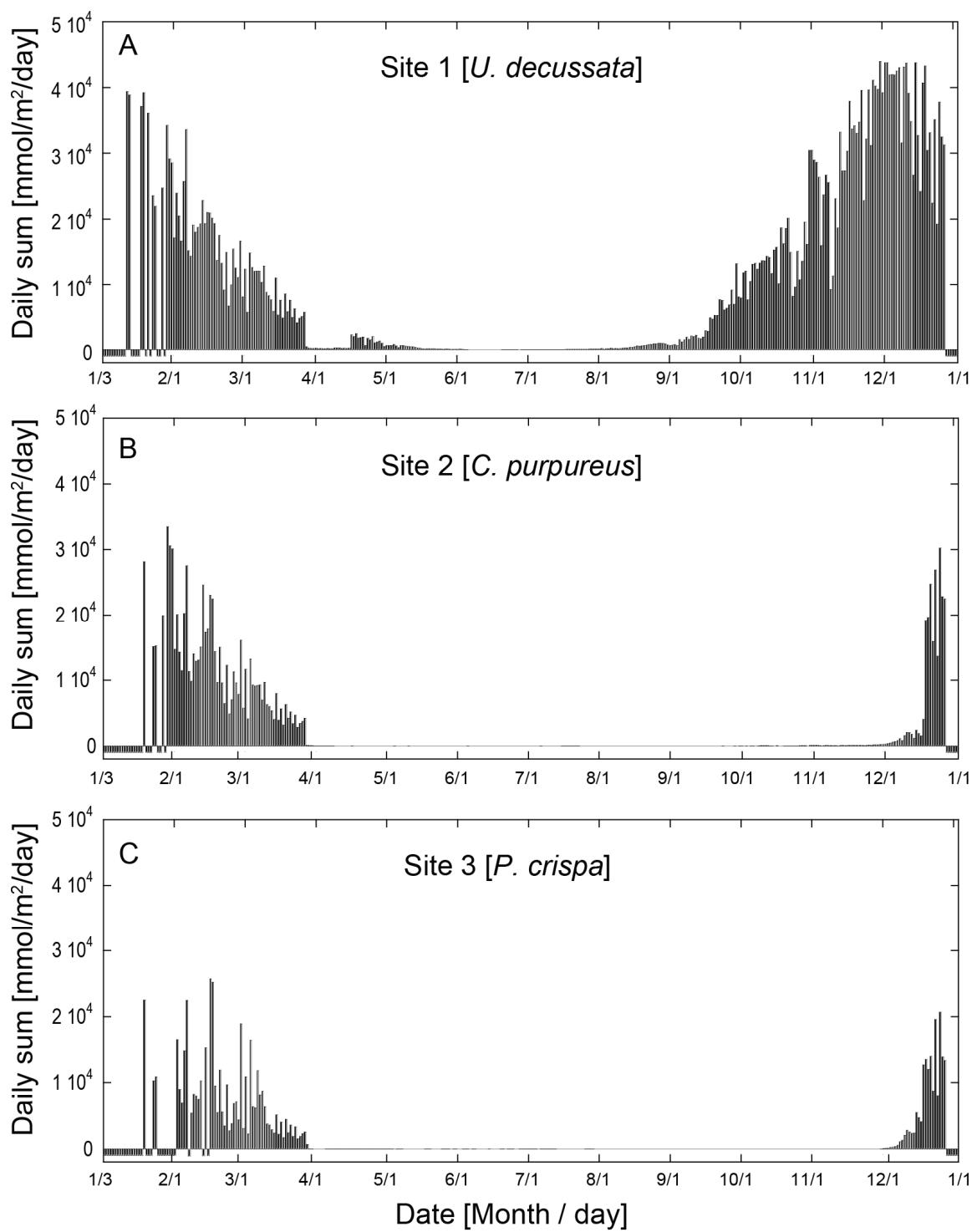


Fig. 6. Seasonal variability in PAR at Site 1 (A), Site 2 (B), and Site 3 (C) during 2013. Daily total values were calculated from data collected at 10 min intervals. Missing values are indicated by a value of -1000.

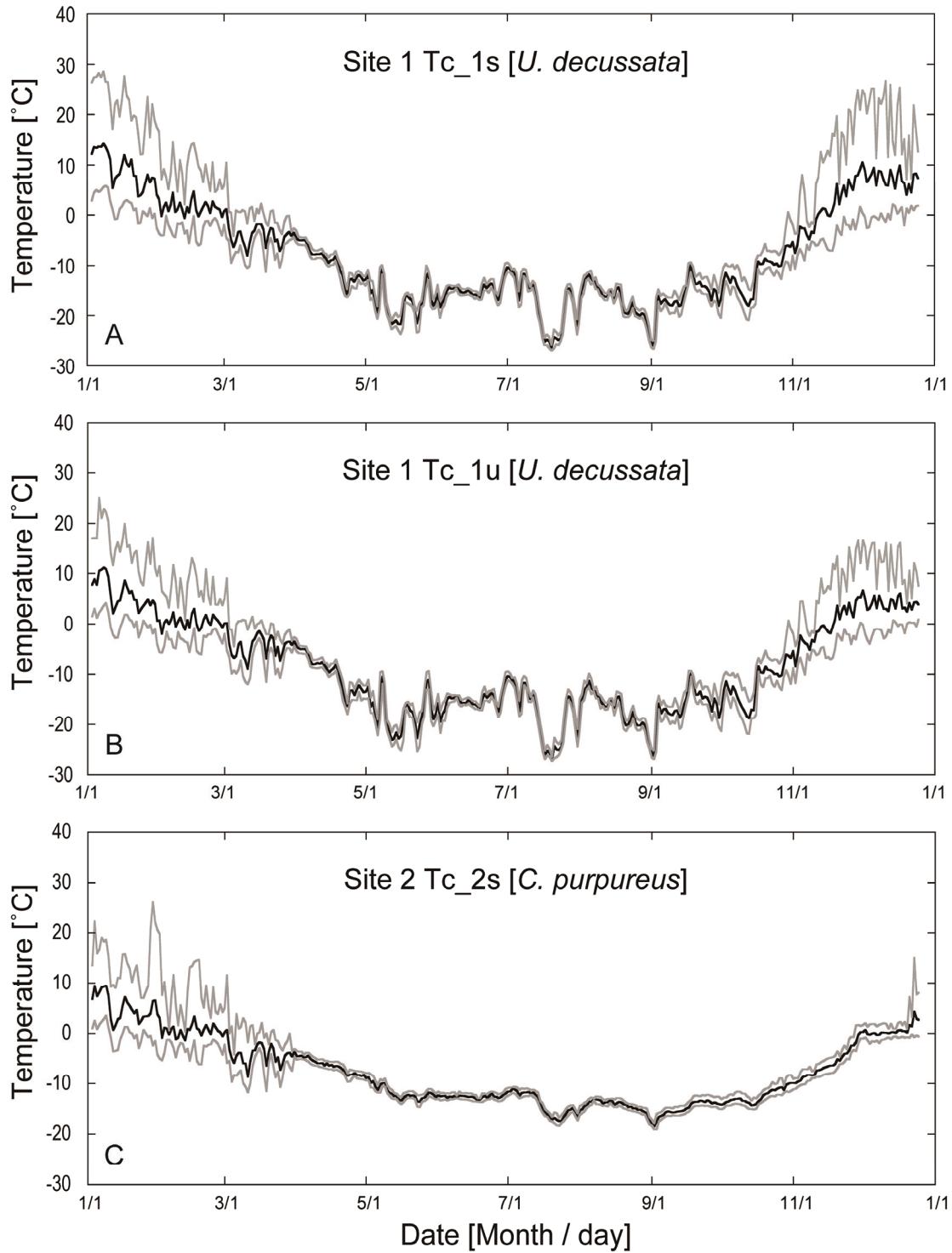


Fig. 7. Seasonal temperature variability measured by thermocouples at Site 1 (A, B), Site 2 (C, D), Site 3 (E, F), Site 4 (G, H), Site 5 (I, J), and Site 6 (K) during 2013. Daily average, maximum, and minimum values were calculated from data collected at 10 min intervals. Graphs A, C, E, G, and I show the surface temperature of the moss colony or lichen thallus. Graphs B and F depict the underside temperature of lichen thalli or green algae. Graphs D, H, and J show temperature data from the interiors of moss colonies, while graph K shows temperature data from beneath a quartz stone on which micro algae were growing.

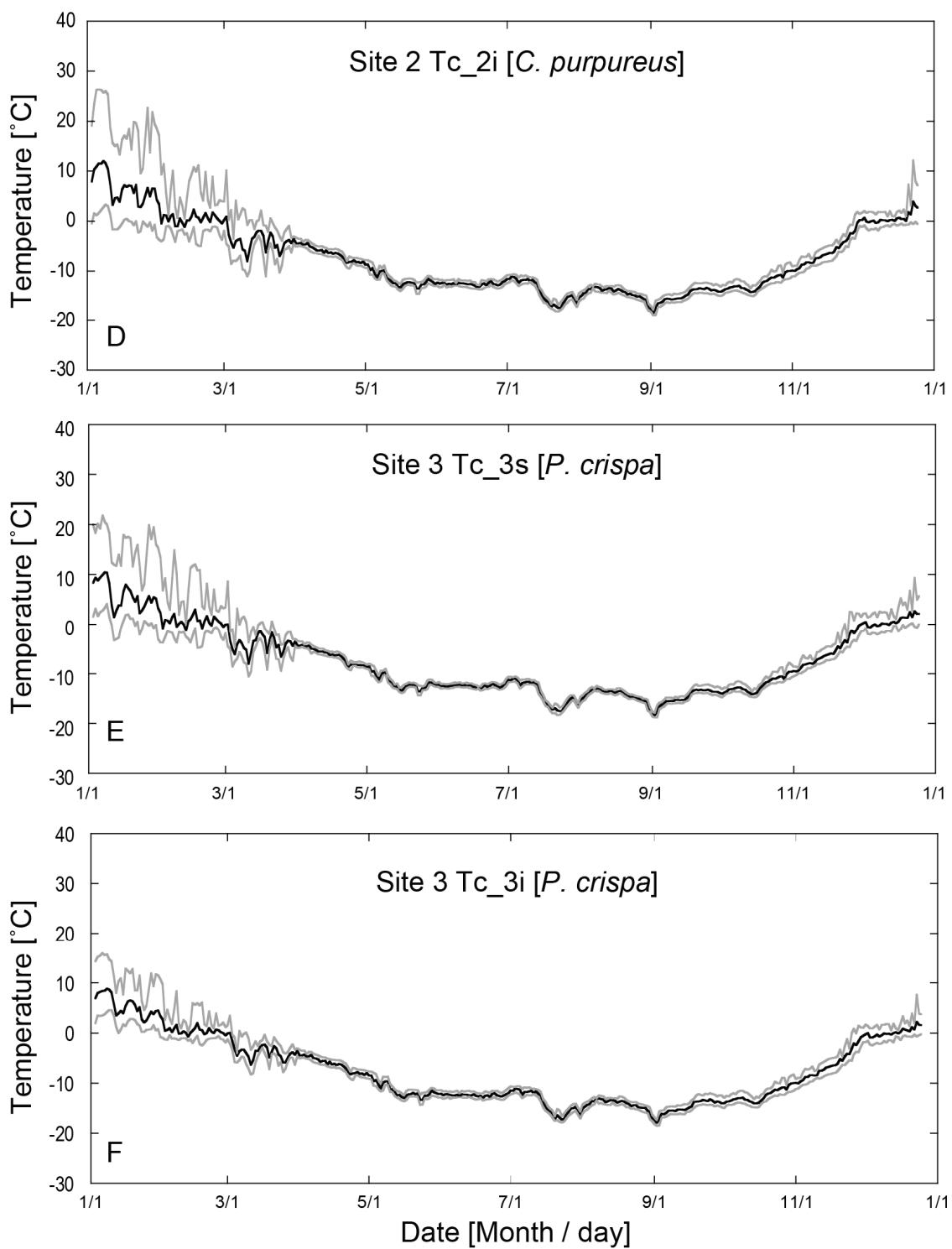


Fig. 7. Continued.

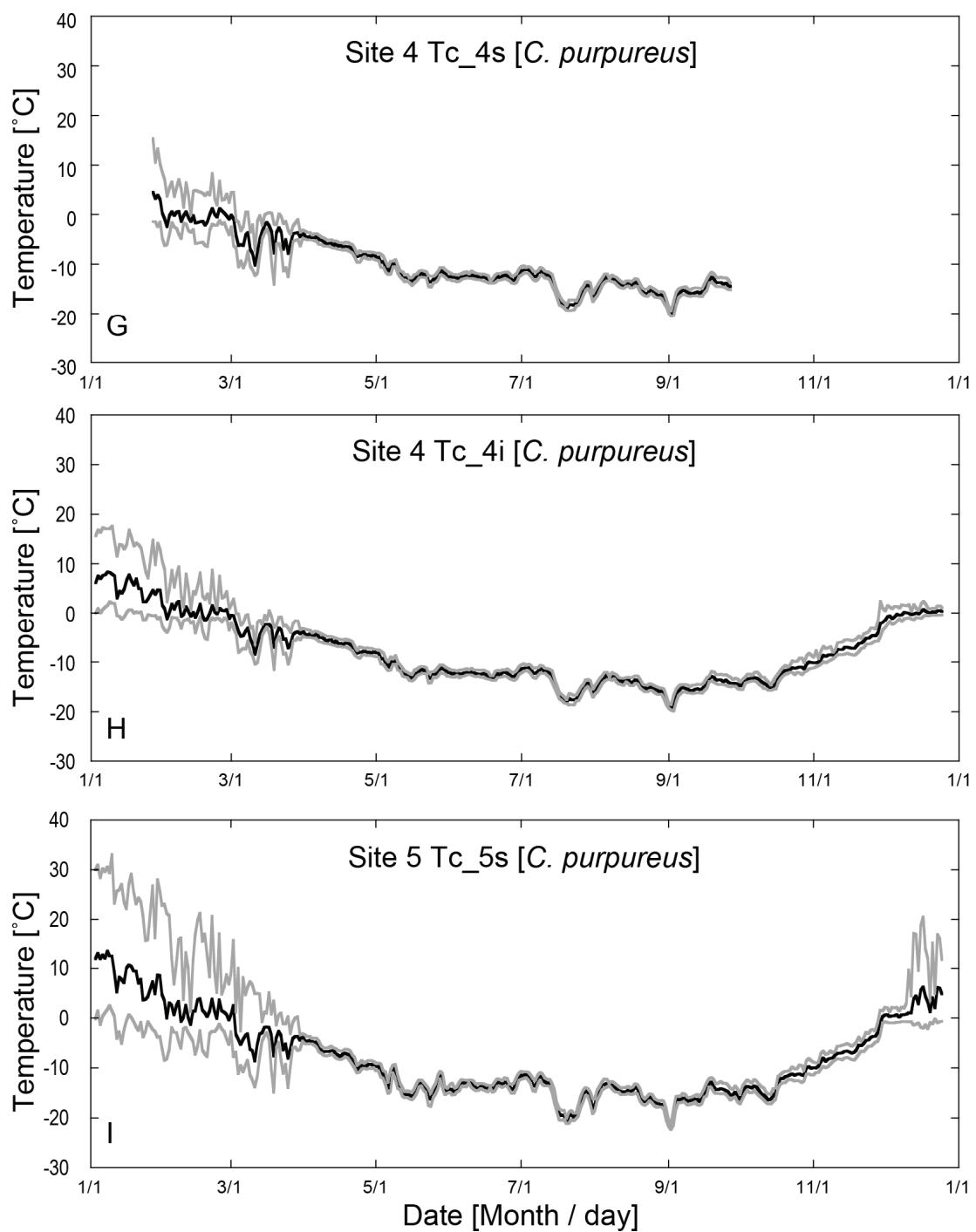


Fig. 7. Continued.

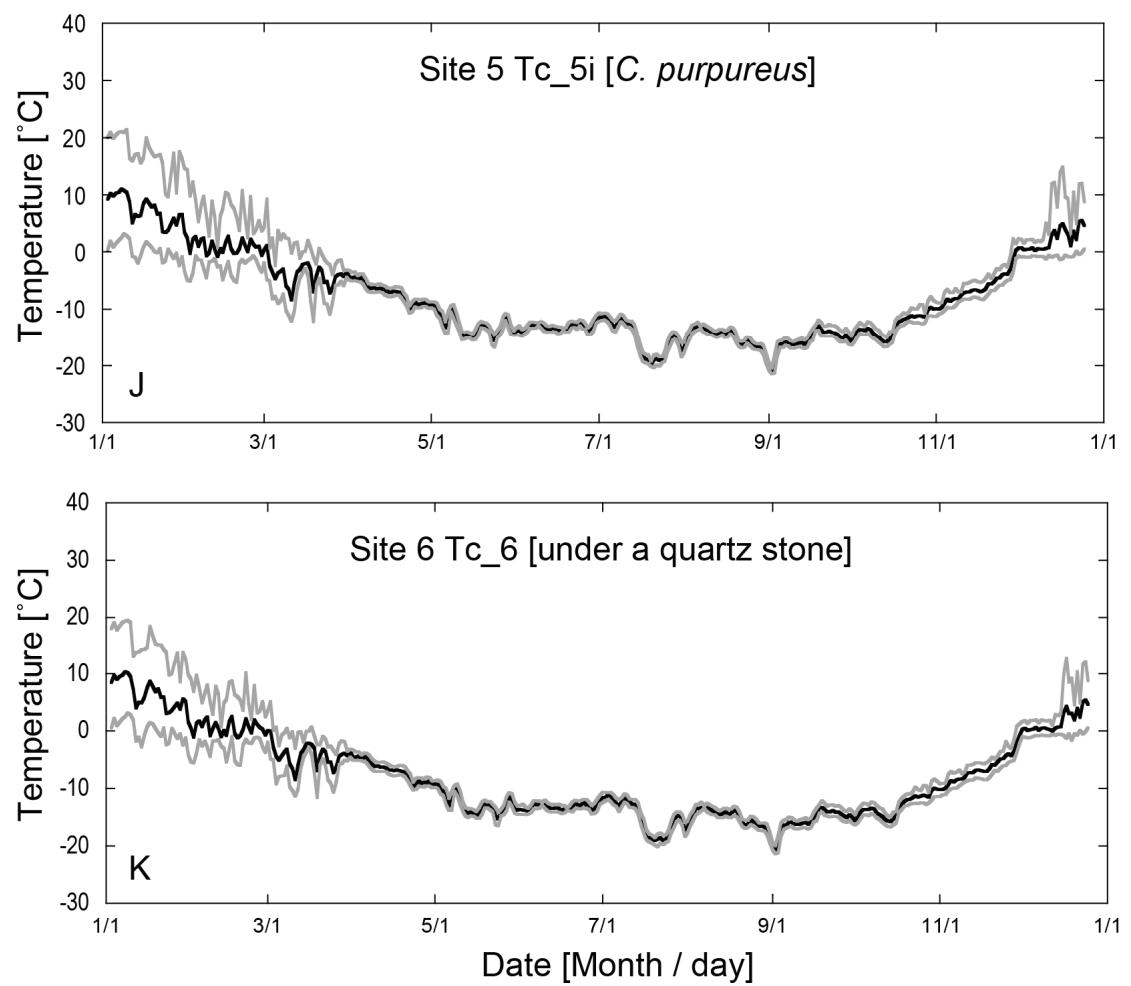


Fig. 7. Continued.

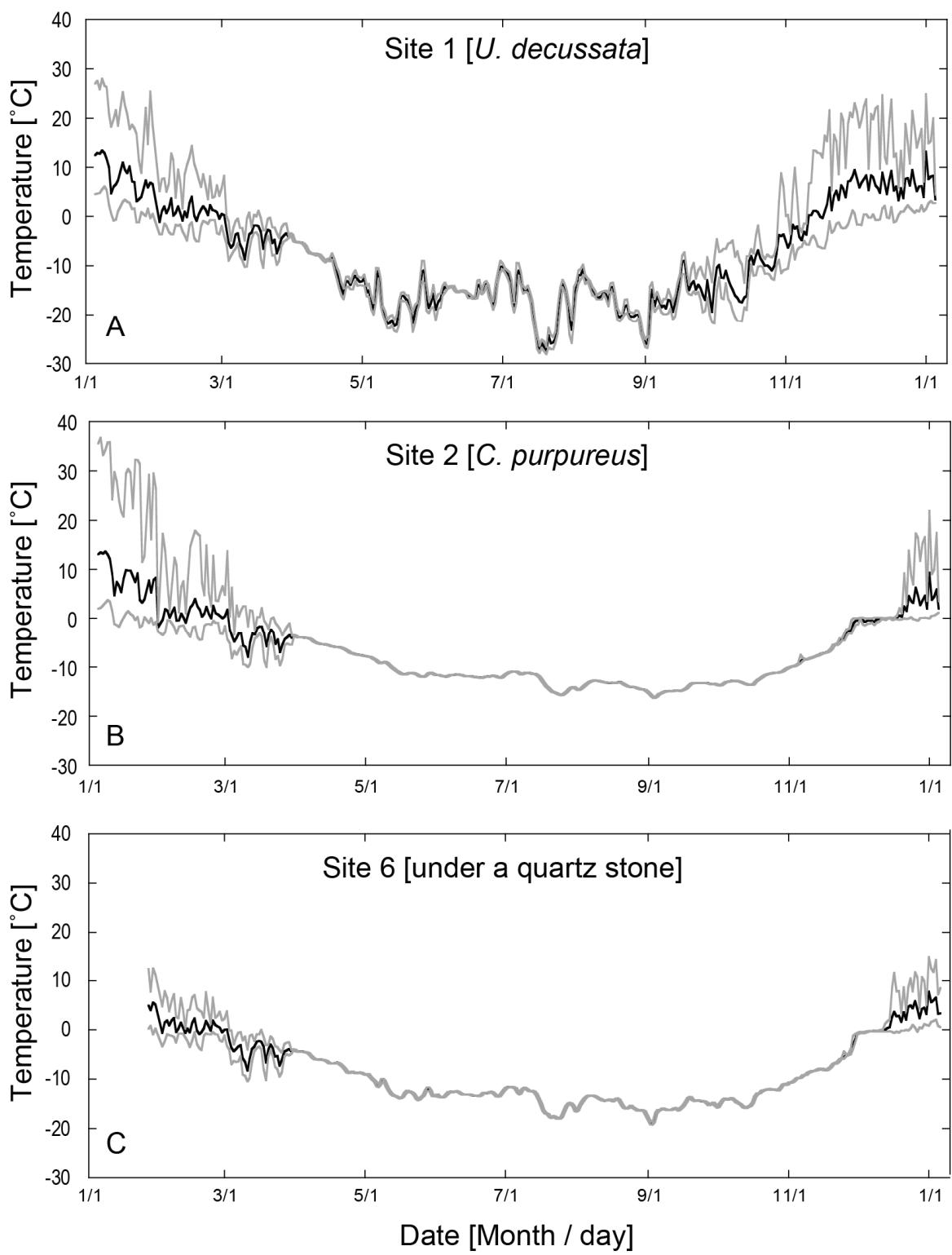


Fig. 8. Seasonal temperature variations beneath a lichen thallus at Site 1 (A), inside a moss colony at Site 2 (B), and beneath a quartz stone at Site 6 (C) measured using mini sensors during 2013. Daily average, maximum, and minimum data were calculated from data collected at 10 min intervals during January, and at 45 min intervals between February and December.

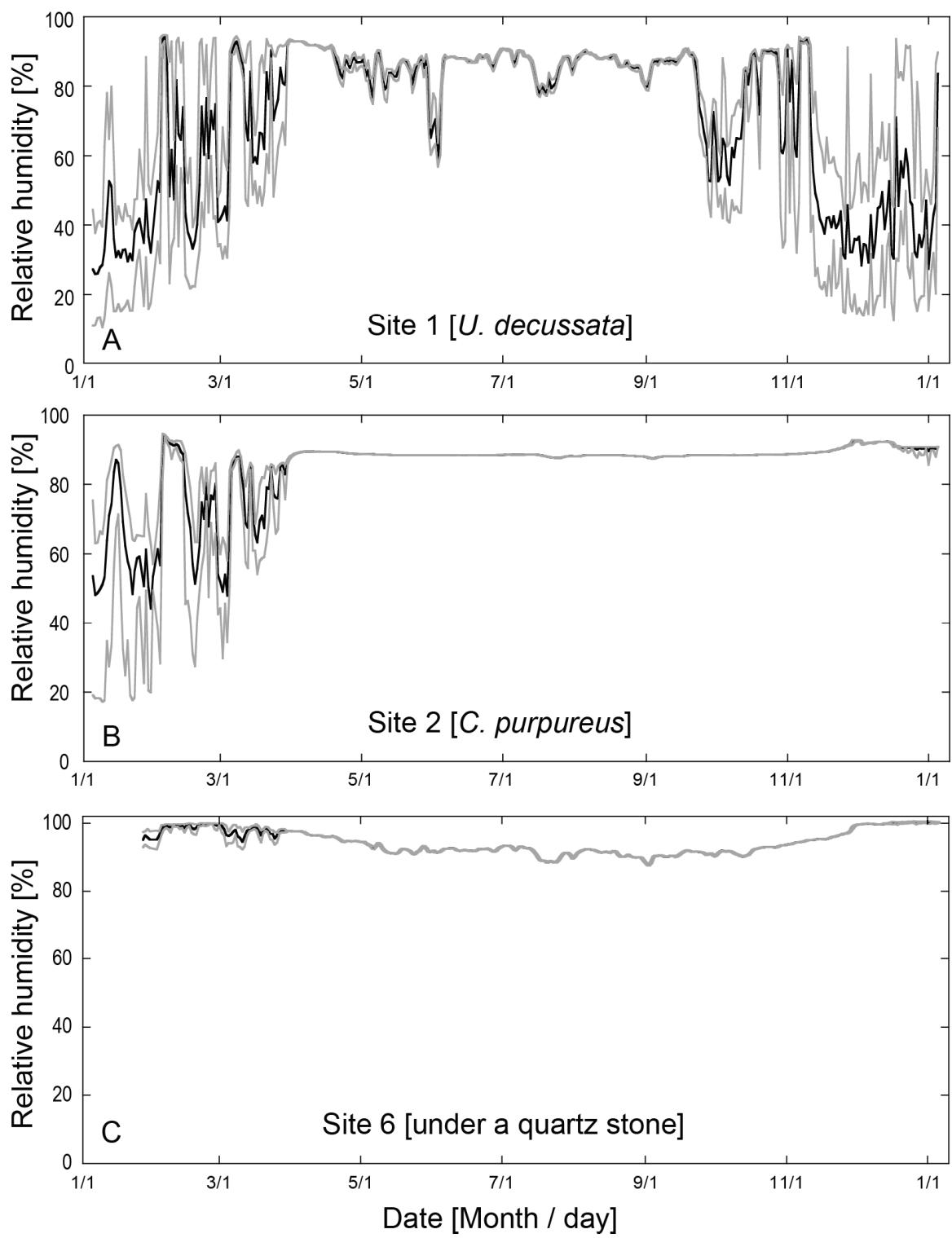


Fig. 9. Seasonal variations in relative humidity beneath a lichen thallus at Site 1 (A), inside a moss colony at Site 2 (B), and beneath a quartz stone at Site 6 (C), measured using mini sensors during 2013. Daily average, maximum, and minimum values were calculated data collected at 10 min intervals during January and at 45 min intervals from February to December.

Table 1. Categories of observed items at each site.

Site No.	Photosynthetic organism	Glowing condition	Set up item		Set up item	
			Air temperature-humidity sensor	PAR sensor	Thermocouple	Mini-temperature-thermometer
1	<i>Umbilicaria decussata</i>	rock surface	<input type="radio"/>	<input type="radio"/>	surface of a thallus under side of a thallus	Tc_1s Tc_1u
2	<i>Ceratodon purpureus</i>	surface of sand gravel	<input type="radio"/>	<input type="radio"/>	surface of colony inner side of colony	Tc_2s Tc_2i
3	<i>Prasiola crispa</i>	surface of sand gravel	<input type="radio"/>	<input type="radio"/>	surface of colony under side of colony	Tc_3s Tc_3u
4	<i>Ceratodon purpureus</i>	surface of sand gravel			surface of colony inner side of colony	Tc_4s Tc_4i
5	<i>Ceratodon purpureus</i> and lichens	surface of sand gravel			surface of colony	Tc_5s
6	algae, cyanobacteria	under a quartz stone			inner side of colony under a quartz stone	Tc_5i Tc_6u

Table 2-1. January 2013 air temperature data (°C) measured at one centimeter above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/1/3	8.2	17.7	1.7		7.7	17.9	0.8		9.1
2013/1/4	9.6	18.2	3.5		8.9	17.3	2.5		10.2
2013/1/5	8.8	19.0	1.9		8.1	18.6	0.8		9.7
2013/1/6	9.6	20.0	2.9		9.0	19.9	1.8		10.4
2013/1/7	9.7	18.6	3.2		9.1	19.5	2.2		10.9
2013/1/8	10.3	20.3	3.9		9.7	19.7	2.9		10.8
2013/1/9	10.1	18.9	4.5		9.5	19.0	3.5		10.9
2013/1/10	8.6	17.6	3.4		8.2	18.6	2.0		9.6
2013/1/11	5.7	12.7	0.4		4.9	13.2	-0.5		5.4
2013/1/12	1.7	8.5	-1.9		1.5	10.8	-2.5		2.9
2013/1/13	2.8	11.9	-2.4		3.1	12.6	-2.9		4.3
2013/1/14	3.6	13.7	-3.2		3.8	14.5	-3.2		5.4
2013/1/15	4.6	13.2	-0.5		3.7	12.9	-1.2		4.1
2013/1/16	6.4	15.3	0.9		5.8	15.0	0.4		6.1
2013/1/17	8.3	19.1	2.1		7.6	18.3	1.3		8.5
2013/1/18	6.9	15.0	2.1		6.4	14.3	1.3		7.5
2013/1/19	6.0	15.0	1.3		5.6	14.4	0.5		6.9
2013/1/20	6.7	12.0	0.7		5.6	10.6	-0.1		5.9
2013/1/21	4.8	12.4	-0.4		4.3	13.6	-1.0		5.3
2013/1/22	4.6	12.2	0.5		4.6	13.6	0.0		5.9
2013/1/23	1.9	10.5	-2.2		1.7	11.5	-2.5		2.6
2013/1/24	2.6	8.3	-1.6		2.3	7.8	-1.7		2.6
2013/1/25	3.3	7.4	0.8		3.1	7.9	0.5		3.4
2013/1/26			*4				*4		*4
2013/1/27	4.9	15.1	-0.7		4.3	15.2	-1.0		4.8
2013/1/28	3.8	10.0	0.1		3.1	9.6	-0.3		3.6
2013/1/29	4.4	15.0	-1.9		4.0	14.3	-1.9		4.4
2013/1/30	3.7	10.8	-1.2		3.6	11.0	-1.6		4.2
2013/1/31	0.6	9.4	-4.0		0.7	9.2	-4.0		2.1
<i>Monthly</i>	5.8	20.3	-4.0 *4		5.4	19.9	-4.0 *4		6.3
									22.2 -2.5 *4

Table 2-2. February 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/2/1	-0.7	8.1	-6.1	-0.1	8.3	-5.1	1.2	9.8	-3.7
2013/2/2	-2.7	2.7	-6.0	-2.3	4.6	-5.3	-1.3	4.9	-3.7
2013/2/3	-0.3	4.6	-4.8	-0.3	5.1	-3.8	0.2	6.2	-2.2
2013/2/4	1.0	4.8	-1.4	0.7	4.1	-1.1	0.5	3.1	-0.8
2013/2/5	-0.3	1.9	-2.6	-0.3	1.1	-1.9	-0.1	1.7	-1.4
2013/2/6	0.3	4.6	-3.7	0.1	4.1	-2.7	0.8	6.0	-1.5
2013/2/7	0.9	8.8	-4.8	0.5	8.2	-3.9	0.9	10.8	-2.6
2013/2/8	-1.1	5.9	-4.9	-1.4	6.3	-4.4	-0.7	7.1	-3.3
2013/2/9	0.1	2.7	-1.8	-0.3	1.6	-1.9	-0.2	1.2	-1.5
2013/2/10	0.8	6.0	-2.2	0.2	4.4	-2.0	0.3	3.2	-1.3
2013/2/11	-0.1	4.7	-2.1	-0.4	4.2	-2.3	-0.2	3.1	-1.1
2013/2/12	-1.2	0.3	-3.4	-1.5	-0.2	-3.2	-1.4	-0.6	-2.6
2013/2/13	0.2	5.0	-4.2	-0.2	3.9	-3.9	0.1	5.4	-2.6
2013/2/14	-1.9	6.9	-6.2	-1.3	6.2	-5.1	0.3	8.5	-3.6
2013/2/15	1.3	7.9	-3.7	0.8	7.8	-3.6	1.5	9.6	-1.9
2013/2/16	2.5	8.2	-0.6	2.0	8.3	-1.3	2.4	9.7	-0.7
2013/2/17	-1.1	6.9	-5.4	-0.9	6.2	-5.1	0.3	8.9	-4.5
2013/2/18	-2.3	4.2	-5.9	-1.7	4.8	-5.5	0.1	8.2	-4.6
2013/2/19	-1.3	4.3	-6.2	-1.6	3.2	-5.6	-1.2	1.7	-4.1
2013/2/20	0.6	3.8	-2.2	0.2	2.8	-2.1	0.3	2.1	-1.8
2013/2/21	1.2	7.0	-1.8	0.8	6.9	-1.9	1.2	7.0	-1.0
2013/2/22	0.3	4.7	-1.8	-0.1	3.4	-2.0	0.0	2.3	-1.3
2013/2/23	-0.2	3.1	-2.1	-0.5	2.1	-2.0	-0.2	1.4	-1.3
2013/2/24	1.6	6.0	-0.7	1.2	5.6	-0.8	1.2	5.8	-0.4
2013/2/25	1.0	3.3	-1.3	0.7	2.8	-1.4	1.0	2.6	-0.3
2013/2/26	0.5	3.0	-1.6	0.2	2.4	-1.6	0.4	1.7	-0.9
2013/2/27	-0.1	4.5	-3.2	-0.4	3.2	-3.1	0.0	2.8	-2.3
2013/2/28	-0.9	2.9	-3.9	-1.0	2.5	-3.7	-0.7	2.6	-3.0
<i>Monthly</i>	-0.1	8.8	-6.2	-0.3	8.3	-5.6	0.2	10.8	-4.6

Table 2-3. March 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/3/1	0.0	3.7	-1.8	-0.3	3.0	-1.9	-0.2	2.2	-1.5
2013/3/2	-0.9	4.5	-5.6	-1.2	3.0	-5.5	-0.1	7.7	-4.1
2013/3/3	-4.0	-1.7	-6.0	-3.7	-1.8	-5.4	-3.7	-2.1	-5.1
2013/3/4	-6.7	-3.9	-10.0	-6.0	-3.3	-9.5	-5.4	-1.8	-8.5
2013/3/5	-7.0	-5.1	-8.8	-5.8	-4.0	-8.2	-6.1	-5.2	-7.6
2013/3/6	-6.2	-1.0	-8.3	-5.1	-1.7	-7.9	-4.0	3.1	-6.5
2013/3/7	-4.1	0.1	-7.6	-3.8	-0.3	-7.5	-3.5	-1.1	-5.4
2013/3/8	-3.9	0.6	-7.1	-3.4	0.1	-6.2	-4.0	-0.2	-6.1
2013/3/9	-6.6	-0.6	-9.5	-6.2	-3.8	-8.8	-4.9	2.7	-7.9
2013/3/10	-7.2	-1.4	-10.5	-7.2	-2.8	-9.5	-5.4	-0.4	-8.3
2013/3/11	-9.8	-5.4	-12.9	-9.4	-7.6	-11.0	-8.3	-4.1	-10.4
2013/3/12	-6.6	-1.7	-11.0	-6.6	-2.2	-10.0	-6.0	-2.7	-9.3
2013/3/13	-3.6	0.1	-6.7	-3.9	-0.5	-6.6	-3.6	-1.5	-5.6
2013/3/14	-2.7	-1.0	-4.2	-3.6	-2.6	-4.6	-3.1	-2.0	-4.3
2013/3/15	-1.9	-0.3	-3.0	-2.5	-1.0	-3.8	-2.2	-1.0	-3.0
2013/3/16	-1.6	-0.1	-2.7	-1.8	-0.4	-2.9	-1.5	-0.3	-2.5
2013/3/17	-2.2	0.5	-3.9	-2.4	0.0	-3.9	-2.1	-0.1	-3.4
2013/3/18	-3.4	-1.4	-8.5	-3.4	-1.6	-7.6	-2.8	-1.6	-5.7
2013/3/19	-7.5	-2.6	-12.4	-7.1	-2.9	-11.1	-6.0	-2.5	-9.0
2013/3/20	-3.7	-2.6	-5.2	-3.8	-2.8	-5.3	-3.6	-2.7	-4.9
2013/3/21	-2.2	0.1	-3.5	-2.5	-0.5	-3.9	-1.8	0.3	-3.1
2013/3/22	-3.1	-0.6	-5.9	-3.5	-1.1	-6.0	-2.8	-1.4	-4.2
2013/3/23	-5.6	-2.1	-8.4	-5.8	-2.7	-8.5	-4.8	-2.4	-7.0
2013/3/24	-4.6	-2.1	-7.8	-4.8	-2.4	-8.0	-4.3	-2.6	-6.7
2013/3/25	-7.9	-4.3	-11.9	-7.6	-4.4	-10.8	-6.7	-4.0	-9.3
2013/3/26	-5.9	-4.4	-8.7	-5.9	-4.4	-8.4	-5.6	-4.3	-7.4
2013/3/27	-4.0	-2.3	-5.3	-4.5	-3.0	-5.6	-4.1	-2.9	-5.2
2013/3/28	-3.5	-1.6	-4.9	-4.0	-2.4	-5.2	-3.5	-2.3	-4.2
2013/3/29	-3.4	-1.3	-5.0	-3.9	-2.1	-5.8	-3.7	-1.8	-6.4
2013/3/30	-3.9	-3.2	-5.8	-4.3	-3.7	-6.2	-4.4	-3.5	-7.3
2013/3/31	-3.1	-2.7	-3.7	-3.6	-3.5	-3.7	-3.5	-3.5	-3.8
<i>Monthly</i>	-4.4	4.5	-12.9	-4.4	3.0	-11.1	-3.9	7.7	-10.4

Table 2-4. April 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/4/1	-4.6	-3.7	-4.9	-4.1	-3.7	-4.2	-4.1	-3.7	-4.3
2013/4/2	-4.9	-4.7	-5.0	-4.2	-4.1	-4.2	-4.1	-4.1	-4.2
2013/4/3	-4.9	-4.8	-5.0	-4.2	-4.1	-4.2	-4.1	-4.1	-4.1
2013/4/4	-5.0	-5.0	-5.1	-4.2	-4.1	-4.2	-4.1	-4.1	-4.2
2013/4/5	-5.2	-5.0	-5.4	-4.2	-4.2	-4.3	-4.2	-4.1	-4.2
2013/4/6	-5.7	-5.4	-6.4	-4.4	-4.3	-4.5	-4.2	-4.2	-4.3
2013/4/7	-7.2	-6.4	-7.6	-4.6	-4.4	-4.9	-4.4	-4.2	-4.5
2013/4/8	-7.6	-7.2	-8.1	-5.1	-4.9	-5.3	-4.6	-4.5	-4.8
2013/4/9	-7.7	-7.4	-8.1	-5.4	-5.3	-5.6	-4.9	-4.7	-5.0
2013/4/10	-7.7	-7.4	-7.9	-5.6	-5.6	-5.7	-5.1	-5.0	-5.2
2013/4/11	-7.6	-7.4	-8.0	-5.7	-5.7	-5.8	-5.3	-5.2	-5.4
2013/4/12	-7.6	-7.2	-8.1	-5.8	-5.7	-5.8	-5.4	-5.3	-5.4
2013/4/13	-8.2	-7.8	-9.1	-5.8	-5.7	-5.8	-5.5	-5.4	-5.5
2013/4/14	-9.1	-8.4	-9.9	-5.8	-5.8	-5.9	-5.6	-5.5	-5.7
2013/4/15	-10.1	-9.0	-10.9	-6.0	-5.9	-6.1	-5.7	-5.6	-5.8
2013/4/16	-8.9	-8.5	-9.3	-6.2	-6.1	-6.3	-5.9	-5.8	-6.0
2013/4/17	-9.1	-8.4	-9.8	-6.3	-6.2	-6.3	-6.0	-6.0	-6.1
2013/4/18	-7.8	-6.6	-8.9	-6.3	-6.3	-6.4	-6.1	-6.1	-6.2
2013/4/19	-9.8	-8.2	-12.2	-6.3	-6.3	-6.3	-6.1	-6.1	-6.2
2013/4/20	-13.3	-11.2	-15.7	-6.3	-6.2	-6.4	-6.2	-6.1	-6.4
2013/4/21	-14.2	-11.5	-18.4	-6.5	-6.4	-6.7	-6.5	-6.3	-6.7
2013/4/22	-16.7	-13.7	-19.8	-6.8	-6.7	-7.0	-6.8	-6.5	-7.0
2013/4/23	-18.6	-16.5	-20.9	-7.2	-7.0	-7.4	-7.2	-7.0	-7.5
2013/4/24	-13.4	-11.7	-16.3	-7.6	-7.4	-7.7	-7.7	-7.5	-8.0
2013/4/25	-14.2	-12.0	-16.3	-7.7	-7.7	-7.8	-7.9	-7.8	-8.0
2013/4/26	-14.5	-13.5	-15.5	-7.8	-7.7	-7.9	-8.0	-7.9	-8.1
2013/4/27	-11.9	-10.3	-16.3	-7.9	-7.8	-8.0	-8.2	-8.1	-8.2
2013/4/28	-11.2	-8.9	-13.0	-8.0	-8.0	-8.1	-8.2	-8.1	-8.3
2013/4/29	-12.9	-11.3	-15.3	-8.0	-8.0	-8.1	-8.1	-8.1	-8.2
2013/4/30	-14.0	-11.9	-15.7	-8.1	-8.0	-8.2	-8.2	-8.1	-8.3
<i>Monthly</i>	-9.8	-3.7	-20.9	-6.1	-3.7	-8.2	-6.0	-3.7	-8.3

Table 2-5. May 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/5/1	-13.7	-11.8	-14.9	-8.2	-8.1	-8.3	-8.3	-8.2	-8.4
2013/5/2	-12.7	-11.3	-16.5	-8.3	-8.3	-8.4	-8.4	-8.3	-8.5
2013/5/3	-18.6	-16.2	-20.1	-8.4	-8.3	-8.5	-8.5	-8.4	-8.6
2013/5/4	-16.3	-13.4	-20.2	-8.7	-8.5	-9.0	-8.8	-8.6	-9.0
2013/5/5	-20.5	-18.4	-23.2	-9.0	-8.9	-9.2	-9.1	-8.9	-9.3
2013/5/6	-23.8	-18.8	-25.6	-9.4	-9.2	-9.7	-9.5	-9.2	-9.9
2013/5/7	-11.9	-8.7	-18.9	-9.9	-9.7	-10.1	-10.1	-9.7	-10.2
2013/5/8	-9.3	-8.3	-10.9	-9.8	-9.6	-10.1	-9.9	-9.6	-10.1
2013/5/9	-17.0	-11.1	-20.8	-9.4	-9.3	-9.6	-9.5	-9.5	-9.6
2013/5/10	-21.2	-19.2	-22.1	-9.6	-9.4	-9.9	-9.7	-9.5	-10.0
2013/5/11	-22.2	-20.5	-23.6	-10.1	-9.8	-10.4	-10.2	-9.9	-10.5
2013/5/12	-23.7	-21.8	-25.2	-10.6	-10.4	-10.9	-10.8	-10.5	-11.0
2013/5/13	-22.7	-19.8	-24.8	-11.1	-10.9	-11.3	-11.3	-11.0	-11.6
2013/5/14	-21.5	-19.2	-23.5	-11.5	-11.3	-11.6	-11.8	-11.6	-11.9
2013/5/15	-22.9	-21.1	-25.0	-11.7	-11.6	-11.9	-12.1	-11.9	-12.2
2013/5/16	-22.5	-20.1	-25.9	-12.0	-11.9	-12.2	-12.4	-12.2	-12.6
2013/5/17	-19.5	-16.4	-23.4	-12.3	-12.2	-12.3	-12.6	-12.6	-12.7
2013/5/18	-15.3	-14.7	-16.5	-12.2	-12.1	-12.3	-12.5	-12.4	-12.7
2013/5/19	-15.9	-14.0	-18.1	-11.9	-11.8	-12.1	-12.2	-12.1	-12.4
2013/5/20	-17.3	-15.8	-18.4	-11.7	-11.7	-11.8	-12.0	-11.9	-12.1
2013/5/21	-18.2	-15.8	-19.7	-11.8	-11.7	-11.8	-11.9	-11.8	-12.0
2013/5/22	-19.7	-18.5	-22.2	-11.8	-11.8	-12.0	-12.0	-11.9	-12.1
2013/5/23	-24.8	-20.8	-27.8	-12.1	-11.9	-12.2	-12.2	-12.0	-12.4
2013/5/24	-20.3	-17.6	-27.2	-12.5	-12.2	-12.7	-12.6	-12.3	-12.8
2013/5/25	-18.5	-17.2	-21.0	-12.7	-12.6	-12.7	-12.8	-12.8	-12.9
2013/5/26	-15.7	-12.7	-17.9	-12.6	-12.5	-12.7	-12.8	-12.8	-12.9
2013/5/27	-10.6	-7.9	-12.7	-12.4	-12.1	-12.5	-12.5	-12.2	-12.8
2013/5/28	-10.0	-8.1	-13.2	-11.9	-11.6	-12.1	-11.9	-11.6	-12.3
2013/5/29	-17.0	-13.0	-20.2	-11.5	-11.4	-11.6	-11.5	-11.4	-11.6
2013/5/30	-19.3	-17.0	-21.0	-11.7	-11.4	-12.0	-11.6	-11.5	-11.9
2013/5/31	-17.7	-15.9	-19.3	-12.1	-11.9	-12.2	-12.0	-11.8	-12.1
<i>Monthly</i>	-18.1	-7.9	-27.8	-10.9	-8.1	-12.7	-11.1	-8.2	-12.9

Table 2-6. June 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/6/1	-15.4	-13.1	-18.0	-12.2	-12.1	-12.3	-12.1	-12.1	-12.2
2013/6/2	-19.5	-16.8	-22.7	-12.2	-12.1	-12.3	-12.2	-12.1	-12.3
2013/6/3	-17.1	-15.2	-18.5	-12.4	-12.2	-12.5	-12.4	-12.3	-12.5
2013/6/4	-16.6	-15.2	-18.9	-12.5	-12.4	-12.6	-12.5	-12.4	-12.5
2013/6/5	-14.5	-13.4	-15.8	-12.4	-12.3	-12.6	-12.5	-12.4	-12.5
2013/6/6	-14.2	-13.1	-16.0	-12.2	-12.1	-12.4	-12.3	-12.2	-12.5
2013/6/7	-14.8	-14.4	-15.0	-12.1	-12.0	-12.1	-12.1	-12.0	-12.2
2013/6/8	-14.3	-14.1	-14.6	-12.0	-12.0	-12.1	-12.0	-11.9	-12.1
2013/6/9	-14.1	-14.0	-14.3	-12.0	-12.0	-12.1	-11.9	-11.8	-12.0
2013/6/10	-14.8	-14.0	-15.6	-12.0	-11.9	-12.0	-11.8	-11.8	-11.9
2013/6/11	-15.9	-15.6	-16.2	-12.0	-11.9	-12.2	-11.9	-11.8	-11.9
2013/6/12	-15.7	-15.4	-15.9	-12.2	-12.1	-12.4	-12.0	-11.9	-12.0
2013/6/13	-15.4	-15.1	-15.6	-12.4	-12.3	-12.5	-12.1	-12.0	-12.1
2013/6/14	-15.2	-14.9	-15.6	-12.4	-12.4	-12.5	-12.1	-12.1	-12.2
2013/6/15	-15.4	-15.1	-15.8	-12.4	-12.4	-12.5	-12.1	-12.1	-12.2
2013/6/16	-16.4	-15.8	-16.7	-12.5	-12.4	-12.5	-12.2	-12.2	-12.3
2013/6/17	-16.1	-15.7	-16.7	-12.6	-12.5	-12.7	-12.4	-12.3	-12.4
2013/6/18	-16.6	-16.3	-16.8	-12.7	-12.6	-12.7	-12.5	-12.4	-12.5
2013/6/19	-16.5	-16.2	-16.9	-12.7	-12.7	-12.8	-12.6	-12.5	-12.7
2013/6/20	-14.1	-12.8	-16.8	-12.8	-12.7	-12.8	-12.7	-12.6	-12.8
2013/6/21	-13.5	-12.5	-14.9	-12.6	-12.5	-12.8	-12.5	-12.4	-12.7
2013/6/22	-15.3	-14.9	-15.5	-12.4	-12.3	-12.5	-12.3	-12.2	-12.4
2013/6/23	-14.1	-13.3	-15.1	-12.4	-12.3	-12.4	-12.3	-12.2	-12.3
2013/6/24	-13.1	-12.8	-13.7	-12.3	-12.2	-12.4	-12.2	-12.1	-12.3
2013/6/25	-15.1	-13.6	-16.1	-12.2	-12.1	-12.3	-12.0	-12.0	-12.1
2013/6/26	-16.8	-16.0	-17.7	-12.2	-12.2	-12.3	-12.0	-12.0	-12.2
2013/6/27	-18.2	-17.0	-19.3	-12.4	-12.3	-12.6	-12.3	-12.1	-12.5
2013/6/28	-15.3	-13.2	-17.4	-12.7	-12.5	-12.8	-12.6	-12.5	-12.7
2013/6/29	-11.4	-10.6	-13.3	-12.6	-12.5	-12.8	-12.5	-12.2	-12.7
2013/6/30	-9.7	-8.2	-10.9	-12.3	-12.0	-12.5	-11.9	-11.4	-12.2
<i>Monthly</i>	-15.2	-8.2	-22.7	-12.4	-11.9	-12.8	-12.2	-11.4	-12.8

Table 2-7. July 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/7/1	-9.9	-8.7	-10.6	-11.8	-11.6	-12.0	-11.2	-11.0	-11.4
2013/7/2	-10.7	-10.2	-11.4	-11.5	-11.4	-11.6	-10.9	-10.9	-11.0
2013/7/3	-11.3	-10.6	-12.3	-11.3	-11.3	-11.4	-10.9	-10.8	-10.9
2013/7/4	-11.9	-10.9	-13.7	-11.3	-11.2	-11.3	-10.8	-10.8	-10.9
2013/7/5	-14.9	-13.1	-18.1	-11.2	-11.2	-11.3	-10.9	-10.8	-11.0
2013/7/6	-19.4	-17.8	-20.5	-11.4	-11.3	-11.7	-11.2	-11.0	-11.5
2013/7/7	-12.8	-8.6	-17.8	-11.9	-11.7	-12.1	-11.8	-11.5	-12.1
2013/7/8	-10.6	-8.7	-11.9	-11.9	-11.7	-12.1	-11.9	-11.6	-12.1
2013/7/9	-11.8	-10.8	-13.5	-11.6	-11.5	-11.7	-11.5	-11.3	-11.7
2013/7/10	-15.3	-13.6	-16.4	-11.4	-11.4	-11.5	-11.3	-11.2	-11.4
2013/7/11	-15.2	-14.7	-16.2	-11.6	-11.5	-11.7	-11.4	-11.3	-11.6
2013/7/12	-14.4	-13.7	-15.5	-11.8	-11.7	-11.8	-11.6	-11.5	-11.7
2013/7/13	-16.6	-15.5	-17.7	-11.8	-11.8	-11.9	-11.7	-11.7	-11.8
2013/7/14	-20.0	-17.6	-22.3	-12.0	-11.8	-12.1	-11.9	-11.8	-12.1
2013/7/15	-23.7	-22.1	-25.2	-12.4	-12.1	-12.7	-12.4	-12.1	-12.7
2013/7/16	-26.9	-25.0	-28.6	-13.0	-12.7	-13.4	-13.1	-12.7	-13.5
2013/7/17	-28.9	-27.6	-29.7	-13.8	-13.4	-14.3	-13.9	-13.5	-14.4
2013/7/18	-26.6	-25.6	-27.9	-14.6	-14.2	-15.0	-14.8	-14.4	-15.2
2013/7/19	-27.6	-25.8	-28.7	-15.1	-14.9	-15.3	-15.4	-15.1	-15.7
2013/7/20	-28.8	-27.1	-29.5	-15.5	-15.2	-15.7	-15.9	-15.5	-16.1
2013/7/21	-24.3	-22.2	-27.4	-15.9	-15.7	-16.1	-16.3	-16.1	-16.5
2013/7/22	-26.7	-24.4	-28.5	-16.1	-16.0	-16.1	-16.4	-16.4	-16.5
2013/7/23	-26.3	-24.0	-28.4	-16.2	-16.0	-16.4	-16.6	-16.5	-16.7
2013/7/24	-25.6	-23.6	-26.5	-16.4	-16.3	-16.6	-16.8	-16.7	-16.8
2013/7/25	-20.6	-17.8	-24.2	-16.5	-16.5	-16.6	-16.8	-16.8	-16.9
2013/7/26	-15.8	-13.3	-18.5	-16.3	-16.0	-16.5	-16.6	-16.3	-16.8
2013/7/27	-12.7	-11.8	-14.0	-15.6	-15.3	-16.0	-15.9	-15.4	-16.3
2013/7/28	-14.2	-13.3	-15.7	-15.0	-14.7	-15.3	-15.0	-14.7	-15.5
2013/7/29	-16.7	-15.1	-18.6	-14.6	-14.5	-14.7	-14.5	-14.3	-14.7
2013/7/30			*1			*1			*1
2013/7/31	-24.3	-21.3	-27.7	-14.8	-14.5	-15.1	-14.6	-14.4	-14.9
<i>Monthly</i>	-18.8	-8.6	-29.7 *1	-13.5	-11.2	-16.6 *1	-13.5	-10.8	-16.9 *1

Table 2-8. August 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/8/1	-17.4	-13.6	-21.5	-15.3	-15.1	-15.4	-15.2	-14.9	-15.4
2013/8/2	-13.5	-12.3	-16.0	-15.2	-14.9	-15.4	-15.2	-14.9	-15.4
2013/8/3	-11.1	-9.8	-13.2	-14.6	-14.4	-14.9	-14.7	-14.3	-15.0
2013/8/4	-11.3	-10.3	-12.6	-14.1	-13.9	-14.4	-14.0	-13.7	-14.4
2013/8/5	-9.6	-8.7	-11.0	-13.7	-13.5	-13.9	-13.4	-13.1	-13.8
2013/8/6	-12.6	-11.1	-14.3	-13.3	-13.2	-13.5	-13.0	-12.8	-13.2
2013/8/7	-12.6	-12.2	-13.0	-13.1	-13.0	-13.2	-12.8	-12.8	-12.9
2013/8/8	-13.9	-12.9	-15.1	-13.1	-13.0	-13.2	-12.7	-12.7	-12.8
2013/8/9	-14.4	-14.1	-15.7	-13.1	-13.0	-13.2	-12.8	-12.7	-12.9
2013/8/10	-15.6	-14.7	-17.0	-13.2	-13.1	-13.3	-12.9	-12.8	-13.1
2013/8/11	-16.4	-15.8	-17.1	-13.4	-13.3	-13.4	-13.1	-13.1	-13.2
2013/8/12	-16.6	-16.0	-17.2	-13.5	-13.4	-13.6	-13.3	-13.2	-13.4
2013/8/13	-16.2	-15.1	-17.3	-13.6	-13.6	-13.7	-13.5	-13.4	-13.6
2013/8/14	-15.4	-14.9	-15.8	-13.7	-13.6	-13.7	-13.6	-13.5	-13.6
2013/8/15	-15.6	-14.7	-16.5	-13.6	-13.6	-13.7	-13.5	-13.5	-13.6
2013/8/16	-17.5	-16.3	-19.1	-13.6	-13.6	-13.7	-13.5	-13.5	-13.5
2013/8/17	-14.1	-12.7	-16.9	-13.7	-13.6	-13.8	-13.6	-13.5	-13.6
2013/8/18	-14.1	-12.8	-15.6	-13.6	-13.5	-13.7	-13.5	-13.4	-13.6
2013/8/19	-17.6	-14.4	-19.6	-13.5	-13.4	-13.6	-13.3	-13.3	-13.4
2013/8/20	-20.8	-19.2	-22.4	-13.6	-13.4	-13.8	-13.4	-13.3	-13.6
2013/8/21	-21.2	-19.8	-22.4	-14.0	-13.7	-14.2	-13.8	-13.5	-14.1
2013/8/22	-20.8	-20.0	-21.6	-14.4	-14.2	-14.5	-14.2	-14.0	-14.4
2013/8/23	-18.6	-16.4	-20.1	-14.6	-14.5	-14.7	-14.5	-14.4	-14.6
2013/8/24	-17.7	-16.3	-19.8	-14.6	-14.6	-14.7	-14.6	-14.6	-14.7
2013/8/25	-20.5	-19.4	-21.2	-14.6	-14.5	-14.6	-14.5	-14.5	-14.6
2013/8/26	-21.1	-19.2	-22.4	-14.7	-14.6	-14.8	-14.7	-14.6	-14.8
2013/8/27	-21.0	-19.7	-22.6	-14.9	-14.8	-15.0	-14.9	-14.7	-15.0
2013/8/28	-20.1	-18.8	-22.5	-15.1	-15.0	-15.2	-15.0	-14.9	-15.1
2013/8/29	-20.4	-19.0	-23.0	-15.2	-15.1	-15.2	-15.2	-15.1	-15.2
2013/8/30	-22.1	-20.1	-24.5	-15.2	-15.2	-15.3	-15.3	-15.2	-15.4
2013/8/31	-25.4	-24.2	-26.2	-15.5	-15.3	-15.7	-15.5	-15.3	-15.7
<i>Monthly</i>	-16.9	-8.7	-26.2	-14.1	-13.0	-15.7	-14.0	-12.7	-15.7

Table 2-9. September 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/9/1	-26.8	-26.0	-27.7	-16.1	-15.7	-16.4	-16.0	-15.7	-16.3
2013/9/2	-27.4	-25.2	-28.2	-16.7	-16.4	-17.0	-16.6	-16.3	-16.9
2013/9/3	-19.6	-13.3	-25.1	-17.2	-17.0	-17.4	-17.2	-16.9	-17.6
2013/9/4	-13.8	-12.3	-15.5	-17.0	-16.6	-17.4	-17.1	-16.7	-17.7
2013/9/5	-17.7	-15.5	-19.7	-16.3	-15.9	-16.6	-16.3	-16.0	-16.7
2013/9/6	-16.2	-14.2	-19.8	-15.8	-15.7	-16.0	-15.8	-15.7	-16.0
2013/9/7	-16.7	-15.6	-17.5	-15.6	-15.4	-15.8	-15.5	-15.3	-15.7
2013/9/8	-18.4	-17.1	-19.7	-15.4	-15.3	-15.5	-15.3	-15.2	-15.4
2013/9/9	-18.3	-16.0	-20.7	-15.4	-15.3	-15.5	-15.2	-15.2	-15.3
2013/9/10	-18.6	-16.3	-20.9	-15.4	-15.4	-15.5	-15.2	-15.2	-15.3
2013/9/11	-16.9	-13.9	-20.5	-15.4	-15.4	-15.5	-15.2	-15.2	-15.3
2013/9/12	-17.2	-15.4	-19.1	-15.3	-15.3	-15.5	-15.2	-15.1	-15.3
2013/9/13	-19.4	-17.6	-22.1	-15.2	-15.2	-15.3	-15.1	-15.0	-15.2
2013/9/14	-17.8	-15.2	-21.8	-15.3	-15.2	-15.4	-15.2	-15.0	-15.3
2013/9/15	-15.3	-12.9	-17.7	-15.3	-15.2	-15.4	-15.3	-15.2	-15.3
2013/9/16	-13.3	-11.1	-14.9	-15.1	-15.0	-15.3	-15.0	-14.8	-15.2
2013/9/17	-8.4	-6.2	-11.8	-14.8	-14.6	-15.0	-14.6	-14.3	-14.8
2013/9/18	-7.8	-6.5	-9.6	-14.3	-14.0	-14.6	-13.9	-13.5	-14.3
2013/9/19	-11.5	-9.3	-14.5	-13.8	-13.6	-14.0	-13.3	-13.1	-13.5
2013/9/20	-15.1	-13.4	-16.7	-13.5	-13.5	-13.6	-13.1	-13.0	-13.1
2013/9/21	-13.8	-10.0	-16.2	-13.6	-13.5	-13.7	-13.2	-13.1	-13.3
2013/9/22	-13.0	-9.5	-15.3	-13.7	-13.7	-13.7	-13.3	-13.3	-13.3
2013/9/23	-15.1	-13.1	-17.4	-13.6	-13.6	-13.7	-13.3	-13.2	-13.3
2013/9/24	-14.1	-11.8	-15.6	-13.6	-13.6	-13.7	-13.3	-13.3	-13.4
2013/9/25	-14.5	-11.9	-17.1	-13.6	-13.6	-13.7	-13.4	-13.3	-13.4
2013/9/26	-16.2	-13.7	-19.2	-13.7	-13.6	-13.7	-13.4	-13.3	-13.4
2013/9/27	-18.1	-14.7	-20.8	-13.8	-13.7	-13.9	-13.5	-13.4	-13.6
2013/9/28	-13.6	-9.3	-17.2	-14.0	-13.9	-14.0	-13.7	-13.6	-13.8
2013/9/29	-15.7	-13.1	-21.4	-13.9	-13.9	-14.0	-13.7	-13.6	-13.8
2013/9/30	-20.3	-15.8	-22.9	-13.9	-13.9	-14.1	-13.7	-13.6	-13.8
<i>Monthly</i>	-16.4	-6.2	-28.2	-14.9	-13.5	-17.4	-14.7	-13.0	-17.7

Table 2-10. October 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/10/1	-15.7	-8.9	-23.2	-14.2	-14.1	-14.4	-14.0	-13.8	-14.2
2013/10/2	-11.0	-6.5	-15.3	-14.3	-14.2	-14.4	-14.1	-13.9	-14.2
2013/10/3	-9.4	-7.7	-11.0	-14.0	-13.7	-14.2	-13.7	-13.4	-14.0
2013/10/4	-12.1	-7.7	-15.5	-13.6	-13.4	-13.7	-13.2	-13.1	-13.4
2013/10/5	-13.5	-8.5	-18.2	-13.4	-13.3	-13.4	-13.0	-13.0	-13.1
2013/10/6	-11.4	-8.1	-13.5	-13.4	-13.3	-13.4	-13.0	-12.9	-13.0
2013/10/7	-12.6	-8.3	-15.9	-13.2	-13.2	-13.3	-12.8	-12.8	-12.9
2013/10/8	-14.9	-9.0	-18.6	-13.2	-13.1	-13.3	-12.8	-12.7	-12.8
2013/10/9	-16.0	-9.4	-20.3	-13.3	-13.2	-13.4	-12.9	-12.8	-13.0
2013/10/10	-17.3	-12.8	-21.0	-13.4	-13.3	-13.5	-13.0	-12.9	-13.2
2013/10/11	-18.3	-12.4	-22.4	-13.6	-13.5	-13.7	-13.3	-13.1	-13.4
2013/10/12	-19.3	-13.1	-23.5	-13.8	-13.7	-14.0	-13.5	-13.4	-13.7
2013/10/13	-19.5	-13.8	-23.3	-14.0	-13.9	-14.2	-13.8	-13.7	-14.0
2013/10/14	-17.5	-15.0	-19.2	-14.2	-14.1	-14.2	-14.1	-14.0	-14.1
2013/10/15	-17.5	-10.9	-19.6	-14.2	-14.1	-14.2	-14.1	-14.1	-14.1
2013/10/16	-9.7	-7.2	-19.3	-14.1	-14.0	-14.2	-14.1	-13.9	-14.2
2013/10/17	-7.3	-5.8	-8.3	-13.6	-13.3	-14.0	-13.4	-12.9	-13.9
2013/10/18	-8.8	-6.4	-12.9	-13.0	-12.8	-13.3	-12.7	-12.4	-12.9
2013/10/19	-8.3	-3.8	-12.2	-12.6	-12.5	-12.8	-12.3	-12.1	-12.4
2013/10/20	-7.3	-3.0	-10.3	-12.4	-12.2	-12.5	-11.9	-11.7	-12.1
2013/10/21	-8.4	-5.0	-10.3	-12.1	-11.9	-12.2	-11.6	-11.4	-11.8
2013/10/22	-8.4	-5.7	-10.1	-11.8	-11.7	-12.0	-11.3	-11.2	-11.5
2013/10/23	-9.4	-6.3	-13.5	-11.7	-11.6	-11.8	-11.2	-11.1	-11.3
2013/10/24	-9.7	-3.6	-13.6	-11.6	-11.5	-11.6	-11.1	-11.1	-11.2
2013/10/25	-9.7	-5.0	-12.6	-11.5	-11.4	-11.6	-11.1	-11.0	-11.2
2013/10/26	-10.7	-5.0	-13.7	-11.4	-11.4	-11.5	-11.1	-11.0	-11.2
2013/10/27	-9.9	-4.4	-14.6	-11.4	-11.4	-11.5	-11.1	-11.0	-11.2
2013/10/28	-7.2	-5.1	-9.6	-11.4	-11.3	-11.5	-11.1	-11.0	-11.2
2013/10/29	-4.9	-1.0	-9.0	-11.1	-11.0	-11.3	-10.8	-10.6	-11.0
2013/10/30	-5.8	2.8	-12.0	-10.8	-10.7	-11.0	-10.4	-10.2	-10.7
2013/10/31	-6.5	1.2	-13.1	-10.6	-10.5	-10.7	-10.0	-9.9	-10.2
<i>Monthly</i>	-11.5	2.8	-23.5	-12.8	-10.5	-14.4	-12.5	-9.9	-14.2

Table 2-11. November 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/11/1	-5.4	-0.7	-11.6	-10.4	-10.3	-10.6	-9.8	-9.6	-9.9
2013/11/2	-8.6	-3.9	-12.7	-10.2	-10.1	-10.3	-9.5	-9.4	-9.6
2013/11/3	-5.1	-2.4	-7.8	-10.1	-10.0	-10.2	-9.5	-9.4	-9.6
2013/11/4	-2.4	2.5	-5.4	-9.9	-9.7	-10.1	-9.3	-9.2	-9.5
2013/11/5	-4.0	2.3	-8.6	-9.6	-9.4	-9.8	-9.0	-8.7	-9.3
2013/11/6	-3.9	0.5	-10.0	-9.3	-9.0	-9.5	-8.6	-8.1	-8.9
2013/11/7	-3.0	-0.2	-6.5	-8.7	-7.5	-9.1	-8.3	-8.0	-8.5
2013/11/8	-4.6	-0.2	-8.1	-8.6	-8.5	-8.7	-8.2	-8.1	-8.3
2013/11/9	-2.2	0.1	-4.5	-8.6	-8.5	-8.7	-8.0	-7.8	-8.2
2013/11/10	-3.1	-1.0	-4.8	-8.4	-8.2	-8.5	-7.8	-7.7	-7.9
2013/11/11	-1.2	3.0	-5.7	-8.2	-8.1	-8.3	-7.7	-7.6	-7.8
2013/11/12	-1.7	2.7	-6.8	-8.0	-8.0	-8.1	-7.4	-7.3	-7.6
2013/11/13	-0.8	6.7	-4.3	-7.9	-7.8	-8.0	-7.2	-7.1	-7.3
2013/11/14	-0.7	4.2	-4.5	-7.7	-7.6	-7.8	-7.0	-6.8	-7.2
2013/11/15	-1.6	4.2	-6.9	-7.5	-7.5	-7.6	-6.7	-6.6	-6.8
2013/11/16	-2.5	6.5	-7.2	-7.4	-7.3	-7.5	-6.6	-6.5	-6.7
2013/11/17	-2.9	5.5	-7.5	-7.3	-7.2	-7.4	-6.5	-6.4	-6.6
2013/11/18	-1.0	8.1	-6.8	-7.2	-6.7	-7.3	-6.4	-6.2	-6.5
2013/11/19	0.1	8.6	-5.1	-6.7	-5.4	-7.0	-6.1	-5.7	-6.2
2013/11/20	3.4	12.2	-1.8	-5.9	-4.9	-6.1	-5.4	-4.7	-5.7
2013/11/21	0.7	3.2	-3.1	-5.3	-5.1	-5.5	-4.8	-4.7	-4.9
2013/11/22	2.2	9.9	-3.6	-5.6	-5.4	-5.7	-4.8	-4.1	-5.0
2013/11/23	3.4	8.8	-0.9	-4.5	-1.5	-5.3	-4.1	-2.4	-4.6
2013/11/24	1.9	5.9	-1.7	-4.2	-3.6	-4.6	-3.9	-3.4	-4.0
2013/11/25	3.5	13.3	-1.9	-3.8	-1.0	-4.7	-3.4	-0.8	-4.2
2013/11/26	2.1	11.2	-3.9	-2.3	-0.7	-3.4	-2.1	-0.3	-3.4
2013/11/27	1.2	7.2	-2.0	-2.3	-0.8	-3.0	-2.2	-0.3	-3.2
2013/11/28	3.7	11.6	-3.2	-2.5	-0.6	-3.2	-2.2	-0.1	-3.2
2013/11/29	4.3	14.7	-1.0	-1.2	-0.5	-1.9	-1.1	-0.1	-2.3
2013/11/30	4.7	11.7	0.5	-0.9	-0.4	-1.3	-0.9	-0.2	-1.7
<i>Monthly</i>	-0.8	14.7	-12.7	-6.7	-0.4	-10.6	-6.1	-0.1	-9.9

Table 2-12. December 2013 air temperature data (°C) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/12/1	5.9	14.1	0.0	-0.6	-0.3	-0.9	-0.5	-0.1	-1.1
2013/12/2	4.1	13.3	-2.7	-0.4	-0.2	-0.5	-0.2	-0.1	-0.7
2013/12/3	2.3	10.1	-3.3	-0.3	-0.2	-0.4	-1.1	-0.1	-1.9
2013/12/4	2.5	12.2	-4.5	-0.3	-0.2	-0.6	-1.2	-0.1	-2.3
2013/12/5	3.7	14.6	-2.9	-0.2	-0.1	-0.4	-1.0	-0.2	-1.9
2013/12/6	5.1	15.3	-1.1	-0.2	0.0	-0.3	-0.9	-0.1	-1.7
2013/12/7	3.1	6.7	-1.0	-0.2	-0.1	-0.3	-0.8	-0.1	-1.8
2013/12/8	4.8	13.3	-1.3	-0.3	0.3	-0.7			*2
2013/12/9	3.9	11.9	-1.7	0.2	1.1	-0.4			*2
2013/12/10	2.8	12.8	-3.2	0.4	2.3	-0.4			*2
2013/12/11	2.4	14.3	-2.6	0.7	6.1	-0.6			*3
2013/12/12	2.6	6.1	-0.8	0.5	2.0	-0.5			*3
2013/12/13	4.8	14.2	-1.2	1.9	11.8	-0.9			*3
2013/12/14	4.4	9.1	0.9	1.6	4.3	-0.5			*3
2013/12/15	3.1	6.7	0.6	1.1	3.8	-0.3			*3
2013/12/16	4.5	12.7	-1.8	3.4	13.3	-1.5			*3
2013/12/17	5.6	15.0	-0.2	3.7	14.4	-1.8			*3
2013/12/18	3.6	7.5	-0.3	1.8	5.8	-0.9	0.8	2.5	-0.6
2013/12/19	3.5	9.9	-2.2	2.0	7.6	-2.2	0.8	3.7	-1.3
2013/12/20	2.5	4.2	0.6	1.5	3.0	-0.3	0.8	1.9	-0.5
2013/12/21	4.0	9.9	0.4	3.1	8.9	-0.2	2.0	6.2	-0.2
2013/12/22	2.8	4.7	0.7	1.8	3.4	0.3	1.2	2.2	0.1
2013/12/23	4.6	13.4	0.5	3.5	11.8	-0.2	2.3	9.6	0.1
2013/12/24	4.8	10.5	0.1	3.0	8.3	-1.5	1.6	4.3	-0.7
2013/12/25	4.2	7.4	0.3	2.9	6.3	-0.3	1.9	5.2	0.3
2013/12/26		*5			*5				*5
2013/12/27		*5			*5				*5
2013/12/28		*5			*5				*5
2013/12/29		*5			*5				*5
2013/12/30		*5			*5				*5
<i>Monthly</i>	3.8	15.3	-4.5 *5	1.2	14.4	-2.2 *5	0.4	9.6	-2.3 *2,3,5

Table 3-1. January 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/1/3	27	43	19		36	53	26		32
2013/1/4	31	48	22		39	55	28		36
2013/1/5	33	53	19		43	71	26		38
2013/1/6	31	39	19		38	50	25		35
2013/1/7	31	40	22		37	49	24		35
2013/1/8	33	43	23		38	49	26		37
2013/1/9	33	41	20		38	47	23		37
2013/1/10	38	58	23		44	68	26		41
2013/1/11	52	78	34		59	83	37		55
2013/1/12	59	72	40		66	83	39		58
2013/1/13	57	77	36		61	81	37		55
2013/1/14	41	65	20		48	77	26		42
2013/1/15	36	44	23		43	55	28		41
2013/1/16	37	46	25		42	51	30		42
2013/1/17	35	44	23		40	49	28		39
2013/1/18	37	46	26		43	58	29		40
2013/1/19	38	49	26		43	56	29		40
2013/1/20	36	48	25		43	56	32		42
2013/1/21	36	47	25		42	54	26		40
2013/1/22	34	41	24		38	48	26		36
2013/1/23	40	49	29		43	52	29		42
2013/1/24	41	47	34		44	50	37		44
2013/1/25	42	53	35		45	56	37		45
2013/1/26	39	*4			44	*4			42
2013/1/27	39	48	26		45	55	30		42
2013/1/28	49	74	36		55	76	44		51
2013/1/29	41	55	26		47	61	31		44
2013/1/30	37	50	25		42	56	31		39
2013/1/31	37	61	25		43	69	30		37
<i>Monthly</i>	39	78	19 *4		45	83	23 *4		42
									60 *4

Table 3-2. February 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/2/1	54	73	33	60	80	35	50	65	33
2013/2/2	57	77	39	61	81	38	53	70	38
2013/2/3	49	87	35	52	80	36	49	74	35
2013/2/4	89	97	82	84	91	75	74	85	64
2013/2/5	91	94	82	89	92	80	73	80	61
2013/2/6	77	93	58	80	93	69	66	78	51
2013/2/7	51	84	31	63	90	41	52	70	30
2013/2/8	54	77	35	66	82	47	53	67	41
2013/2/9	45	56	38	52	62	45	48	56	42
2013/2/10	70	87	46	76	90	55	66	78	46
2013/2/11	63	91	34	69	92	42	60	82	40
2013/2/12	60	74	53	63	80	55	62	77	53
2013/2/13	64	87	48	69	85	50	61	73	49
2013/2/14	45	62	32	53	73	36	42	56	30
2013/2/15	39	50	28	45	60	32	41	52	29
2013/2/16	38	65	30	42	67	34	41	64	33
2013/2/17	35	40	28	38	43	30	36	41	28
2013/2/18	38	42	30	40	47	31	36	41	27
2013/2/19	42	53	32	47	58	36	44	53	39
2013/2/20	49	90	34	52	85	39	51	78	40
2013/2/21	68	91	42	68	86	48	61	79	45
2013/2/22	59	79	42	63	78	48	61	74	49
2013/2/23	66	87	52	69	83	58	63	74	56
2013/2/24	57	72	42	59	73	46	59	74	47
2013/2/25	70	90	57	71	89	59	69	85	58
2013/2/26	64	91	41	67	87	45	63	81	46
2013/2/27	61	88	37	68	88	44	55	72	42
2013/2/28	40	46	34	42	47	36	42	47	38
<i>Monthly</i>	57	97	28	61	93	30	55	85	27

Table 3-3. March 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/3/1	41	48	35	43	51	39	44	49	41
2013/3/2	43	55	35	47	57	40	44	58	33
2013/3/3	47	61	35	50	63	40	48	61	40
2013/3/4	44	54	34	45	54	36	43	52	33
2013/3/5	69	88	45	66	82	45	62	80	44
2013/3/6	76	90	48	80	86	74	52	71	34
2013/3/7	77	88	66	81	89	75	66	74	55
2013/3/8	80	87	70	86	90	79	72	79	62
2013/3/9	73	86	53	87	89	84	58	78	35
2013/3/10	58	74	47	85	87	82	48	63	39
2013/3/11	65	78	45	83	86	81	58	66	42
2013/3/12	57	78	35	76	85	49	55	71	37
2013/3/13	54	79	38	61	83	49	55	77	40
2013/3/14	69	85	56	87	91	80	75	86	64
2013/3/15	53	62	47	63	82	51	57	66	50
2013/3/16	54	58	48	56	60	50	55	58	50
2013/3/17	54	64	46	55	65	48	55	63	49
2013/3/18	61	80	48	62	80	49	58	74	49
2013/3/19	63	80	41	65	80	45	57	73	43
2013/3/20	54	71	45	55	77	47	54	68	47
2013/3/21	69	88	51	71	84	52	64	85	52
2013/3/22	63	82	51	67	80	57	60	74	52
2013/3/23	72	84	58	76	82	65	63	74	52
2013/3/24	59	75	42	62	75	49	58	70	45
2013/3/25	68	82	51	69	80	54	63	74	50
2013/3/26	65	82	55	66	84	56	63	79	54
2013/3/27	70	85	57	80	89	68	72	84	63
2013/3/28	69	82	61	80	88	70	70	80	62
2013/3/29	72	92	57	74	87	61	71	89	59
2013/3/30	89	90	87	85	88	84	89	91	83
2013/3/31	89	92	88	86	87	85	91	91	91
<i>Monthly</i>	64	92	34	69	91	36	61	91	33

Table 3-4. April 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/4/1	91	92	90	88	89	87	91	91	91
2013/4/2	91	91	90	89	89	89	91	91	91
2013/4/3	91	91	91	89	90	89	91	92	91
2013/4/4	91	92	91	90	90	90	92	92	92
2013/4/5	92	92	91	90	90	90	92	92	92
2013/4/6	92	92	92	90	91	90	92	92	92
2013/4/7	91	92	91	91	92	91	92	92	92
2013/4/8	90	91	90	92	92	92	92	92	92
2013/4/9	90	90	89	92	92	92	92	92	92
2013/4/10	90	90	89	92	92	92	92	92	92
2013/4/11	90	90	89	92	92	92	92	92	92
2013/4/12	90	91	90	92	92	92	91	92	91
2013/4/13	89	90	89	92	92	92	91	91	91
2013/4/14	88	89	87	92	92	92	91	91	91
2013/4/15	87	88	85	92	92	92	91	91	91
2013/4/16	88	88	87	92	92	92	91	91	91
2013/4/17	88	89	87	92	92	92	91	91	91
2013/4/18	88	90	79	92	92	92	91	91	91
2013/4/19	73	80	68	92	92	92	91	91	91
2013/4/20	75	82	69	92	92	92	91	91	91
2013/4/21	71	80	64	92	92	92	91	91	91
2013/4/22	71	78	61	92	92	92	91	91	91
2013/4/23	74	80	71	92	92	92	91	91	90
2013/4/24	83	89	72	92	92	92	90	91	90
2013/4/25	84	88	79	92	92	92	90	90	90
2013/4/26	79	84	70	92	92	92	90	90	90
2013/4/27	66	77	59	91	92	91	90	90	90
2013/4/28	61	79	51	91	91	91	90	90	90
2013/4/29	65	86	49	91	91	91	90	90	90
2013/4/30	80	86	75	91	91	91	90	90	90
<i>Monthly</i>	83	92	49	91	92	87	91	92	90

Table 3-5. May 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/5/1	78	82	71	91	91	91	90	90	90
2013/5/2	84	88	81	91	91	91	90	90	90
2013/5/3	78	83	76	91	91	91	90	90	90
2013/5/4	80	84	77	91	91	91	90	90	90
2013/5/5	75	77	73	91	91	91	89	90	89
2013/5/6	72	77	70	91	91	91	89	89	89
2013/5/7	85	89	77	91	91	90	89	89	89
2013/5/8	89	90	88	90	90	90	89	89	89
2013/5/9	84	88	81	90	90	90	89	89	89
2013/5/10	81	82	79	90	90	90	89	89	89
2013/5/11	80	81	78	90	90	90	89	89	89
2013/5/12	79	81	77	90	90	90	88	89	88
2013/5/13	79	82	77	90	90	90	88	88	88
2013/5/14	79	81	77	89	90	89	88	88	88
2013/5/15	78	80	76	89	89	89	87	88	87
2013/5/16	78	80	75	89	89	89	87	87	87
2013/5/17	81	84	77	88	89	88	87	87	87
2013/5/18	85	86	84	88	88	88	87	87	87
2013/5/19	84	86	82	88	88	88	87	87	87
2013/5/20	83	85	82	88	88	88	87	88	87
2013/5/21	82	85	81	88	88	88	87	88	87
2013/5/22	81	82	79	88	88	88	87	88	87
2013/5/23	78	80	76	88	88	88	87	87	87
2013/5/24	81	83	77	88	88	88	87	87	87
2013/5/25	82	84	79	88	88	88	87	87	87
2013/5/26	85	87	83	88	88	88	87	87	87
2013/5/27	89	91	87	87	88	87	87	87	87
2013/5/28	88	90	86	88	88	87	87	88	87
2013/5/29	84	86	81	88	88	88	88	88	88
2013/5/30	82	83	81	88	88	88	88	88	88
2013/5/31	82	84	81	88	88	88	87	88	87
<i>Monthly</i>	81	91	70	89	91	87	88	90	87

Table 3-6. June 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/6/1	84	87	82	88	88	88	87	87	87
2013/6/2	81	82	78	88	88	88	87	87	87
2013/6/3	81	83	79	88	88	88	87	87	87
2013/6/4	82	84	79	88	88	88	87	87	87
2013/6/5	85	86	83	88	88	88	87	87	87
2013/6/6	86	87	84	88	88	88	87	87	87
2013/6/7	86	86	85	88	88	88	87	87	87
2013/6/8	86	86	86	88	88	88	87	88	87
2013/6/9	86	86	86	88	88	88	88	88	88
2013/6/10	85	86	84	88	88	88	88	88	88
2013/6/11	84	85	84	88	88	88	88	88	88
2013/6/12	84	85	84	88	88	88	87	88	87
2013/6/13	85	85	85	88	88	88	87	87	87
2013/6/14	85	86	85	88	88	88	87	87	87
2013/6/15	85	85	85	88	88	88	87	87	87
2013/6/16	84	85	84	88	88	88	87	87	87
2013/6/17	84	85	84	87	88	87	87	87	87
2013/6/18	84	84	84	87	88	87	87	87	87
2013/6/19	84	84	84	87	88	87	87	87	87
2013/6/20	86	87	84	87	88	87	87	87	87
2013/6/21	86	87	85	87	87	87	87	87	87
2013/6/22	85	85	85	87	87	87	87	87	87
2013/6/23	86	87	85	87	88	87	87	87	87
2013/6/24	87	87	86	88	88	88	87	87	87
2013/6/25	85	86	84	88	88	88	87	88	87
2013/6/26	84	84	83	88	88	88	87	88	87
2013/6/27	82	84	82	88	88	88	87	87	87
2013/6/28	85	87	83	88	88	87	87	87	87
2013/6/29	88	89	87	87	88	87	87	87	87
2013/6/30	89	90	88	87	88	87	88	88	87
<i>Monthly</i>	85	90	78	88	88	87	87	88	87

Table 3-7. July 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/7/1	89	90	89		88	88	88	88	88
2013/7/2	89	89	88		88	88	88	88	88
2013/7/3	88	89	88		88	88	88	88	88
2013/7/4	88	89	87		88	88	88	88	88
2013/7/5	85	87	83		88	88	88	88	88
2013/7/6	82	83	81		88	88	88	88	88
2013/7/7	87	90	83		88	88	88	88	87
2013/7/8	89	89	88		88	88	88	88	87
2013/7/9	88	89	87		88	88	88	88	88
2013/7/10	86	87	85		88	88	88	88	88
2013/7/11	86	86	85		88	88	88	88	88
2013/7/12	86	87	85		88	88	88	88	88
2013/7/13	84	85	83		88	88	88	88	88
2013/7/14	81	83	79		88	88	88	88	87
2013/7/15	78	80	77		88	88	88	87	87
2013/7/16	76	77	75		88	88	88	87	87
2013/7/17	75	77	74		88	88	87	86	87
2013/7/18	77	78	76		87	87	87	86	86
2013/7/19	76	77	75		86	87	86	85	85
2013/7/20	75	77	75		86	86	86	85	85
2013/7/21	79	81	77		86	86	85	85	85
2013/7/22	77	79	75		85	86	85	85	85
2013/7/23	77	79	76		85	86	85	84	85
2013/7/24	78	79	77		85	86	85	84	84
2013/7/25	82	84	79		85	85	85	84	84
2013/7/26	85	87	83		85	85	85	84	84
2013/7/27	87	88	86		85	86	85	85	85
2013/7/28	86	87	85		85	86	85	85	85
2013/7/29	85	86	83		86	86	85	86	86
2013/7/30			*1				*1		*1
2013/7/31	79	81	77	86	86	86	86	86	86
Monthly	83	90	74 *1	87	88	85 *1	86	88	84 *1

Table 3-8. August 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/8/1	84	87	81	86	86	86	85	86	85
2013/8/2	87	87	85	86	86	86	85	86	85
2013/8/3	88	89	87	86	86	86	86	86	85
2013/8/4	88	88	87	86	86	86	86	86	86
2013/8/5	88	89	88	86	87	86	86	87	86
2013/8/6	87	88	87	87	87	86	87	87	87
2013/8/7	87	88	87	87	87	87	87	87	87
2013/8/8	87	87	86	87	87	87	87	87	87
2013/8/9	86	87	85	87	87	87	87	87	87
2013/8/10	86	86	84	87	87	87	87	87	87
2013/8/11	85	86	84	87	87	87	87	87	87
2013/8/12	85	85	84	87	87	87	87	87	87
2013/8/13	85	86	84	87	87	87	86	87	86
2013/8/14	85	86	85	87	87	87	86	86	86
2013/8/15	85	86	84	87	87	87	86	86	86
2013/8/16	83	85	82	87	87	87	86	87	86
2013/8/17	86	88	84	87	87	87	86	86	86
2013/8/18	86	87	85	87	87	87	86	87	86
2013/8/19	83	86	81	87	87	87	87	87	87
2013/8/20	80	82	79	87	87	87	86	87	86
2013/8/21	80	82	79	87	87	87	86	86	86
2013/8/22	81	82	80	87	87	86	86	86	86
2013/8/23	83	85	81	86	86	86	86	86	86
2013/8/24	83	85	81	86	86	86	86	86	86
2013/8/25	81	82	80	86	86	86	86	86	86
2013/8/26	80	82	79	86	86	86	86	86	86
2013/8/27	81	82	79	86	86	86	86	86	86
2013/8/28	81	82	79	86	86	86	85	86	85
2013/8/29	81	82	79	86	86	86	85	85	85
2013/8/30	79	81	77	86	86	86	85	85	85
2013/8/31	77	78	76	86	86	86	85	85	85
<i>Monthly</i>	84	89	76	86	87	86	86	87	85

Table 3-9. September 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/9/1	76	77	75	86	86	85	85	85	85
2013/9/2	76	78	75	85	86	85	84	85	84
2013/9/3	83	87	78	85	86	84	84	84	84
2013/9/4	87	87	86	84	84	84	84	84	84
2013/9/5	84	86	82	84	85	84	85	85	84
2013/9/6	85	86	82	85	86	85	85	85	85
2013/9/7	84	86	84	85	86	85	85	85	85
2013/9/8	83	84	82	85	86	85	85	85	85
2013/9/9	83	84	81	85	86	85	85	85	85
2013/9/10	83	84	81	85	86	85	85	85	85
2013/9/11	84	86	81	86	86	85	85	85	85
2013/9/12	84	85	82	86	86	85	85	85	85
2013/9/13	82	84	79	86	86	85	85	85	85
2013/9/14	83	85	80	86	86	86	85	85	85
2013/9/15	85	87	84	86	86	85	85	85	85
2013/9/16	85	87	84	86	86	86	85	86	85
2013/9/17	86	88	85	86	86	86	86	86	86
2013/9/18	88	89	86	86	86	86	86	87	86
2013/9/19	87	88	85	86	86	86	87	87	87
2013/9/20	84	87	83	86	87	86	87	87	87
2013/9/21	85	87	83	87	87	87	87	87	87
2013/9/22	86	87	84	87	87	87	87	87	87
2013/9/23	84	87	82	87	87	87	87	87	87
2013/9/24	84	86	83	87	87	87	87	87	87
2013/9/25	84	87	82	87	87	87	87	87	87
2013/9/26	83	85	81	87	87	87	86	87	86
2013/9/27	81	83	79	87	87	87	86	87	86
2013/9/28	82	85	79	87	87	87	86	86	86
2013/9/29	78	83	76	87	87	87	86	86	86
2013/9/30	80	83	77	87	87	87	86	86	86
<i>Monthly</i>	83	89	75	86	87	84	86	87	84

Table 3-10. October 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/10/1	81	85	76	86	87	86	86	86	86
2013/10/2	75	82	70	86	86	86	86	86	86
2013/10/3	73	82	66	86	87	86	86	87	86
2013/10/4	68	86	56	87	87	86	87	87	87
2013/10/5	66	80	57	87	87	87	87	87	87
2013/10/6	58	68	49	87	87	87	87	87	87
2013/10/7	51	61	46	87	87	87	87	87	87
2013/10/8	66	78	57	87	87	87	87	87	87
2013/10/9	62	76	48	87	87	87	87	87	87
2013/10/10	69	78	58	87	87	87	87	87	87
2013/10/11	71	78	56	87	87	87	87	87	87
2013/10/12	71	77	53	87	87	87	86	87	86
2013/10/13	71	81	58	87	87	87	86	86	86
2013/10/14	71	77	65	86	87	86	86	86	86
2013/10/15	73	78	59	86	87	86	86	86	86
2013/10/16	80	90	60	86	86	86	86	86	86
2013/10/17	90	91	90	87	87	86	87	87	86
2013/10/18	89	90	87	87	87	87	87	87	87
2013/10/19	88	89	86	87	87	87	87	87	87
2013/10/20	88	90	84	87	87	87	88	88	87
2013/10/21	89	90	85	87	88	87	88	88	88
2013/10/22	88	91	85	88	88	88	88	88	88
2013/10/23	88	90	85	88	88	88	88	88	88
2013/10/24	87	90	84	88	88	88	88	88	88
2013/10/25	87	89	83	88	88	88	88	88	88
2013/10/26	86	88	83	88	88	88	88	88	88
2013/10/27	86	89	84	88	88	88	88	88	88
2013/10/28	88	89	86	88	88	88	88	88	88
2013/10/29	81	91	69	88	88	88	88	88	88
2013/10/30	84	91	73	88	88	88	89	89	88
2013/10/31	82	92	62	88	89	88	89	89	89
<i>Monthly</i>	78	92	46	87	89	86	87	89	86

Table 3-11. November 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/11/1	83	92	72	89	89	88	89	89	89
2013/11/2	70	90	50	89	89	89	89	89	89
2013/11/3	92	93	90	89	89	89	89	89	89
2013/11/4	83	92	67	89	89	89	89	90	89
2013/11/5	75	94	57	89	89	89	90	90	89
2013/11/6	82	94	57	89	89	89	90	91	90
2013/11/7	88	94	81	90	93	89	90	90	90
2013/11/8	90	93	82	89	90	89	90	90	90
2013/11/9	89	93	84	90	90	90	90	90	90
2013/11/10	82	94	63	90	90	90	90	91	90
2013/11/11	62	82	44	90	90	90	90	91	90
2013/11/12	62	90	47	90	90	90	91	91	91
2013/11/13	52	72	32	90	90	90	91	91	91
2013/11/14	52	66	41	90	90	90	91	91	91
2013/11/15	46	72	34	90	90	90	91	91	91
2013/11/16	47	72	32	90	90	90	91	91	91
2013/11/17	43	55	32	90	90	90	91	92	91
2013/11/18	43	53	31	90	91	89	91	92	91
2013/11/19	44	49	37	90	91	88	92	92	92
2013/11/20	44	57	30	90	90	89	92	93	92
2013/11/21	45	64	36	90	91	90	93	93	93
2013/11/22	39	50	28	91	91	91	93	95	92
2013/11/23	44	53	34	90	91	84	93	96	93
2013/11/24	46	53	38	91	91	90	93	94	93
2013/11/25	37	52	23	91	92	87	94	97	93
2013/11/26	35	42	25	91	92	89	95	96	94
2013/11/27	48	81	33	92	92	90	95	96	94
2013/11/28	39	48	27	92	93	89	95	96	94
2013/11/29	35	49	24	92	93	91	96	97	95
2013/11/30	42	52	30	93	93	91	96	97	96
<i>Monthly</i>	58	94	23	90	93	84	92	97	89

Table 3-12. December 2013 relative humidity data (%) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 3 [<i>P. crispa</i>]			
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	
2013/12/1	40	55	24		93	93	93	96	97	96
2013/12/2	49	71	24		94	94	93	97	97	96
2013/12/3	35	48	25		94	94	94	96	97	96
2013/12/4	39	56	23		94	94	93	96	97	95
2013/12/5	44	63	29		94	95	94	96	97	96
2013/12/6	35	49	22		94	95	94	96	97	96
2013/12/7	45	72	32		95	95	94	97	97	96
2013/12/8	36	50	23		95	95	93			*2
2013/12/9	41	56	30		94	95	92			*2
2013/12/10	52	70	33		95	96	90			*2
2013/12/11	52	70	31		94	96	84			*3
2013/12/12	53	64	44		93	96	90			*3
2013/12/13	47	71	30		88	97	64	93	94	88
2013/12/14	50	63	38		84	93	74	94	95	92
2013/12/15	53	69	43		84	92	76	94	95	93
2013/12/16	40	72	27		71	94	43	88	96	72
2013/12/17	37	53	21		64	83	41	76	91	53
2013/12/18	63	91	36		78	92	59	78	89	64
2013/12/19	50	81	35		65	89	50	67	78	60
2013/12/20	54	70	47		63	77	56	65	76	61
2013/12/21	57	74	41		65	81	50	68	79	54
2013/12/22	58	76	52		68	80	63	70	82	64
2013/12/23	59	77	37		70	85	49	72	82	53
2013/12/24	52	88	31		68	91	46	66	86	50
2013/12/25	50	71	38		63	79	51	65	77	55
2013/12/26			*5			*5				*5
2013/12/27			*5			*5				*5
2013/12/28			*5			*5				*5
2013/12/29			*5			*5				*5
2013/12/30			*5			*5				*5
<i>Monthly</i>	48	91	21 *5		82	97	41 *5	84	97	50 *2,3,5

Table 4-1. January 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispum</i>]			
	<i>daily</i> <i>average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily</i> <i>average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily</i> <i>average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>
		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]
2013/1/3				*6				*6				*6
2013/1/4				*6*7				*6*7				*6*7
2013/1/5				*7				*7				*7
2013/1/6				*7				*7				*7
2013/1/7				*7				*7				*7
2013/1/8				*7				*7				*7
2013/1/9				*7				*7				*7
2013/1/10				*7				*7				*7
2013/1/11				*7				*7				*7
2013/1/12				*7				*7				*7
2013/1/13	456	1176	4	39389				*7				*7
2013/1/14	450	1177	27	38848				*7				*7
2013/1/15				*7				*7				*7
2013/1/16				*7				*7				*7
2013/1/17				*7				*7				*7
2013/1/18				*7				*7				*7
2013/1/19	430	1134	16	37154				*7				*7
2013/1/20	454	1132	14	39207	326	991	7	28165	261	923	5	22529
2013/1/21				*7				*7				*7
2013/1/22	418	1129	7	36099				*7				*7
2013/1/23				*7				*7				*7
2013/1/24	273	842	5	23584	175	569	3	15121	119	385	2	10283
2013/1/25	254	707	4	21964	177	584	3	15290	127	565	2	10947
2013/1/26				*4				*4				*4
2013/1/27				*7				*7				*7
2013/1/28	286	929	4	24753	231	913	2	19926				
2013/1/29				*7				*7				*7
2013/1/30	397	1095	1	34258	388	1197	1	33524				
2013/1/31	337	999	2	29153	354	1132	1	30624				

Monthly

Table 4-2. February 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>
		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]
2013/2/1	330	987	1	28514	349	1120	1	30118				*7
2013/2/2	199	899	1	17173	171	1060	1	14749				*7
2013/2/3	277	1039	0	23935	232	1078	0	20079	191	1211	0	16534
2013/2/4	237	729	0	20477	166	543	0	14316	104	346	0	8994
2013/2/5	193	509	0	16636	133	364	0	11468	80	210	0	6936
2013/2/6	298	855	0	25730	235	826	0	20263	172	851	0	14855
2013/2/7	389	1036	0	33625	318	1114	0	27518	260	1232	0	22467
2013/2/8	176	1185	0	15168	131	1200	0	11351				*7
2013/2/9	166	539	0	14340	114	379	0	9842	63	212	0	5409
2013/2/10	221	821	0	19088	163	645	0	14047	96	445	0	8287
2013/2/11	209	836	0	18033	150	882	0	12920	92	739	0	7981
2013/2/12	217	611	0	18750	152	437	0	13115	87	254	0	7521
2013/2/13	223	652	0	19287	175	598	0	15111	119	532	0	10283
2013/2/14	265	831	0	22865	285	967	0	24604				*7
2013/2/15	224	929	0	19318	201	901	0	17346	177	1042	0	15315
2013/2/16	243	973	0	21014	206	1049	0	17827				*7
2013/2/17	243	788	0	20966	267	924	0	23094	298	1175	0	25761
2013/2/18	233	775	0	20131	260	910	0	22478	292	1162	0	25255
2013/2/19	224	641	0	19313	167	540	0	14413	110	439	0	9534
2013/2/20	159	517	0	13733	112	371	0	9642	64	226	0	5488
2013/2/21	203	801	0	17531	174	834	0	15009	138	979	0	11934
2013/2/22	154	551	0	13304	111	391	0	9598	65	240	0	5603
2013/2/23	107	435	0	9210	75	309	0	6480	40	171	0	3481
2013/2/24	173	640	0	14953	142	763	0	12280	113	821	0	9733
2013/2/25	78	247	0	6745	56	182	0	4874	32	106	0	2751
2013/2/26	115	343	0	9958	82	246	0	7050	44	136	0	3835
2013/2/27	178	538	0	15406	131	416	0	11281	80	284	0	6879
2013/2/28	146	567	0	12580	111	515	0	9606	83	520	0	7145
<i>Monthly</i>	210	1185	0	507781	174	1200	0	420479	122	1232	0	241983 *7

Table 4-3. March 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	daily average	maximum	minimum	daily sum	daily average	maximum	minimum	daily sum	daily average	maximum	minimum	daily sum
	[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]	
2013/3/1	129	439	0	11123	91	330	0	7824	51	213	0	4447
2013/3/2	193	619	0	16640	187	724	0	16124	219	974	0	18937
2013/3/3	94	265	0	8164	67	191	0	5760	36	99	0	3094
2013/3/4	143	529	0	12375	135	606	0	11693	126	808	0	10922
2013/3/5	67	220	0	5822	48	152	0	4113	26	78	0	2249
2013/3/6	172	572	0	14829	154	694	0	13304	190	922	0	16449
2013/3/7	146	497	0	12628	107	358	0	9267	74	389	0	6435
2013/3/8	139	563	0	12052	106	473	0	9127	72	538	0	6221
2013/3/9	140	555	0	12110	106	638	0	9198	137	898	0	11857
2013/3/10	140	518	0	12104	108	503	0	9299	95	549	0	8180
2013/3/11	120	477	0	10377	81	588	0	6994	101	827	0	8723
2013/3/12	149	492	0	12868	112	371	0	9710	74	265	0	6420
2013/3/13	103	398	0	8866	73	288	0	6340	44	166	0	3784
2013/3/14	97	354	0	8352	70	253	0	6014	42	155	0	3612
2013/3/15	90	321	0	7744	62	229	0	5397	33	123	0	2887
2013/3/16	69	260	0	5954	46	174	0	4001	27	104	0	2372
2013/3/17	128	509	0	11050	92	376	0	7966	60	251	0	5143
2013/3/18	63	240	0	5413	45	172	0	3923	25	93	0	2193
2013/3/19	89	389	0	7690	65	263	0	5625	47	209	0	4095
2013/3/20	56	206	0	4829	37	140	0	3227	20	75	0	1717
2013/3/21	100	465	0	8630	73	325	0	6309	52	274	0	4493
2013/3/22	68	263	0	5910	49	187	0	4274	28	110	0	2410
2013/3/23	89	458	0	7649	60	327	0	5204	42	270	0	3620
2013/3/24	57	260	0	4925	39	182	0	3410	22	95	0	1888
2013/3/25	74	322	0	6365	54	231	0	4698	39	197	0	3371
2013/3/26	48	218	0	4109	33	155	0	2859	18	87	0	1570
2013/3/27	55	242	0	4757	40	178	0	3439	22	106	0	1899
2013/3/28	59	266	0	5068	43	201	0	3745	27	139	0	2331
2013/3/29	67	343	0	5812	49	258	0	4212	30	177	0	2569
2013/3/30	5	23	0	457	1	5	0	99	8	55	0	705
2013/3/31	2	10	0	209	0	2	0	36	0	0	0	2
Monthly	95	619	0	254883	72	724	0	193192	58	974	0	154595

Table 4-4. April 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>
	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]
2013/4/1	2	11	0	196	0	2	0	34	0	0	0	3
2013/4/2	2	9	0	178	0	0	0	2	0	0	0	0
2013/4/3	2	13	0	213	0	0	0	3	0	0	0	0
2013/4/4	2	8	0	158	0	0	0	2	0	0	0	0
2013/4/5	2	9	0	194	0	0	0	3	0	0	0	0
2013/4/6	2	10	0	162	0	0	0	3	0	0	0	0
2013/4/7	2	8	0	151	0	0	0	1	0	0	0	0
2013/4/8	2	9	0	171	0	0	0	1	0	0	0	0
2013/4/9	2	9	0	160	0	0	0	2	0	0	0	0
2013/4/10	2	11	0	143	0	0	0	1	0	0	0	0
2013/4/11	3	20	0	241	0	0	0	0	0	0	0	0
2013/4/12	3	16	0	258	0	0	0	0	0	0	0	0
2013/4/13	3	13	0	249	0	0	0	0	0	0	0	0
2013/4/14	2	9	0	174	0	0	0	0	0	0	0	0
2013/4/15	3	10	0	227	0	0	0	0	0	0	0	0
2013/4/16	2	11	0	178	0	0	0	0	0	0	0	0
2013/4/17	2	12	0	214	0	0	0	0	0	0	0	0
2013/4/18	26	139	0	2245	0	0	0	1	0	0	0	0
2013/4/19	23	178	0	1977	0	0	0	0	0	0	0	0
2013/4/20	28	143	0	2407	0	0	0	0	0	0	0	0
2013/4/21	21	122	0	1780	0	0	0	0	0	0	0	0
2013/4/22	21	94	0	1853	0	0	0	0	0	0	0	0
2013/4/23	23	119	0	1945	0	0	0	0	0	0	0	0
2013/4/24	7	60	0	648	0	0	0	0	0	0	0	0
2013/4/25	20	104	0	1716	0	0	0	0	0	0	0	0
2013/4/26	17	86	0	1496	0	0	0	0	0	0	0	0
2013/4/27	23	144	0	1988	0	0	0	0	0	0	0	0
2013/4/28	12	75	0	1032	0	0	0	0	0	0	0	0
2013/4/29	13	90	0	1158	0	0	0	0	0	0	0	0
2013/4/30	15	95	0	1317	0	0	0	0	0	0	0	0
<i>Monthly</i>	10	178	0	24829	0	2	0	52	0	0	0	3

Table 4-5. May 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispum</i>]			
	daily average	maximum	minimum	daily sum	daily average	maximum	minimum	daily sum	daily average	maximum	minimum	daily sum
		[$\mu\text{mol/m}^2/\text{s}$]	[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]	[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]	[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]
2013/5/1	11	71	0	985	0	0	0	0	0	0	0	0
2013/5/2	6	37	0	491	0	0	0	0	0	0	0	0
2013/5/3	7	41	0	640	0	0	0	0	0	0	0	0
2013/5/4	7	44	0	632	0	0	0	0	0	0	0	0
2013/5/5	8	46	0	668	0	0	0	0	0	0	0	0
2013/5/6	9	56	0	787	0	0	0	0	0	0	0	0
2013/5/7	7	61	0	581	0	0	0	0	0	0	0	0
2013/5/8	4	27	0	344	0	0	0	0	0	0	0	0
2013/5/9	8	48	0	654	0	0	0	0	0	0	0	0
2013/5/10	7	45	0	605	0	0	0	0	0	0	0	0
2013/5/11	6	43	0	559	0	0	0	0	0	0	0	0
2013/5/12	6	40	0	508	0	0	0	0	0	0	0	0
2013/5/13	5	38	0	465	0	0	0	0	0	0	0	0
2013/5/14	5	35	0	421	0	0	0	0	0	0	0	0
2013/5/15	4	32	0	372	0	0	0	0	0	0	0	0
2013/5/16	3	28	0	277	0	0	0	0	0	0	0	0
2013/5/17	3	20	0	221	0	0	0	0	0	0	0	0
2013/5/18	2	14	0	152	0	0	0	0	0	0	0	0
2013/5/19	1	12	0	118	0	0	0	0	0	0	0	0
2013/5/20	2	14	0	150	0	0	0	0	0	0	0	0
2013/5/21	2	16	0	165	0	0	0	0	0	0	0	0
2013/5/22	2	15	0	153	0	0	0	0	0	0	0	0
2013/5/23	2	17	0	165	0	0	0	0	0	0	0	0
2013/5/24	1	10	0	93	0	0	0	0	0	0	0	0
2013/5/25	1	9	0	77	0	0	0	0	0	0	0	0
2013/5/26	1	10	0	82	0	0	0	0	0	0	0	0
2013/5/27	1	6	0	50	0	0	0	0	0	0	0	0
2013/5/28	1	8	0	72	0	0	0	0	0	0	0	0
2013/5/29	1	9	0	76	0	0	0	0	0	0	0	0
2013/5/30	1	6	0	57	0	0	0	0	0	0	0	0
2013/5/31	1	6	0	49	0	0	0	0	0	0	0	0
Monthly	4	71	0	10668	0	0	0	0	0	0	0	0

Table 4-6. June 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>
		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]
2013/6/1	0	5	0	39	0	0	0	0	0	0	0	0
2013/6/2	1	6	0	50	0	0	0	0	0	0	0	0
2013/6/3	1	8	0	75	0	0	0	0	0	0	0	0
2013/6/4	0	3	0	27	0	0	0	0	0	0	0	0
2013/6/5	0	2	0	19	0	0	0	0	0	0	0	0
2013/6/6	0	1	0	10	0	0	0	0	0	0	0	0
2013/6/7	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/8	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/9	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/10	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/11	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/12	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/13	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/14	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/15	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/16	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/17	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/18	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/19	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/20	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/21	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/22	0	0	0	1	0	0	0	0	0	0	0	0
2013/6/23	0	0	0	1	0	0	0	0	0	0	0	0
2013/6/24	0	0	0	1	0	0	0	0	0	0	0	0
2013/6/25	0	0	0	2	0	0	0	0	0	0	0	0
2013/6/26	0	0	0	2	0	0	0	0	0	0	0	0
2013/6/27	0	0	0	1	0	0	0	0	0	0	0	0
2013/6/28	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/29	0	0	0	0	0	0	0	0	0	0	0	0
2013/6/30	0	0	0	0	0	0	0	0	0	0	0	0
<i>Monthly</i>	0	8	0	229	0	0	0	0	0	0	0	0

Table 4-7. July 2013 PAR data ($\mu\text{mol}/\text{m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>
		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]
2013/7/1	0	0	0	3	0	0	0	0	0	0	0	0
2013/7/2	0	0	0	2	0	0	0	0	0	0	0	0
2013/7/3	0	1	0	4	0	0	0	0	0	0	0	0
2013/7/4	0	1	0	5	0	0	0	0	0	0	0	0
2013/7/5	0	1	0	8	0	0	0	0	0	0	0	0
2013/7/6	0	1	0	9	0	0	0	0	0	0	0	0
2013/7/7	0	0	0	3	0	0	0	0	0	0	0	0
2013/7/8	0	1	0	5	0	0	0	0	0	0	0	0
2013/7/9	0	1	0	7	0	0	0	0	0	0	0	0
2013/7/10	0	1	0	11	0	0	0	0	0	0	0	0
2013/7/11	0	1	0	8	0	0	0	0	0	0	0	0
2013/7/12	0	1	0	5	0	0	0	0	0	0	0	0
2013/7/13	0	2	0	14	0	0	0	0	0	0	0	0
2013/7/14	0	2	0	16	0	0	0	0	0	0	0	0
2013/7/15	0	2	0	17	0	0	0	0	0	0	0	0
2013/7/16	0	2	0	19	0	0	0	0	0	0	0	0
2013/7/17	0	2	0	21	0	0	0	1	0	0	0	0
2013/7/18	0	3	0	26	0	0	0	0	0	0	0	0
2013/7/19	0	4	0	34	0	0	0	0	0	0	0	0
2013/7/20	0	3	0	29	0	0	0	0	0	0	0	0
2013/7/21	0	3	0	30	0	0	0	0	0	0	0	0
2013/7/22	1	5	0	44	0	0	0	0	0	0	0	0
2013/7/23	1	5	0	47	0	0	0	0	0	0	0	0
2013/7/24	1	5	0	49	0	0	0	0	0	0	0	0
2013/7/25	0	3	0	31	0	0	0	0	0	0	0	0
2013/7/26	1	5	0	47	0	0	0	0	0	0	0	0
2013/7/27	0	3	0	33	0	0	0	0	0	0	0	0
2013/7/28	1	5	0	62	0	0	0	0	0	0	0	0
2013/7/29	1	10	0	109	0	0	0	0	0	0	0	0
2013/7/30				*1				*1				*1
2013/7/31	1	10	0	108	0	0	0	0	0	0	0	0
<i>Monthly</i>	0	10	0	804 *1	0	0	0	1 *1	0	0	0	*1

Table 4-8. August 2013 PAR data ($\mu\text{mol}/\text{m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispa</i>]			
	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>	<i>daily average</i>	<i>maximum</i>	<i>minimum</i>	<i>daily sum</i>
		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]		[$\mu\text{mol}/\text{m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol}/\text{m}^2$]
2013/8/1	1	8	0	84	0	0	0	0	0	0	0	0
2013/8/2	2	17	0	190	0	0	0	0	0	0	0	0
2013/8/3	1	5	0	46	0	0	0	0	0	0	0	0
2013/8/4	2	12	0	157	0	0	0	0	0	0	0	0
2013/8/5	2	10	0	133	0	0	0	0	0	0	0	0
2013/8/6	2	15	0	208	0	0	0	0	0	0	0	0
2013/8/7	2	14	0	162	0	0	0	0	0	0	0	0
2013/8/8	2	14	0	189	0	0	0	0	0	0	0	0
2013/8/9	2	10	0	145	0	0	0	0	0	0	0	0
2013/8/10	2	12	0	176	0	0	0	0	0	0	0	0
2013/8/11	3	15	0	224	0	0	0	0	0	0	0	0
2013/8/12	3	15	0	239	0	0	0	0	0	0	0	0
2013/8/13	3	17	0	261	0	0	0	0	0	0	0	0
2013/8/14	4	22	0	364	0	0	0	0	0	0	0	0
2013/8/15	4	23	0	368	0	0	0	0	0	0	0	0
2013/8/16	5	34	0	474	0	0	0	0	0	0	0	0
2013/8/17	7	55	0	593	0	0	0	0	0	0	0	0
2013/8/18	6	32	0	528	0	0	0	0	0	0	0	0
2013/8/19	7	34	0	574	0	0	0	0	0	0	0	0
2013/8/20	7	32	0	600	0	0	0	0	0	0	0	0
2013/8/21	8	39	0	677	0	0	0	0	0	0	0	0
2013/8/22	9	47	0	766	0	0	0	0	0	0	0	0
2013/8/23	10	49	0	826	0	0	0	0	0	0	0	0
2013/8/24	11	47	0	918	0	0	0	0	0	0	0	0
2013/8/25	10	41	0	896	0	0	0	0	0	0	0	0
2013/8/26	12	51	0	1006	0	0	0	0	0	0	0	0
2013/8/27	12	50	0	1017	0	0	0	0	0	0	0	0
2013/8/28	11	50	0	941	0	0	0	0	0	0	0	0
2013/8/29	10	47	0	890	0	0	0	0	0	0	0	0
2013/8/30	8	41	0	724	0	0	0	0	0	0	0	0
2013/8/31	7	29	0	644	0	0	0	0	0	0	0	0
<i>Monthly</i>	6	55	0	15018	0	0	0	0	0	0	0	0

Table 4-9. September 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>
	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]
2013/9/1	8	30	0	685	0	0	0	0	0	0	0	0
2013/9/2	9	35	0	748	0	0	0	0	0	0	0	0
2013/9/3	8	30	0	661	0	0	0	0	0	0	0	0
2013/9/4	18	108	0	1545	0	0	0	0	0	0	0	0
2013/9/5	13	49	0	1152	0	0	0	0	0	0	0	0
2013/9/6	17	76	0	1467	0	0	0	0	0	0	0	0
2013/9/7	22	87	0	1875	0	0	0	0	0	0	0	0
2013/9/8	18	63	0	1582	0	0	0	0	0	0	0	0
2013/9/9	24	96	0	2079	0	0	0	0	0	0	0	0
2013/9/10	23	90	0	1974	0	0	0	0	0	0	0	0
2013/9/11	26	104	0	2216	0	0	0	0	0	0	0	0
2013/9/12	19	65	0	1682	0	0	0	0	0	0	0	0
2013/9/13	19	61	0	1673	0	0	0	0	0	0	0	0
2013/9/14	22	73	0	1943	0	0	0	0	0	0	0	0
2013/9/15	34	138	0	2908	0	0	0	0	0	0	0	0
2013/9/16	33	116	0	2811	0	0	0	0	0	0	0	0
2013/9/17	57	259	0	4896	0	0	0	0	0	0	0	0
2013/9/18	54	301	0	4657	0	0	0	0	0	0	0	0
2013/9/19	61	169	0	5312	0	0	0	0	0	0	0	0
2013/9/20	61	172	0	5237	0	0	0	0	0	0	0	0
2013/9/21	90	387	0	7767	0	0	0	0	0	0	0	0
2013/9/22	88	346	0	7636	0	0	0	0	0	0	0	0
2013/9/23	71	362	0	6162	0	0	0	0	0	0	0	0
2013/9/24	75	374	0	6452	0	0	0	0	0	0	0	0
2013/9/25	81	418	0	6958	0	0	0	0	0	0	0	0
2013/9/26	107	431	0	9223	0	0	0	0	0	0	0	0
2013/9/27	82	426	0	7043	0	0	0	0	0	0	0	0
2013/9/28	153	501	0	13208	0	0	0	0	0	0	0	0
2013/9/29	94	450	0	8160	0	1	0	1	0	0	0	0
2013/9/30	93	466	0	8000	0	1	0	4	0	0	0	0
<i>Monthly</i>	49	501	0	127711	0	1	0	6	0	0	0	0

Table 4-10. October 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispum</i>]			
	<i>daily average</i>	maximum	minimum	daily sum	<i>daily average</i>	maximum	minimum	daily sum	<i>daily average</i>	maximum	minimum	daily sum
	[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]		[$\mu\text{mol/m}^2/\text{s}$]		[$\times 10^3 \mu\text{mol/m}^2$]	
2013/10/1	137	137	0	11796	0	0	0	0	0	0	0	0
2013/10/2	140	140	0	12110	0	2	0	1	0	0	0	0
2013/10/3	89	89	0	7721	0	0	0	0	0	0	0	0
2013/10/4	122	122	0	10517	0	1	0	2	0	0	0	0
2013/10/5	152	152	0	13166	0	1	0	2	0	0	0	0
2013/10/6	154	154	0	13263	0	0	0	0	0	0	0	0
2013/10/7	143	143	0	12343	0	2	0	20	0	0	0	0
2013/10/8	154	154	0	13331	0	2	0	24	0	0	0	0
2013/10/9	159	159	0	13701	0	2	0	24	0	0	0	0
2013/10/10	157	157	0	13605	0	2	0	23	0	0	0	0
2013/10/11	166	166	0	14354	0	2	0	25	0	0	0	0
2013/10/12	164	164	0	14150	0	2	0	21	0	0	0	0
2013/10/13	135	135	0	11695	0	2	0	12	0	0	0	0
2013/10/14	177	177	0	15315	0	0	0	0	0	0	0	0
2013/10/15	182	182	0	15707	0	2	0	23	0	0	0	0
2013/10/16	118	118	0	10160	0	0	0	0	0	0	0	0
2013/10/17	216	216	0	18693	0	0	0	0	0	0	0	0
2013/10/18	188	188	0	16260	0	1	0	2	0	0	0	0
2013/10/19	215	215	0	18613	0	2	0	9	0	0	0	0
2013/10/20	233	233	0	20114	0	2	0	13	0	0	0	0
2013/10/21	173	173	0	14953	0	1	0	1	0	0	0	0
2013/10/22	96	96	0	8279	0	0	0	0	0	0	0	0
2013/10/23	112	112	0	9652	0	2	0	13	0	0	0	0
2013/10/24	174	174	0	15044	0	2	0	17	0	0	0	0
2013/10/25	124	124	0	10740	0	2	0	32	0	0	0	0
2013/10/26	157	157	0	13576	0	2	0	33	0	0	0	0
2013/10/27	226	226	0	19550	0	2	0	28	0	0	0	0
2013/10/28	187	187	0	16159	0	0	0	0	0	0	0	0
2013/10/29	353	353	0	30477	1	3	0	70	0	0	0	0
2013/10/30	353	353	0	30497	1	3	0	74	0	0	0	0
2013/10/31	335	335	0	28952	1	3	0	59	0	0	0	0
<i>Monthly</i>	177	353	0	474493	0	3	0	528	0	0	0	0

Table 4-11. November 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]			
	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>
	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]
2013/11/1	331	957	0	28620	1	3	0	56	0	0	0	0
2013/11/2	305	929	0	26366	0	2	0	39	0	0	0	0
2013/11/3	185	479	0	16018	0	0	0	0	0	0	0	0
2013/11/4	274	767	0	23703	0	2	0	41	0	0	0	0
2013/11/5	309	1012	0	26677	1	3	0	70	0	0	0	0
2013/11/6	296	831	0	25553	1	2	0	44	0	0	0	0
2013/11/7	107	328	0	9285	1	3	0	54	0	0	0	0
2013/11/8	131	518	0	11351	0	2	0	35	0	0	0	0
2013/11/9	267	743	0	23100	0	2	0	32	0	0	0	0
2013/11/10	216	527	0	18625	0	2	0	21	0	0	0	0
2013/11/11	385	948	0	33223	1	2	0	56	0	0	0	0
2013/11/12	316	848	2	27312	1	2	0	57	0	0	0	0
2013/11/13	317	988	2	27373	1	3	0	54	0	0	0	0
2013/11/14	351	1080	2	30352	1	3	0	63	0	0	0	0
2013/11/15	439	1098	3	37904	1	3	0	98	0	0	0	0
2013/11/16	390	1107	7	33736	1	3	0	88	0	0	0	0
2013/11/17	396	1115	8	34196	1	4	0	90	0	0	0	0
2013/11/18	382	1365	8	33036	1	5	0	90	0	0	0	0
2013/11/19	403	1189	7	34788	1	5	0	106	0	0	0	0
2013/11/20	458	1446	7	39587	1	5	0	114	0	0	0	0
2013/11/21	264	703	6	22783	1	2	0	53	0	0	0	0
2013/11/22	372	1311	7	32178	1	5	0	101	0	0	0	0
2013/11/23	458	1386	7	39614	2	7	0	139	0	0	0	0
2013/11/24	361	916	7	31195	1	3	0	97	0	0	0	0
2013/11/25	476	1186	7	41151	2	7	0	174	0	0	0	0
2013/11/26	466	1188	20	40243	2	7	0	184	0	0	0	0
2013/11/27	460	1405	20	39741	2	7	0	165	0	0	0	0
2013/11/28	509	1292	25	43993	2	7	0	203	0	2	0	8
2013/11/29	454	1217	24	39232	2	8	0	208	1	2	0	45
2013/11/30	507	1214	24	43762	3	8	0	262	1	2	0	80
<i>Monthly</i>	353	1446	0	914695	1	8	0	2795	0	2	0	133

Table 4-12. December 2013 PAR data ($\mu\text{mol/m}^2/\text{s}$) measured at 1 cm above the substratum (gravel ground or rock surface) at Sites 1–3.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]				Site 2 [<i>C. purpureus</i>]				Site 3 [<i>P. crispata</i>]						
	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>	<i>daily average</i>	maximum	minimum	<i>daily sum</i>			
	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]	[$\mu\text{mol/m}^2/\text{s}$]			[$\times 10^3 \mu\text{mol/m}^2$]			
2013/12/1	507	1224	34	43815	4	12	0	352	1	3	0	125			
2013/12/2	485	1232	32	41914	5	13	0	427	2	5	0	205			
2013/12/3	486	1234	34	41994	7	19	0	582	3	10	0	285			
2013/12/4	485	1239	34	41939	8	20	0	675	4	12	0	346			
2013/12/5	493	1250	34	42553	10	27	0	824	6	22	0	539			
2013/12/6	498	1248	37	43004	13	35	0	1120	13	47	2	1096			
2013/12/7	366	771	34	31599	9	19	1	781	15	33	2	1290			
2013/12/8	500	1476	35	43163	19	53	2	1599	24	84	2	2063			
2013/12/9	506	1256	42	43737	24	66	2	2066	32	118	2	2771			
2013/12/10	453	1450	42	39137	23	91	2	2019	30	116	2	2570			
2013/12/11	404	1500	30	34865	20	91	2	1761	27	163	2	2344			
2013/12/12	309	738	21	26680	14	35	2	1191	28	82	2	2390			
2013/12/13	507	1630	20	43816	28	113	2	2391	64	301	2	5521			
2013/12/14	379	1029	21	32728	22	59	2	1905	55	154	4	4749			
2013/12/15	280	778	19	24180	18	52	2	1554	48	148	3	4135			
2013/12/16	471	1260	32	40689	47	163	2	4086	147	554	7	12711			
2013/12/17	501	1490	51	43296	222	1475	3	19194	157	552	7	13548			
2013/12/18	353	852	47	30478	228	660	19	19664	140	409	15	12057			
2013/12/19	383	1082	24	33121	287	859	19	24755	162	523	9	14030			
2013/12/20	260	606	14	22430	185	439	9	15945	101	240	5	8763			
2013/12/21	407	1375	12	35130	311	1292	8	26911	227	1079	5	19603			
2013/12/22	222	486	19	19203	158	357	14	13673	93	219	8	8047			
2013/12/23	437	1249	16	37761	350	1222	10	30222	239	1092	6	20646			
2013/12/24	376	972	13	32490	264	753	10	22818	161	476	5	13907			
2013/12/25	362	1060	24	31274	260	954	18	22450	155	804	10	13358			
2013/12/26			*5					*5				*5			
2013/12/27			*5					*5				*5			
2013/12/28			*5					*5				*5			
2013/12/29			*5					*5				*5			
2013/12/30			*5					*5				*5			
<i>Monthly</i>	417	1630	12	900994	*5	101	1475	0	218962	*5	77	1092	0	167095	*5

Table 6-1. January 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]			
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	
2013/1/5	12.5	26.9	4.5		13.0	35.5	1.9		*4	
2013/1/6	12.9	27.6	4.7		13.5	36.7	2.2		*4	
2013/1/7	12.8	25.8	4.8		13.2	33.2	2.7		*4	
2013/1/8	13.4	28.0	5.5		13.7	34.2	3.2		*4	
2013/1/9	12.9	26.6	6.1		13.0	35.8	3.8		*4	
2013/1/10	11.7	26.3	5.4		12.1	35.8	3.4		*4	
2013/1/11	10.0	20.9	2.4		9.0	24.2	1.5		*4	
2013/1/12	4.6	18.2	0.7		4.7	29.8	-1.1		*4	
2013/1/13	6.0	19.8	-0.8		7.5	27.9	-1.3		*4	
2013/1/14	6.6	21.6	-0.6		6.6	23.9	-1.8		*4	
2013/1/15	7.3	18.4	1.1		5.3	21.7	-0.7		*4	
2013/1/16	9.1	22.0	2.0		8.1	20.7	0.2		*4	
2013/1/17	10.9	25.2	3.0		9.9	29.5	1.0		*4	
2013/1/18	9.5	22.7	3.4		9.8	30.3	1.5		*4	
2013/1/19	8.8	20.8	3.0		9.8	29.6	0.9		*4	
2013/1/20	10.2	17.7	2.8		8.6	22.4	0.6		*4	
2013/1/21	7.2	18.6	1.5		7.4	32.3	-0.3		*4	
2013/1/22	7.0	17.9	1.7		9.2	32.2	0.4		*4	
2013/1/23	3.1	16.8	-1.2		3.8	31.4	-1.8		*4	
2013/1/24	3.5	11.4	-1.2		3.2	11.5	-1.4		*4	
2013/1/25	4.0	8.9	0.9		3.9	12.7	0.3		*4	
2013/1/26		*4				*4			*4	
2013/1/27	7.4	22.1	0.1		7.7	29.2	-1.0	5.0	12.4	0.2
2013/1/28	5.9	14.7	1.6		5.3	16.1	0.1	4.0	7.8	0.8
2013/1/29	6.9	25.4	-0.3		7.8	29.5	-1.3	5.5	12.5	-1.0
2013/1/30	6.5	18.5	0.5		8.3	26.4	-0.7	5.1	11.2	0.3
2013/1/31		*4				*4			*4	
<i>Monthly</i>	8.4	28.0	-1.2 *4		8.6	36.7	-1.8 *4	4.9	12.5	-1.0 *4

Table 6-2. February 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/2/2	-1.1	5.1	-3.6	-0.2	17.2	-3.5	-0.6	4.8	-3.4
2013/2/3	1.1	7.6	-3.6	1.9	13.8	-2.8	1.5	7.9	-2.3
2013/2/4	2.1	7.8	-1.4	1.6	6.9	-0.3	1.9	6.5	-0.9
2013/2/5	0.6	5.0	-2.0	0.1	1.7	-0.4	0.9	3.8	-1.0
2013/2/6	1.7	6.7	-3.2	1.3	7.1	-1.1	1.9	5.9	-1.1
2013/2/7	3.7	12.8	-3.6	2.2	12.4	-1.8	2.4	7.3	-1.4
2013/2/8	0.2	11.4	-3.6	-0.5	10.9	-3.2	-0.5	2.7	-2.5
2013/2/9	0.7	3.8	-1.6	-0.4	1.3	-1.6	0.3	2.4	-0.8
2013/2/10	2.1	9.6	-1.9	1.0	6.4	-1.5	1.5	6.5	-0.8
2013/2/11	0.7	7.1	-1.6	0.2	7.5	-1.4	0.5	4.3	-0.7
2013/2/12	-0.8	1.6	-3.0	-0.9	1.0	-2.5	-0.6	0.2	-1.6
2013/2/13	1.0	8.6	-3.8	0.7	8.1	-3.1	0.2	3.9	-2.2
2013/2/14	-0.1	10.5	-4.9	2.2	14.6	-3.8	-0.5	4.2	-3.5
2013/2/15	2.7	12.0	-1.8	2.8	16.3	-1.8	1.4	6.6	-2.1
2013/2/16	4.1	14.4	-1.1	4.0	17.9	-1.7	2.4	7.1	-0.5
2013/2/17	0.2	10.8	-4.4	2.5	17.2	-3.9	-0.1	4.4	-2.9
2013/2/18	-0.8	9.2	-5.1	1.8	16.8	-4.4	-0.9	4.0	-3.7
2013/2/19	0.5	7.5	-5.0	0.4	7.4	-4.4	-0.5	3.7	-4.1
2013/2/20	1.4	6.0	-1.9	1.1	4.7	-1.5	0.4	2.4	-1.2
2013/2/21	2.1	8.6	-0.9	2.4	14.9	-1.2	1.9	7.7	-0.7
2013/2/22	1.4	6.3	-1.1	1.0	5.3	-1.1	0.9	4.2	-0.8
2013/2/23	0.3	3.5	-1.5	0.1	2.4	-1.3	-0.2	1.2	-0.9
2013/2/24	2.4	8.2	-0.7	2.6	12.8	-0.4	1.9	6.6	-0.5
2013/2/25	1.3	3.8	-0.7	1.1	3.7	-0.9	1.0	2.5	-0.9
2013/2/26	1.2	4.1	-0.7	0.8	3.5	-0.9	0.7	2.9	-0.9
2013/2/27	0.9	6.3	-3.4	0.5	5.1	-3.1	0.5	3.8	-2.1
2013/2/28	-0.4	4.2	-3.6	0.0	6.6	-3.3	-0.5	1.9	-2.4
<i>Monthly</i>	1.1	14.4	-5.1	1.1	17.9	-4.4	0.7	7.9	-4.1

Table 6-3. March 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/3/1	0.5	5.8	-1.8	0.5	4.8	-1.6	0.1	2.3	-1.1
2013/3/2	0.3	8.3	-3.9	1.8	13.7	-4.3	0.1	3.8	-3.2
2013/3/3	-2.6	0.1	-5.6	-2.3	0.3	-5.1	-2.1	-0.2	-4.0
2013/3/4	-5.2	-1.0	-9.0	-3.5	6.3	-8.3	-3.7	-0.1	-7.0
2013/3/5	-6.4	-5.0	-8.0	-4.9	-3.4	-6.8	-4.3	-3.0	-6.3
2013/3/6	-5.7	-2.3	-7.1	-4.0	2.6	-7.5	-3.9	-1.4	-6.5
2013/3/7	-3.7	-1.0	-6.5	-3.1	0.4	-6.6	-3.3	-0.6	-6.4
2013/3/8	-3.4	-0.4	-5.4	-3.1	1.7	-5.7	-3.0	-0.5	-5.3
2013/3/9	-5.6	-2.3	-8.1	-5.6	2.5	-9.5	-5.7	-2.1	-9.1
2013/3/10	-6.6	-2.3	-8.9	-5.9	2.4	-9.6	-6.5	-1.3	-9.3
2013/3/11	-8.7	-4.9	-10.2	-8.0	-1.6	-10.1	-8.3	-4.0	-10.5
2013/3/12	-6.0	-0.4	-10.2	-4.9	1.7	-9.3	-5.9	-1.3	-9.8
2013/3/13	-3.6	0.8	-6.9	-3.1	1.5	-6.1	-3.8	-1.0	-6.5
2013/3/14	-3.2	-2.1	-4.5	-3.4	-2.3	-4.2	-3.4	-2.3	-4.3
2013/3/15	-1.8	0.4	-3.3	-2.0	0.3	-3.7	-2.4	-0.9	-3.7
2013/3/16	-1.8	0.0	-3.2	-1.6	0.2	-3.0	-2.2	-0.9	-3.3
2013/3/17	-2.0	1.2	-3.9	-1.7	2.1	-3.8	-2.4	0.0	-3.9
2013/3/18	-3.2	-0.3	-8.5	-3.1	-0.4	-8.6	-3.3	-1.4	-8.0
2013/3/19	-6.6	-2.8	-10.4	-5.8	-1.2	-10.1	-6.6	-3.0	-10.2
2013/3/20	-4.0	-2.8	-5.7	-3.5	-2.2	-5.2	-4.1	-3.1	-5.5
2013/3/21	-2.6	-0.5	-3.9	-2.3	-0.1	-3.9	-2.9	-1.3	-4.1
2013/3/22	-2.9	-0.2	-5.2	-2.9	0.2	-5.5	-3.7	-1.8	-5.3
2013/3/23	-5.4	-2.1	-7.9	-5.3	-1.0	-8.4	-5.4	-3.2	-7.5
2013/3/24	-4.7	-2.2	-7.7	-4.3	-1.5	-7.8	-5.2	-3.5	-8.0
2013/3/25	-7.5	-3.3	-9.8	-7.0	-2.2	-9.7	-7.3	-4.1	-9.5
2013/3/26	-6.1	-4.4	-8.9	-5.5	-3.5	-8.4	-6.0	-4.7	-8.6
2013/3/27	-4.4	-2.2	-5.9	-4.3	-2.4	-5.5	-4.4	-2.9	-5.4
2013/3/28	-3.9	-1.5	-5.1	-3.9	-1.6	-5.2	-4.1	-2.6	-4.9
2013/3/29	-3.4	-1.4	-4.8	-3.5	-1.0	-5.4	-3.9	-2.5	-5.2
2013/3/30	-4.1	-3.8	-4.3	-4.1	-3.6	-5.4	-4.4	-4.1	-4.8
2013/3/31	-3.6	-3.4	-3.8	-3.5	-3.4	-3.6	-4.0	-3.9	-4.1
<i>Monthly</i>	-4.1	8.3	-10.4	-3.7	13.7	-10.1	-4.1	3.8	-10.5

Table 6-4. April 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/4/1	-4.6	-3.7	-5.0	-3.8	-3.6	-3.9	-4.3	-4.0	-4.4
2013/4/2	-5.1	-5.0	-5.2	-3.9	-3.9	-3.9	-4.4	-4.4	-4.4
2013/4/3	-5.2	-5.1	-5.2	-3.9	-3.9	-4.0	-4.4	-4.4	-4.4
2013/4/4	-5.2	-5.2	-5.3	-4.0	-3.9	-4.0	-4.4	-4.4	-4.5
2013/4/5	-5.3	-5.3	-5.5	-4.0	-4.0	-4.0	-4.5	-4.5	-4.5
2013/4/6	-5.7	-5.5	-6.1	-4.1	-4.0	-4.1	-4.6	-4.5	-4.7
2013/4/7	-6.6	-6.1	-7.0	-4.2	-4.1	-4.4	-4.9	-4.7	-5.2
2013/4/8	-7.2	-7.0	-7.5	-4.6	-4.4	-4.7	-5.4	-5.2	-5.7
2013/4/9	-7.5	-7.4	-7.6	-4.9	-4.7	-5.0	-5.8	-5.7	-5.9
2013/4/10	-7.6	-7.5	-7.7	-5.1	-5.0	-5.2	-6.0	-5.9	-6.1
2013/4/11	-7.6	-7.5	-7.9	-5.2	-5.2	-5.3	-6.1	-6.1	-6.1
2013/4/12	-7.7	-7.6	-7.9	-5.3	-5.3	-5.3	-6.1	-6.1	-6.1
2013/4/13	-7.9	-7.8	-8.3	-5.4	-5.3	-5.4	-6.1	-6.1	-6.1
2013/4/14	-8.4	-8.3	-8.9	-5.4	-5.4	-5.5	-6.2	-6.1	-6.4
2013/4/15	-9.1	-8.9	-9.3	-5.5	-5.5	-5.6	-6.5	-6.4	-6.7
2013/4/16	-8.8	-8.6	-9.0	-5.7	-5.6	-5.8	-6.8	-6.7	-6.8
2013/4/17	-8.8	-8.5	-9.1	-5.8	-5.8	-5.9	-6.8	-6.8	-6.9
2013/4/18	-8.2	-7.4	-8.7	-5.9	-5.9	-5.9	-6.8	-6.7	-6.8
2013/4/19	-9.5	-8.6	-10.8	-5.9	-5.9	-5.9	-6.7	-6.6	-6.7
2013/4/20	-11.6	-10.3	-12.7	-6.0	-5.9	-6.0	-6.8	-6.7	-7.1
2013/4/21	-12.5	-11.2	-14.4	-6.1	-6.0	-6.2	-7.3	-7.1	-7.4
2013/4/22	-14.5	-13.4	-16.0	-6.3	-6.2	-6.5	-7.7	-7.4	-8.0
2013/4/23	-15.7	-14.6	-16.8	-6.6	-6.5	-6.8	-8.3	-8.0	-8.6
2013/4/24	-13.0	-12.2	-14.4	-7.0	-6.8	-7.1	-8.7	-8.6	-8.8
2013/4/25	-13.2	-12.2	-14.2	-7.2	-7.1	-7.2	-8.5	-8.5	-8.7
2013/4/26	-13.9	-13.4	-14.8	-7.3	-7.2	-7.4	-8.6	-8.5	-8.7
2013/4/27	-12.6	-11.8	-14.8	-7.4	-7.4	-7.5	-8.8	-8.7	-8.8
2013/4/28	-12.0	-10.9	-13.0	-7.5	-7.5	-7.6	-8.7	-8.6	-8.8
2013/4/29	-12.7	-12.1	-14.0	-7.6	-7.6	-7.6	-8.6	-8.6	-8.7
2013/4/30	-13.2	-12.3	-13.9	-7.7	-7.6	-7.7	-8.8	-8.7	-8.9
<i>Monthly</i>	-9.4	-3.7	-16.8	-5.6	-3.6	-7.7	-6.6	-4.0	-8.9

Table 6-5. May 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]			
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	
2013/5/1	-13.2	-12.4	-14.0		-7.8	-7.7	-7.8	-9.0	-8.9	-9.1
2013/5/2	-12.3	-11.8	-14.0		-7.9	-7.8	-7.9	-9.1	-9.0	-9.1
2013/5/3	-15.4	-14.0	-16.2		-7.9	-7.9	-8.0	-9.2	-9.0	-9.6
2013/5/4	-15.0	-13.6	-16.3		-8.1	-8.0	-8.3	-9.9	-9.6	-10.1
2013/5/5	-17.2	-16.1	-18.8		-8.4	-8.3	-8.5	-10.2	-10.0	-10.5
2013/5/6	-19.3	-17.6	-20.0		-8.7	-8.5	-8.9	-11.0	-10.5	-11.5
2013/5/7	-13.1	-10.4	-17.3		-9.1	-8.9	-9.3	-11.5	-11.1	-11.6
2013/5/8	-11.0	-10.5	-12.6		-9.2	-9.1	-9.3	-10.5	-10.0	-11.0
2013/5/9	-15.8	-12.6	-18.2		-9.0	-9.0	-9.1	-10.0	-9.9	-10.4
2013/5/10	-19.1	-18.2	-20.0		-9.1	-9.0	-9.2	-10.9	-10.4	-11.5
2013/5/11	-20.5	-19.3	-21.3		-9.4	-9.2	-9.6	-11.9	-11.5	-12.3
2013/5/12	-21.9	-21.1	-22.7		-9.8	-9.6	-10.0	-12.6	-12.3	-13.0
2013/5/13	-21.7	-20.3	-22.8		-10.2	-10.0	-10.4	-13.2	-13.0	-13.4
2013/5/14	-21.1	-20.0	-22.2		-10.6	-10.4	-10.8	-13.4	-13.4	-13.5
2013/5/15	-22.3	-21.1	-23.3		-10.9	-10.8	-11.1	-13.5	-13.4	-13.7
2013/5/16	-22.0	-20.2	-23.6		-11.2	-11.0	-11.3	-13.8	-13.7	-13.9
2013/5/17	-19.3	-17.2	-22.2		-11.4	-11.3	-11.5	-13.8	-13.6	-13.9
2013/5/18	-16.1	-15.5	-17.0		-11.5	-11.5	-11.5	-13.2	-12.8	-13.6
2013/5/19	-16.1	-15.3	-17.2		-11.4	-11.3	-11.5	-12.6	-12.4	-12.8
2013/5/20	-16.7	-16.0	-17.2		-11.3	-11.2	-11.3	-12.5	-12.4	-12.6
2013/5/21	-17.3	-15.9	-18.2		-11.2	-11.2	-11.3	-12.6	-12.6	-12.7
2013/5/22	-18.5	-17.9	-19.6		-11.3	-11.2	-11.3	-12.9	-12.7	-13.1
2013/5/23	-21.7	-19.3	-23.5		-11.4	-11.3	-11.5	-13.4	-13.1	-13.9
2013/5/24	-19.4	-18.0	-21.7		-11.7	-11.5	-11.9	-14.2	-13.9	-14.3
2013/5/25	-18.0	-17.4	-19.0		-12.0	-11.9	-12.0	-13.9	-13.7	-14.2
2013/5/26	-16.0	-13.2	-17.6		-12.0	-12.0	-12.0	-13.5	-13.3	-13.7
2013/5/27	-11.3	-9.0	-13.0		-11.9	-11.7	-12.0	-12.8	-12.3	-13.3
2013/5/28	-10.9	-9.0	-13.5		-11.5	-11.3	-11.7	-11.9	-11.7	-12.3
2013/5/29	-16.6	-13.5	-19.1		-11.2	-11.1	-11.3	-11.9	-11.7	-12.4
2013/5/30	-18.6	-17.1	-19.7		-11.2	-11.1	-11.4	-12.9	-12.4	-13.4
2013/5/31	-17.5	-16.3	-18.6		-11.5	-11.4	-11.6	-13.5	-13.4	-13.5
<i>Monthly</i>	-17.3	-9.0	-23.6		-10.3	-7.7	-12.0	-12.1	-8.9	-14.3

Table 6-6. June 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/6/1	-15.7	-13.9	-18.4	-11.6	-11.6	-11.7	-13.4	-13.1	-13.5
2013/6/2	-18.9	-16.9	-21.2	-11.7	-11.6	-11.7	-13.3	-13.1	-13.6
2013/6/3	-17.3	-15.8	-18.7	-11.8	-11.7	-11.9	-13.7	-13.6	-13.8
2013/6/4	-16.7	-15.6	-18.5	-11.9	-11.8	-11.9	-13.7	-13.6	-13.8
2013/6/5	-14.9	-14.0	-16.0	-11.9	-11.9	-12.0	-13.3	-13.1	-13.6
2013/6/6	-14.3	-13.4	-15.4	-11.8	-11.7	-11.9	-12.8	-12.6	-13.1
2013/6/7	-14.6	-14.5	-14.7	-11.7	-11.6	-11.7	-12.6	-12.6	-12.7
2013/6/8	-14.3	-14.1	-14.5	-11.6	-11.6	-11.6	-12.6	-12.6	-12.6
2013/6/9	-14.1	-14.0	-14.2	-11.6	-11.5	-11.6	-12.5	-12.5	-12.6
2013/6/10	-14.5	-14.1	-15.0	-11.5	-11.5	-11.5	-12.5	-12.4	-12.5
2013/6/11	-15.3	-15.0	-15.4	-11.5	-11.5	-11.6	-12.7	-12.5	-12.9
2013/6/12	-15.3	-15.2	-15.4	-11.7	-11.6	-11.7	-13.0	-12.9	-13.1
2013/6/13	-15.2	-15.0	-15.3	-11.8	-11.7	-11.8	-13.1	-13.1	-13.2
2013/6/14	-15.1	-14.9	-15.3	-11.9	-11.8	-11.9	-13.1	-13.0	-13.2
2013/6/15	-15.2	-15.1	-15.5	-11.9	-11.9	-11.9	-13.1	-13.0	-13.1
2013/6/16	-16.1	-15.5	-16.5	-11.9	-11.9	-12.0	-13.1	-13.1	-13.2
2013/6/17	-16.2	-15.9	-16.5	-12.0	-11.9	-12.0	-13.3	-13.2	-13.3
2013/6/18	-16.5	-16.3	-16.7	-12.1	-12.0	-12.1	-13.3	-13.3	-13.4
2013/6/19	-16.5	-16.3	-16.7	-12.1	-12.1	-12.2	-13.4	-13.4	-13.5
2013/6/20	-14.2	-13.0	-16.6	-12.2	-12.2	-12.2	-13.4	-13.3	-13.4
2013/6/21	-13.8	-12.8	-15.1	-12.2	-12.1	-12.2	-13.0	-12.8	-13.2
2013/6/22	-15.5	-15.1	-15.7	-12.0	-11.9	-12.1	-12.8	-12.7	-12.8
2013/6/23	-14.4	-13.5	-15.3	-12.0	-11.9	-12.0	-12.9	-12.8	-12.9
2013/6/24	-13.4	-13.1	-13.9	-11.9	-11.9	-12.0	-12.7	-12.6	-12.8
2013/6/25	-15.2	-13.9	-16.2	-11.8	-11.8	-11.9	-12.6	-12.5	-12.7
2013/6/26	-16.7	-16.1	-17.4	-11.8	-11.8	-11.8	-12.8	-12.7	-13.0
2013/6/27	-18.1	-17.2	-18.9	-11.9	-11.8	-12.0	-13.3	-13.0	-13.5
2013/6/28	-15.5	-13.5	-17.5	-12.1	-12.0	-12.2	-13.5	-13.5	-13.6
2013/6/29	-11.8	-11.1	-13.2	-12.2	-12.1	-12.2	-13.1	-12.8	-13.4
2013/6/30	-10.1	-9.0	-11.3	-11.9	-11.7	-12.1	-12.5	-12.2	-12.8
<i>Monthly</i>	-15.2	-9.0	-21.2	-11.9	-11.5	-12.2	-13.0	-12.2	-13.8

Table 6-7. July 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/7/1	-10.2	-9.6	-10.7	-11.5	-11.3	-11.6	-11.9	-11.7	-12.2
2013/7/2	-10.9	-10.5	-11.3	-11.2	-11.1	-11.3	-11.7	-11.6	-11.7
2013/7/3	-11.5	-10.9	-12.3	-11.0	-11.0	-11.1	-11.6	-11.6	-11.6
2013/7/4	-12.0	-11.3	-13.6	-10.9	-10.9	-11.0	-11.6	-11.6	-11.7
2013/7/5	-14.6	-13.0	-17.5	-10.9	-10.9	-10.9	-11.7	-11.6	-11.9
2013/7/6	-18.6	-17.5	-19.5	-11.0	-10.9	-11.1	-12.2	-11.9	-12.7
2013/7/7	-13.0	-9.4	-17.4	-11.3	-11.1	-11.5	-13.0	-12.7	-13.1
2013/7/8	-11.0	-9.5	-12.0	-11.5	-11.4	-11.6	-12.4	-12.1	-12.9
2013/7/9	-12.1	-11.3	-14.1	-11.3	-11.2	-11.4	-11.9	-11.8	-12.0
2013/7/10	-15.0	-14.1	-15.6	-11.1	-11.1	-11.2	-11.9	-11.7	-12.1
2013/7/11	-15.0	-14.7	-15.2	-11.2	-11.1	-11.2	-12.3	-12.1	-12.4
2013/7/12	-14.5	-14.0	-15.5	-11.3	-11.2	-11.4	-12.4	-12.4	-12.5
2013/7/13	-16.3	-15.4	-17.3	-11.4	-11.3	-11.4	-12.4	-12.4	-12.5
2013/7/14	-19.2	-17.3	-21.0	-11.5	-11.4	-11.6	-12.8	-12.5	-13.1
2013/7/15	-22.5	-21.0	-23.8	-11.8	-11.6	-12.0	-13.5	-13.1	-14.0
2013/7/16	-25.3	-23.8	-27.0	-12.3	-12.0	-12.6	-14.5	-14.0	-15.1
2013/7/17	-27.3	-26.4	-27.8	-12.9	-12.6	-13.3	-15.7	-15.1	-16.4
2013/7/18	-25.8	-25.1	-26.8	-13.6	-13.3	-13.9	-16.7	-16.4	-16.9
2013/7/19	-26.6	-25.5	-27.5	-14.1	-13.9	-14.3	-17.0	-16.9	-17.1
2013/7/20	-27.6	-26.6	-28.1	-14.5	-14.3	-14.7	-17.4	-17.1	-17.7
2013/7/21	-24.3	-22.7	-26.7	-14.9	-14.7	-15.1	-17.8	-17.7	-17.9
2013/7/22	-25.9	-24.2	-27.1	-15.2	-15.1	-15.2	-17.5	-17.5	-17.7
2013/7/23	-25.7	-24.6	-27.0	-15.3	-15.2	-15.5	-17.8	-17.6	-18.0
2013/7/24	-25.0	-23.5	-25.8	-15.6	-15.4	-15.6	-18.0	-18.0	-18.1
2013/7/25	-20.8	-18.3	-23.9	-15.7	-15.6	-15.7	-17.9	-17.7	-18.1
2013/7/26	-16.4	-14.5	-18.8	-15.6	-15.4	-15.7	-17.1	-16.5	-17.6
2013/7/27	-13.5	-12.8	-14.4	-15.2	-15.0	-15.4	-16.0	-15.5	-16.5
2013/7/28	-14.6	-13.9	-15.5	-14.7	-14.5	-15.0	-15.1	-14.9	-15.4
2013/7/29	-16.7	-15.3	-18.2	-14.3	-14.2	-14.5	-14.9	-14.8	-14.9
2013/7/30	-20.3	-18.1	-24.1	-14.1	-14.1	-14.2	-15.1	-14.9	-15.4
2013/7/31	-23.1	-21.2	-25.8	-14.2	-14.1	-14.4	-15.9	-15.4	-16.5
<i>Monthly</i>	-18.6	-9.4	-28.1	-12.9	-10.9	-15.7	-14.4	-11.6	-18.1

Table 6-8. August 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/8/1	-17.8	-14.4	-21.3	-14.6	-14.4	-14.7	-16.5	-16.3	-16.6
2013/8/2	-14.2	-13.3	-15.7	-14.6	-14.5	-14.7	-15.8	-15.3	-16.3
2013/8/3	-11.9	-11.0	-13.6	-14.3	-14.1	-14.5	-14.9	-14.6	-15.2
2013/8/4	-11.9	-10.7	-12.7	-13.9	-13.7	-14.1	-14.2	-13.9	-14.5
2013/8/5	-10.5	-9.8	-11.9	-13.5	-13.3	-13.7	-13.7	-13.5	-13.9
2013/8/6	-12.8	-11.9	-13.7	-13.1	-13.0	-13.3	-13.3	-13.3	-13.5
2013/8/7	-12.9	-12.6	-13.2	-12.9	-12.8	-13.0	-13.4	-13.3	-13.4
2013/8/8	-13.9	-13.1	-14.5	-12.8	-12.7	-12.8	-13.4	-13.4	-13.4
2013/8/9	-14.7	-14.3	-16.0	-12.8	-12.7	-12.8	-13.5	-13.4	-13.6
2013/8/10	-15.5	-15.0	-16.2	-12.8	-12.8	-12.9	-13.7	-13.6	-13.9
2013/8/11	-16.4	-16.0	-16.9	-12.9	-12.9	-13.0	-14.0	-13.9	-14.1
2013/8/12	-16.4	-15.6	-16.8	-13.0	-13.0	-13.1	-14.2	-14.1	-14.4
2013/8/13	-16.1	-15.3	-16.8	-13.2	-13.1	-13.2	-14.4	-14.3	-14.4
2013/8/14	-15.5	-15.2	-15.7	-13.2	-13.2	-13.3	-14.3	-14.2	-14.4
2013/8/15	-15.9	-15.0	-16.8	-13.2	-13.2	-13.3	-14.2	-14.1	-14.2
2013/8/16	-17.2	-15.5	-18.2	-13.2	-13.2	-13.2	-14.3	-14.1	-14.4
2013/8/17	-14.3	-13.5	-15.2	-13.3	-13.2	-13.3	-14.4	-14.3	-14.5
2013/8/18	-14.3	-13.4	-15.6	-13.2	-13.2	-13.3	-14.1	-13.9	-14.2
2013/8/19	-17.6	-15.6	-18.7	-13.1	-13.1	-13.2	-13.9	-13.9	-14.2
2013/8/20	-20.1	-18.7	-21.1	-13.1	-13.1	-13.2	-14.6	-14.2	-15.0
2013/8/21	-20.5	-19.6	-21.3	-13.4	-13.2	-13.6	-15.5	-15.0	-15.8
2013/8/22	-20.2	-19.8	-20.6	-13.7	-13.6	-13.9	-15.9	-15.8	-16.0
2013/8/23	-18.3	-16.9	-19.9	-14.0	-13.9	-14.0	-15.9	-15.8	-16.0
2013/8/24	-18.0	-16.8	-19.7	-14.1	-14.0	-14.1	-15.6	-15.4	-15.8
2013/8/25	-20.1	-19.3	-20.6	-14.0	-14.0	-14.1	-15.5	-15.4	-15.7
2013/8/26	-20.4	-19.5	-21.2	-14.1	-14.0	-14.2	-15.9	-15.7	-16.1
2013/8/27	-20.4	-19.8	-21.4	-14.3	-14.2	-14.4	-16.2	-16.1	-16.4
2013/8/28	-20.0	-19.0	-21.4	-14.4	-14.4	-14.5	-16.4	-16.3	-16.4
2013/8/29	-20.0	-19.3	-20.8	-14.5	-14.5	-14.6	-16.3	-16.3	-16.3
2013/8/30	-21.9	-20.8	-23.8	-14.6	-14.6	-14.7	-16.3	-16.3	-16.5
2013/8/31	-24.5	-23.8	-25.1	-14.8	-14.7	-15.0	-16.9	-16.5	-17.4
<i>Monthly</i>	-16.9	-9.8	-25.1	-13.6	-12.7	-15.0	-14.9	-13.3	-17.4

Table 6-9. September 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/9/1	-25.8	-25.1	-26.6	-15.2	-15.0	-15.5	-17.9	-17.4	-18.4
2013/9/2	-26.0	-24.5	-26.8	-15.7	-15.5	-15.9	-18.8	-18.4	-19.1
2013/9/3	-18.5	-14.3	-24.3	-16.1	-15.9	-16.3	-19.1	-18.7	-19.2
2013/9/4	-14.8	-13.4	-16.8	-16.3	-16.1	-16.3	-17.7	-16.9	-18.7
2013/9/5	-18.2	-16.8	-19.3	-15.8	-15.5	-16.0	-16.4	-16.3	-16.8
2013/9/6	-16.2	-15.2	-18.7	-15.4	-15.3	-15.6	-16.3	-16.2	-16.4
2013/9/7	-17.1	-16.4	-18.1	-15.2	-15.1	-15.3	-16.0	-15.9	-16.2
2013/9/8	-18.5	-17.7	-19.5	-15.0	-14.9	-15.1	-16.0	-15.9	-16.1
2013/9/9	-18.1	-16.6	-19.9	-14.9	-14.9	-15.0	-16.2	-16.1	-16.3
2013/9/10	-18.7	-16.8	-19.9	-14.9	-14.9	-15.0	-16.3	-16.2	-16.3
2013/9/11	-16.9	-14.7	-19.7	-14.9	-14.9	-14.9	-16.3	-16.2	-16.3
2013/9/12	-17.1	-16.0	-18.8	-14.9	-14.8	-14.9	-16.0	-15.9	-16.2
2013/9/13	-19.4	-17.5	-20.8	-14.8	-14.8	-14.9	-15.9	-15.8	-16.0
2013/9/14	-17.4	-16.0	-20.3	-14.8	-14.8	-14.8	-16.3	-16.0	-16.4
2013/9/15	-15.1	-13.7	-17.7	-14.9	-14.8	-14.9	-16.1	-15.8	-16.3
2013/9/16	-13.7	-11.9	-15.2	-14.7	-14.6	-14.8	-15.5	-15.3	-15.8
2013/9/17	-9.3	-8.0	-11.7	-14.5	-14.3	-14.6	-15.0	-14.6	-15.3
2013/9/18	-8.9	-7.3	-11.6	-14.1	-13.8	-14.3	-14.2	-13.8	-14.6
2013/9/19	-12.6	-11.0	-15.1	-13.6	-13.4	-13.8	-13.7	-13.6	-13.8
2013/9/20	-15.0	-13.9	-15.7	-13.3	-13.2	-13.4	-13.9	-13.7	-14.2
2013/9/21	-13.7	-10.7	-15.9	-13.3	-13.3	-13.3	-14.4	-14.2	-14.5
2013/9/22	-13.1	-9.4	-15.2	-13.3	-13.3	-13.4	-14.4	-14.3	-14.4
2013/9/23	-14.8	-12.6	-15.8	-13.3	-13.2	-13.3	-14.3	-14.2	-14.4
2013/9/24	-13.8	-10.9	-15.2	-13.3	-13.2	-13.3	-14.4	-14.4	-14.5
2013/9/25	-14.6	-10.2	-17.0	-13.3	-13.3	-13.3	-14.5	-14.4	-14.5
2013/9/26	-15.9	-11.7	-19.5	-13.3	-13.2	-13.3	-14.6	-14.5	-14.7
2013/9/27	-16.9	-12.6	-19.2	-13.3	-13.3	-13.4	-15.0	-14.7	-15.3
2013/9/28	-12.9	-8.2	-16.4	-13.5	-13.4	-13.5	-15.2	-15.0	-15.3
2013/9/29	-16.2	-10.5	-20.0	-13.5	-13.4	-13.5	-14.9	-14.8	-15.0
2013/9/30	-19.4	-13.3	-21.5	-13.5	-13.4	-13.5	-15.1	-14.8	-15.4
<i>Monthly</i>	-16.3	-7.3	-26.8	-14.4	-13.2	-16.3	-15.7	-13.6	-19.2

Table 6-10. October 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/10/1	-13.9	-8.4	-21.8	-13.6	-13.5	-13.8	-15.7	-15.4	-15.8
2013/10/2	-10.4	-4.5	-15.0	-13.7	-13.7	-13.8	-15.3	-14.9	-15.6
2013/10/3	-9.8	-7.2	-12.4	-13.5	-13.4	-13.7	-14.5	-14.2	-14.9
2013/10/4	-12.4	-7.0	-16.5	-13.2	-13.1	-13.4	-14.0	-13.9	-14.2
2013/10/5	-12.5	-6.5	-16.8	-13.0	-13.0	-13.1	-14.0	-13.9	-14.2
2013/10/6	-10.9	-6.6	-13.5	-13.0	-12.9	-13.0	-14.1	-14.0	-14.2
2013/10/7	-12.7	-5.5	-16.8	-12.9	-12.8	-12.9	-13.9	-13.9	-14.0
2013/10/8	-14.0	-5.3	-17.6	-12.8	-12.8	-12.8	-14.1	-13.9	-14.2
2013/10/9	-14.9	-4.8	-19.1	-12.8	-12.8	-12.9	-14.4	-14.2	-14.6
2013/10/10	-16.1	-8.1	-20.4	-12.9	-12.9	-13.0	-14.8	-14.6	-14.9
2013/10/11	-16.6	-7.0	-21.3	-13.0	-13.0	-13.1	-15.1	-14.9	-15.2
2013/10/12	-17.3	-8.9	-21.3	-13.2	-13.1	-13.3	-15.4	-15.2	-15.7
2013/10/13	-17.5	-9.7	-21.3	-13.4	-13.3	-13.5	-15.8	-15.6	-15.9
2013/10/14	-16.4	-13.4	-18.4	-13.6	-13.5	-13.6	-15.7	-15.6	-15.9
2013/10/15	-16.1	-8.0	-19.0	-13.6	-13.6	-13.6	-15.5	-15.4	-15.6
2013/10/16	-9.1	-8.1	-13.3	-13.6	-13.5	-13.6	-15.2	-14.8	-15.4
2013/10/17	-8.0	-6.6	-9.7	-13.3	-13.0	-13.5	-14.1	-13.5	-14.7
2013/10/18	-9.7	-7.5	-12.0	-12.8	-12.6	-13.0	-13.2	-12.9	-13.5
2013/10/19	-7.9	-3.9	-11.8	-12.4	-12.3	-12.6	-12.9	-12.8	-12.9
2013/10/20	-6.8	-1.8	-10.1	-12.1	-12.0	-12.3	-12.6	-12.4	-12.8
2013/10/21	-8.5	-5.4	-10.0	-11.9	-11.7	-12.0	-12.3	-12.2	-12.4
2013/10/22	-9.2	-7.9	-10.2	-11.6	-11.5	-11.7	-12.2	-12.1	-12.2
2013/10/23	-10.0	-8.6	-11.6	-11.4	-11.4	-11.5	-12.0	-12.0	-12.1
2013/10/24	-9.9	-7.7	-11.5	-11.3	-11.3	-11.4	-12.1	-12.0	-12.2
2013/10/25	-10.3	-8.1	-11.8	-11.3	-11.2	-11.3	-12.1	-12.1	-12.2
2013/10/26	-11.0	-8.3	-12.6	-11.2	-11.1	-11.2	-12.1	-12.0	-12.2
2013/10/27	-10.0	-7.8	-12.9	-11.1	-11.1	-11.2	-12.2	-12.1	-12.3
2013/10/28	-7.4	-5.9	-9.8	-11.1	-11.0	-11.2	-12.1	-11.8	-12.3
2013/10/29	-3.7	3.0	-8.8	-10.9	-10.8	-11.0	-11.5	-11.1	-11.8
2013/10/30	-4.0	8.8	-11.5	-10.6	-10.5	-10.8	-11.1	-11.0	-11.1
2013/10/31	-3.6	6.2	-10.9	-10.3	-10.2	-10.5	-11.1	-11.0	-11.2
<i>Monthly</i>	-11.0	8.8	-21.8	-12.4	-10.2	-13.8	-13.6	-11.0	-15.9

Table 6-11. November 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/11/1	-5.0	0.1	-10.7	-10.1	-10.0	-10.2	-10.9	-10.7	-11.1
2013/11/2	-6.4	0.4	-10.6	-9.9	-9.8	-10.0	-10.6	-10.6	-10.7
2013/11/3	-5.2	-3.5	-7.8	-9.8	-9.8	-9.9	-10.6	-10.4	-10.7
2013/11/4	-1.6	4.9	-5.7	-9.7	-9.6	-9.8	-10.1	-9.8	-10.4
2013/11/5	-2.4	9.9	-8.7	-9.4	-9.3	-9.6	-9.7	-9.7	-9.8
2013/11/6	-2.0	3.8	-6.8	-8.9	-7.5	-9.3	-9.8	-9.6	-9.8
2013/11/7	-4.1	-2.2	-6.3	-8.6	-8.1	-8.8	-9.5	-9.2	-9.7
2013/11/8	-4.9	-3.2	-6.2	-8.5	-8.4	-8.5	-9.2	-9.1	-9.2
2013/11/9	-3.0	-1.3	-4.9	-8.4	-8.3	-8.5	-9.0	-8.7	-9.2
2013/11/10	-3.7	-1.5	-5.7	-8.2	-8.1	-8.3	-8.5	-8.4	-8.7
2013/11/11	0.3	6.7	-5.7	-8.1	-8.0	-8.1	-8.4	-8.3	-8.5
2013/11/12	0.3	6.9	-4.4	-7.9	-7.8	-8.0	-8.3	-8.3	-8.3
2013/11/13	1.1	13.4	-3.9	-7.7	-7.6	-7.8	-8.2	-8.1	-8.3
2013/11/14	1.2	13.4	-4.7	-7.5	-7.4	-7.6	-8.0	-7.9	-8.1
2013/11/15	0.9	13.0	-6.0	-7.3	-7.2	-7.4	-8.0	-7.9	-8.0
2013/11/16	0.0	12.9	-6.2	-7.1	-7.1	-7.2	-8.0	-7.9	-8.2
2013/11/17	-0.3	12.0	-6.4	-7.0	-7.0	-7.1	-8.1	-8.0	-8.3
2013/11/18	1.0	16.4	-6.4	-6.9	-6.8	-7.0	-8.1	-7.9	-8.2
2013/11/19	2.4	15.3	-4.5	-6.6	-6.3	-6.8	-7.8	-7.5	-7.9
2013/11/20	5.9	21.6	-0.9	-6.0	-5.4	-6.3	-7.3	-6.9	-7.5
2013/11/21	1.3	5.3	-3.3	-5.4	-5.4	-5.4	-6.8	-6.7	-6.9
2013/11/22	4.2	16.6	-2.8	-5.4	-5.1	-5.5	-6.8	-6.5	-6.9
2013/11/23	5.3	15.2	-1.5	-4.9	-4.1	-5.2	-6.2	-5.9	-6.5
2013/11/24	3.3	8.6	-1.2	-4.3	-4.1	-4.5	-5.8	-5.8	-5.9
2013/11/25	6.3	20.9	-2.2	-4.2	-3.0	-4.6	-5.6	-4.4	-5.9
2013/11/26	5.6	19.5	-2.4	-3.1	-2.2	-3.6	-5.2	-4.9	-5.4
2013/11/27	3.9	9.8	-2.3	-2.6	-2.2	-3.0	-5.0	-4.8	-5.2
2013/11/28	7.2	18.8	-1.6	-2.4	-0.3	-3.2	-4.6	-3.8	-4.9
2013/11/29	7.2	21.1	-0.3	-0.9	0.0	-2.2	-3.2	-1.2	-3.9
2013/11/30	8.1	20.1	1.3	-0.4	0.0	-1.3	-2.0	-0.8	-2.4
<i>Monthly</i>	0.9	21.6	-10.7	-6.6	0.0	-10.2	-7.6	-0.8	-11.1

Table 6-12. December 2013 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]	daily average [°C]	maximum [°C]	minimum [°C]
2013/12/1	9.4	23.0	0.6	-0.4	0.0	-1.3	-0.8	-0.6	-0.9
2013/12/2	7.7	21.2	-1.6	0.1	0.2	0.0	-0.6	-0.4	-0.7
2013/12/3	5.9	18.1	-1.6	-0.3	0.1	-1.2	-0.5	-0.5	-0.6
2013/12/4	6.8	19.6	-1.8	-0.7	0.1	-1.4	-0.5	-0.4	-0.6
2013/12/5	7.6	22.3	0.4	-0.5	0.0	-1.1	-0.4	-0.3	-0.5
2013/12/6	8.4	23.8	0.4	-0.4	0.0	-1.0	-0.3	-0.2	-0.3
2013/12/7	5.3	9.7	-0.2	-0.5	0.0	-0.8	-0.3	-0.2	-0.3
2013/12/8	8.4	20.8	-0.2	-0.7	0.1	-1.3	-0.2	-0.2	-0.3
2013/12/9	8.0	19.8	0.5	-0.2	0.2	-0.8	-0.2	-0.1	-0.3
2013/12/10	6.3	22.0	-0.7	-0.1	0.2	-0.6	-0.2	-0.1	-0.3
2013/12/11	5.8	22.4	-0.7	0.0	0.1	-0.2	-0.2	0.0	-0.3
2013/12/12	4.8	9.7	-0.6	0.0	0.1	-0.1	-0.2	0.0	-0.3
2013/12/13	8.9	24.7	1.6	-0.1	0.1	-0.3	0.1	1.2	-0.3
2013/12/14	6.6	12.1	2.2	0.1	0.2	0.0	0.4	1.8	-0.3
2013/12/15	4.5	10.7	-0.2	0.1	0.2	0.0	0.6	2.1	-0.3
2013/12/16	7.4	19.1	-0.3	0.0	0.2	-0.3	2.6	8.5	-0.4
2013/12/17	9.3	23.7	1.9	0.1	0.2	-0.1	3.7	11.6	-0.6
2013/12/18	5.3	12.1	-1.1	0.3	0.6	-0.2	2.8	7.8	-0.3
2013/12/19	6.2	12.8	-0.9	0.6	2.1	-0.3	2.9	8.0	-0.6
2013/12/20	3.3	5.9	0.3	0.4	1.1	-0.1	1.6	3.5	-0.2
2013/12/21	5.7	13.4	1.1	2.5	9.2	0.0	3.6	8.7	-0.2
2013/12/22	3.7	6.1	1.0	1.5	3.0	-0.1	2.1	3.8	0.1
2013/12/23	7.6	18.8	1.6	4.6	13.8	0.1	4.7	8.6	-0.1
2013/12/24	7.8	15.0	2.3	3.6	8.7	0.3	5.0	10.5	0.3
2013/12/25	6.3	10.7	1.8	3.2	6.9	-0.2	4.3	7.8	1.0
2013/12/26	9.4	21.5	1.2	6.3	17.3	-0.3	5.8	11.7	0.5
2013/12/27	6.8	17.8	0.8	4.6	16.4	-0.5	4.2	10.6	-0.4
2013/12/28	5.1	14.0	1.3	2.7	11.7	0.1	2.3	4.2	0.5
2013/12/29	6.1	15.8	1.0	3.7	15.3	0.1	4.3	10.7	0.3
2013/12/30	6.2	17.8	2.3	4.6	16.6	0.2	4.5	9.9	1.2
2013/12/31	3.9	7.0	1.1	2.0	3.6	0.1	3.2	5.0	1.0
<i>Monthly</i>	6.6	24.7	-1.8	1.2	17.3	-1.4	1.8	11.7	-0.9

Table 6-13. January 2014 temperature (°C) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	<i>daily</i> <i>average</i>	<i>maximum</i> [°C]	<i>minimum</i> [°C]	<i>daily</i> <i>average</i>	<i>maximum</i> [°C]	<i>minimum</i> [°C]	<i>daily</i> <i>average</i>	<i>maximum</i> [°C]	<i>minimum</i> [°C]
	[°C]			[°C]			[°C]		
2014/1/1	13.1	24.9	1.6	9.4	21.9	0.1	7.9	14.8	0.9
2014/1/2	7.5	14.8	2.6	3.8	9.1	0.6	5.7	12.5	1.6
2014/1/3	8.1	15.4	3.1	4.5	10.0	0.6	6.0	11.7	1.8
2014/1/4	8.3	20.0	2.8	6.0	17.4	0.9	6.7	14.3	2.1
2014/1/5	3.5	4.4	2.7	2.0	3.5	1.2	3.3	7.2	0.9
							3.4	8.5	0.5

Table 7-1. January 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/1/5	27	45	11	54	75	19			*4
2013/1/6	26	38	11	48	63	18			*4
2013/1/7	26	41	13	49	63	18			*4
2013/1/8	28	41	13	50	66	18			*4
2013/1/9	29	40	10	51	66	17			*4
2013/1/10	33	63	13	53	70	18			*4
2013/1/11	43	78	21	64	81	35			*4
2013/1/12	53	65	26	71	84	27			*4
2013/1/13	51	80	22	74	87	34			*4
2013/1/14	36	59	15	83	90	56			*4
2013/1/15	31	40	15	87	91	67			*4
2013/1/16	32	45	17	86	91	71			*4
2013/1/17	31	42	15	79	90	49			*4
2013/1/18	33	41	16	69	83	32			*4
2013/1/19	33	46	17	62	78	25			*4
2013/1/20	30	43	18	58	74	35			*4
2013/1/21	32	43	15	55	70	19			*4
2013/1/22	30	39	15	49	64	18			*4
2013/1/23	38	47	22	55	64	18			*4
2013/1/24	40	48	29	59	65	45			*4
2013/1/25	42	62	33	59	65	48			*4
2013/1/26		*4			*4				*4
2013/1/27	35	47	17	51	65	23	95	97	93
2013/1/28	47	88	31	61	77	50	96	98	94
2013/1/29	37	52	16	51	68	21	96	98	93
2013/1/30	32	49	18	44	63	20	95	98	93
2013/1/31		*4			*4				*4
<i>Monthly</i>	35	88	10 *4	61	91	17 *4	96	98	93 *4

Table 7-2. February 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/2/2	53	66	35	61	69	38	95	98	92
2013/2/3	50	94	29	57	80	28	96	98	95
2013/2/4	93	95	92	90	95	82	98	99	97
2013/2/5	94	95	93	94	94	94	99	100	98
2013/2/6	86	95	68	93	94	92	99	100	99
2013/2/7	48	87	23	92	93	91	99	100	98
2013/2/8	62	93	34	92	93	87	99	100	97
2013/2/9	47	65	36	91	92	90	99	100	99
2013/2/10	82	93	57	92	93	91	99	100	99
2013/2/11	66	94	34	91	93	89	99	100	99
2013/2/12	65	87	56	89	92	87	99	100	98
2013/2/13	74	93	52	89	91	86	99	100	99
2013/2/14	43	58	26	78	89	46	99	100	97
2013/2/15	38	52	24	72	83	47	99	100	99
2013/2/16	36	59	22	68	79	41	100	100	99
2013/2/17	33	39	22	57	71	31	99	100	97
2013/2/18	36	42	22	51	63	27	98	100	97
2013/2/19	40	52	28	56	63	41	99	100	97
2013/2/20	52	92	33	62	80	50	99	100	99
2013/2/21	74	94	46	75	85	56	100	100	99
2013/2/22	60	81	39	70	77	60	100	100	99
2013/2/23	77	92	60	80	85	75	100	100	99
2013/2/24	59	70	44	68	76	48	100	100	99
2013/2/25	73	86	60	77	84	69	100	100	100
2013/2/26	68	94	42	76	84	60	100	100	100
2013/2/27	75	94	43	80	86	66	100	100	98
2013/2/28	41	48	34	54	66	43	99	100	98
<i>Monthly</i>	60	95	22	76	95	27	99	100	92

Table 7-3. March 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	42	50	35	52	60	44	100	100	99
2013/3/1	43	68	30	49	65	30	99	100	97
2013/3/2	45	59	34	54	63	46	98	100	96
2013/3/3	41	56	31	48	58	34	97	99	93
2013/3/4	74	90	45	70	84	51	96	98	94
2013/3/5	90	92	89	85	87	84	97	99	94
2013/3/6	92	94	89	87	88	85	98	100	94
2013/3/7	93	94	91	88	89	87	98	100	97
2013/3/8	91	93	88	88	90	88	96	99	93
2013/3/9	88	90	86	84	88	77	96	99	93
2013/3/10	85	87	82	79	83	70	95	98	92
2013/3/11	70	87	48	69	79	58	96	99	93
2013/3/12	64	92	46	68	84	56	98	99	96
2013/3/13	84	93	65	85	86	84	98	99	98
2013/3/14	58	75	49	71	85	61	99	99	98
2013/3/15	60	66	53	66	69	61	99	99	98
2013/3/16	58	71	46	63	72	54	99	100	98
2013/3/17	67	86	51	69	80	58	98	99	96
2013/3/18	66	89	46	71	82	59	96	98	94
2013/3/19	62	84	50	67	82	59	98	98	97
2013/3/20	84	94	60	79	85	64	98	99	98
2013/3/21	76	92	55	79	84	70	98	99	97
2013/3/22	90	92	88	85	86	85	97	98	95
2013/3/23	70	89	48	77	85	73	97	98	95
2013/3/24	73	89	55	76	83	66	96	97	94
2013/3/25	76	91	62	76	85	67	96	97	94
2013/3/26	85	92	66	85	86	84	98	98	97
2013/3/27	81	92	70	86	86	84	98	98	97
2013/3/28	80	92	63	83	86	76	98	98	97
2013/3/29	92	93	91	87	87	86	98	98	97
2013/3/30	93	94	93	88	88	87	98	98	98
2013/3/31	73	94	30	75	90	30	97	100	92
<i>Monthly</i>									

Table 7-4. April 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	2013/4/1	93	93	93	88	89	88	98	98
2013/4/2	93	93	93	89	89	89	98	98	98
2013/4/3	93	93	93	89	89	89	98	98	98
2013/4/4	93	93	93	89	89	89	98	98	98
2013/4/5	93	93	93	89	89	89	98	98	98
2013/4/6	93	93	93	89	90	89	97	98	97
2013/4/7	92	93	92	90	90	90	97	97	97
2013/4/8	92	92	92	90	90	90	97	97	97
2013/4/9	92	92	92	90	90	90	97	97	96
2013/4/10	92	92	92	90	90	90	96	96	96
2013/4/11	92	92	92	90	90	90	96	96	96
2013/4/12	92	92	92	90	90	89	96	96	96
2013/4/13	92	92	91	90	90	89	96	96	96
2013/4/14	91	91	91	89	90	89	96	96	96
2013/4/15	91	91	90	89	89	89	96	96	96
2013/4/16	91	91	91	89	89	89	96	96	96
2013/4/17	91	91	91	89	89	89	96	96	96
2013/4/18	92	92	91	89	89	89	96	96	96
2013/4/19	90	91	88	89	89	89	96	96	96
2013/4/20	87	89	86	89	89	89	96	96	96
2013/4/21	86	88	83	89	89	89	96	96	96
2013/4/22	84	85	81	89	89	89	95	96	95
2013/4/23	82	85	80	89	89	89	95	95	95
2013/4/24	88	89	85	89	89	89	95	95	94
2013/4/25	87	89	85	89	89	89	95	95	95
2013/4/26	85	86	84	89	89	89	95	95	95
2013/4/27	88	89	84	89	89	89	95	95	95
2013/4/28	88	90	87	89	89	89	95	95	95
2013/4/29	87	88	84	89	89	89	95	95	95
2013/4/30	87	88	85	89	89	89	95	95	95
<i>Monthly</i>	90	93	80	89	90	88	96	98	94

Table 7-5. May 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	2013/5/1	87	88	86	89	89	89	95	95
2013/5/2	88	89	85	89	89	89	95	95	94
2013/5/3	83	85	82	89	89	89	94	95	94
2013/5/4	85	87	81	89	89	89	94	94	94
2013/5/5	80	82	77	89	89	89	94	94	93
2013/5/6	77	83	75	89	89	89	93	93	93
2013/5/7	87	89	84	89	89	89	93	93	92
2013/5/8	90	91	89	89	89	89	94	94	93
2013/5/9	89	90	86	89	89	89	94	94	94
2013/5/10	84	86	81	89	89	89	93	94	93
2013/5/11	79	82	76	89	89	89	92	93	92
2013/5/12	80	85	75	89	89	89	92	92	91
2013/5/13	84	85	83	89	89	89	91	91	91
2013/5/14	84	85	83	89	89	88	91	91	91
2013/5/15	83	84	82	89	89	88	91	91	91
2013/5/16	83	85	82	88	89	88	91	91	91
2013/5/17	85	86	82	88	89	88	91	91	91
2013/5/18	87	87	86	88	88	88	92	92	91
2013/5/19	88	88	87	88	89	88	92	93	92
2013/5/20	87	88	87	88	88	88	92	93	92
2013/5/21	86	87	85	88	88	88	92	92	92
2013/5/22	85	86	84	88	89	88	92	92	92
2013/5/23	80	84	78	88	89	88	91	92	91
2013/5/24	84	86	81	88	89	88	91	91	91
2013/5/25	86	86	85	88	88	88	91	92	91
2013/5/26	87	88	86	88	88	88	92	92	92
2013/5/27	88	89	87	88	88	88	92	93	92
2013/5/28	85	87	83	88	88	88	93	93	93
2013/5/29	88	89	86	88	89	88	93	93	93
2013/5/30	78	86	67	88	89	88	92	93	92
2013/5/31	65	68	60	88	88	88	92	92	92
<i>Monthly</i>	84	91	60	89	89	88	92	95	91

Table 7-6. June 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	2013/6/1	68	78	62	88	88	88	92	92
2013/6/2	71	76	63	88	88	88	92	92	91
2013/6/3	59	64	57	88	88	88	91	91	91
2013/6/4	66	78	60	88	88	88	92	92	91
2013/6/5	87	88	81	88	88	88	92	92	92
2013/6/6	88	89	88	88	89	88	92	93	92
2013/6/7	88	88	88	88	89	88	93	93	93
2013/6/8	88	89	88	89	89	88	93	93	92
2013/6/9	89	89	89	89	89	89	93	93	93
2013/6/10	89	89	88	89	89	89	93	93	93
2013/6/11	88	88	88	89	89	89	92	93	92
2013/6/12	88	88	88	89	89	88	92	92	92
2013/6/13	88	88	88	89	89	88	92	92	92
2013/6/14	88	88	88	89	89	88	92	92	92
2013/6/15	88	88	88	89	89	89	92	92	92
2013/6/16	87	88	87	88	89	88	92	92	92
2013/6/17	87	88	87	88	89	88	92	92	92
2013/6/18	87	87	87	89	89	88	92	92	92
2013/6/19	87	87	87	89	89	88	92	92	92
2013/6/20	88	89	87	89	89	88	92	92	92
2013/6/21	89	89	89	89	89	88	92	93	92
2013/6/22	88	89	88	89	89	88	92	93	92
2013/6/23	88	89	88	89	89	88	92	92	92
2013/6/24	89	89	89	89	89	88	92	93	92
2013/6/25	88	89	87	89	89	88	93	93	92
2013/6/26	86	87	86	89	89	88	92	92	92
2013/6/27	85	86	84	89	89	89	92	92	92
2013/6/28	87	88	86	89	89	88	92	92	92
2013/6/29	89	90	88	89	89	89	92	93	92
2013/6/30	90	91	90	89	89	89	93	93	93
<i>Monthly</i>	85	91	57	89	89	88	92	93	91

Table 7-7. July 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	91	91	91	89	89	89	93	93	93
2013/7/1	91	91	90	89	89	89	93	93	93
2013/7/2	91	91	90	89	89	89	93	93	93
2013/7/3	91	91	90	89	89	89	93	93	93
2013/7/4	90	91	90	89	89	89	93	93	93
2013/7/5	89	90	88	89	89	89	93	93	93
2013/7/6	86	88	86	89	89	89	93	93	92
2013/7/7	88	90	87	89	89	89	92	92	92
2013/7/8	90	91	90	89	89	89	93	93	92
2013/7/9	90	90	90	89	89	89	93	93	93
2013/7/10	89	90	89	89	89	89	93	93	93
2013/7/11	89	89	89	89	89	89	93	93	93
2013/7/12	89	89	88	89	89	89	93	93	93
2013/7/13	88	88	87	89	89	89	93	93	92
2013/7/14	86	87	84	89	89	89	92	92	92
2013/7/15	82	84	81	89	89	89	92	92	91
2013/7/16	79	81	78	89	89	89	91	91	90
2013/7/17	78	79	77	88	89	88	90	90	89
2013/7/18	80	81	79	88	88	88	89	89	89
2013/7/19	79	80	78	88	88	88	89	89	89
2013/7/20	78	80	77	88	88	88	89	89	88
2013/7/21	82	84	79	88	88	88	88	89	88
2013/7/22	79	82	78	88	88	88	89	89	89
2013/7/23	80	82	78	88	88	88	89	89	89
2013/7/24	81	83	80	88	88	88	89	89	89
2013/7/25	84	86	82	88	88	88	89	89	89
2013/7/26	86	87	85	88	88	88	90	90	89
2013/7/27	88	89	87	88	88	88	91	91	90
2013/7/28	88	89	88	88	88	88	91	91	91
2013/7/29	88	89	88	88	88	88	91	91	91
2013/7/30	87	89	86	88	88	88	91	91	91
2013/7/31	84	86	83	88	88	88	90	91	90
<i>Monthly</i>	86	91	77	88	89	88	91	93	88

Table 7-8. August 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	2013/8/1	86	87	85	88	88	88	90	90
2013/8/2	88	89	87	88	88	88	91	91	90
2013/8/3	89	89	88	88	88	88	91	92	91
2013/8/4	89	90	89	88	88	88	92	92	92
2013/8/5	90	90	89	88	88	88	92	92	92
2013/8/6	90	91	89	88	88	88	92	92	92
2013/8/7	90	90	89	88	88	88	92	92	92
2013/8/8	89	90	89	88	88	88	92	92	92
2013/8/9	89	89	89	88	88	88	92	92	92
2013/8/10	89	89	88	88	89	88	92	92	92
2013/8/11	88	88	88	88	88	88	92	92	92
2013/8/12	88	88	88	88	88	88	92	92	91
2013/8/13	88	88	88	88	88	88	91	91	91
2013/8/14	88	88	88	88	88	88	91	92	91
2013/8/15	88	89	88	88	88	88	92	92	92
2013/8/16	88	89	88	88	88	88	91	92	91
2013/8/17	89	89	88	88	88	88	91	92	91
2013/8/18	89	89	89	88	88	88	92	92	92
2013/8/19	88	89	87	88	88	88	92	92	92
2013/8/20	86	87	86	88	88	88	91	92	91
2013/8/21	86	86	85	88	88	88	90	91	90
2013/8/22	86	86	86	88	88	88	90	90	90
2013/8/23	87	87	86	88	88	88	90	90	90
2013/8/24	87	87	86	88	88	88	91	91	90
2013/8/25	86	86	85	88	88	88	91	91	90
2013/8/26	85	86	85	88	88	88	90	90	90
2013/8/27	85	86	84	88	88	88	90	90	90
2013/8/28	85	86	84	88	88	88	90	90	90
2013/8/29	85	86	85	88	88	88	90	90	90
2013/8/30	84	85	82	88	88	88	90	90	90
2013/8/31	81	82	80	88	88	88	89	90	89
<i>Monthly</i>	87	91	80	88	89	88	91	92	89

Table 7-9. September 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]			
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	
	2013/9/1	80	81	79	88	88	88	89	89	88
2013/9/2	80	82	79	88	88	88	88	88	88	88
2013/9/3	84	86	82	88	88	88	88	88	88	88
2013/9/4	87	88	86	87	88	87	89	90	88	88
2013/9/5	87	88	87	88	88	88	90	91	90	90
2013/9/6	87	88	86	88	88	88	90	90	90	90
2013/9/7	88	88	87	88	88	88	91	91	90	90
2013/9/8	88	88	87	88	88	88	91	91	90	90
2013/9/9	87	88	86	88	88	88	90	90	90	90
2013/9/10	87	88	87	88	88	88	90	90	90	90
2013/9/11	87	88	86	88	88	88	90	90	90	90
2013/9/12	87	88	87	88	88	88	90	91	90	90
2013/9/13	87	88	87	88	88	88	91	91	90	90
2013/9/14	87	88	86	88	88	88	90	90	90	90
2013/9/15	88	88	87	88	88	88	90	91	90	90
2013/9/16	89	89	88	88	88	88	91	91	91	91
2013/9/17	90	91	89	88	88	88	91	92	91	91
2013/9/18	91	91	90	88	88	88	92	92	92	92
2013/9/19	90	91	90	88	88	88	92	92	92	92
2013/9/20	89	90	89	88	88	88	92	92	92	92
2013/9/21	89	90	89	88	88	88	92	92	92	92
2013/9/22	87	89	83	88	88	88	92	92	92	92
2013/9/23	85	87	78	88	88	88	92	92	92	92
2013/9/24	74	79	66	88	88	88	92	92	92	92
2013/9/25	71	77	64	88	88	88	91	92	91	91
2013/9/26	67	75	60	88	88	88	91	91	91	91
2013/9/27	63	70	59	88	88	88	91	91	91	91
2013/9/28	53	62	47	88	88	88	91	91	91	91
2013/9/29	53	70	42	88	88	88	91	91	91	91
2013/9/30	73	76	63	88	88	88	91	91	91	91
<i>Monthly</i>	82	91	42	88	88	87	91	92	88	

Table 7-10. October 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	65	75	54	88	88	88	90	91	90
2013/10/2	53	63	45	88	88	88	91	91	90
2013/10/3	54	60	49	88	88	88	92	92	91
2013/10/4	65	88	42	88	88	88	92	92	92
2013/10/5	63	82	50	88	89	88	92	92	92
2013/10/6	54	63	42	89	89	88	92	92	92
2013/10/7	52	64	41	89	89	88	92	92	92
2013/10/8	62	71	47	89	89	89	92	92	92
2013/10/9	59	72	44	89	89	89	91	92	91
2013/10/10	65	75	45	89	89	89	91	91	91
2013/10/11	65	76	44	89	89	88	91	91	91
2013/10/12	65	74	44	88	89	88	90	91	90
2013/10/13	73	85	61	88	88	88	90	90	90
2013/10/14	85	85	84	88	88	88	90	91	90
2013/10/15	81	84	70	88	88	88	91	91	91
2013/10/16	86	89	75	88	88	88	91	91	91
2013/10/17	89	90	89	88	89	88	92	92	91
2013/10/18	89	91	88	89	89	89	92	92	92
2013/10/19	82	88	74	89	89	89	93	93	92
2013/10/20	72	87	56	89	89	89	93	93	93
2013/10/21	90	90	88	89	89	89	93	93	93
2013/10/22	90	91	90	89	89	89	93	93	93
2013/10/23	90	90	90	89	89	89	93	93	93
2013/10/24	90	91	89	89	89	89	93	93	93
2013/10/25	90	91	90	89	89	89	93	93	93
2013/10/26	90	91	89	89	89	89	93	93	93
2013/10/27	90	91	89	89	89	89	93	93	93
2013/10/28	88	91	82	89	89	89	93	93	93
2013/10/29	62	82	42	89	89	89	93	93	93
2013/10/30	61	78	34	89	89	89	94	94	94
2013/10/31	64	90	36	89	89	89	94	94	94
<i>Monthly</i>	74	91	34	89	89	88	92	94	90

Table 7-11. November 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
	91	92	88	89	89	89	94	94	94
2013/11/2	76	91	44	89	89	89	94	94	94
2013/11/3	87	91	73	89	89	89	94	94	94
2013/11/4	63	83	45	89	89	89	94	94	94
2013/11/5	60	81	32	89	89	89	94	94	94
2013/11/6	81	94	46	89	89	89	94	94	94
2013/11/7	93	94	93	89	89	89	94	95	94
2013/11/8	93	93	92	89	89	89	95	95	95
2013/11/9	93	94	93	89	89	89	95	95	95
2013/11/10	93	94	92	89	89	89	95	95	95
2013/11/11	68	92	38	89	89	89	95	95	95
2013/11/12	55	72	43	89	89	89	95	95	95
2013/11/13	49	78	25	89	89	89	95	95	95
2013/11/14	47	68	28	89	89	89	95	95	95
2013/11/15	42	64	22	89	89	89	95	95	95
2013/11/16	40	61	22	89	89	89	95	95	95
2013/11/17	38	55	24	89	89	89	95	95	95
2013/11/18	42	65	20	90	90	89	95	95	95
2013/11/19	42	58	28	90	90	90	95	96	95
2013/11/20	39	58	20	90	90	90	96	96	96
2013/11/21	43	60	36	90	90	90	96	96	96
2013/11/22	39	56	22	90	90	90	96	96	96
2013/11/23	40	54	23	90	90	90	96	96	96
2013/11/24	44	54	33	90	90	90	97	97	96
2013/11/25	32	46	15	91	91	90	97	97	97
2013/11/26	30	41	15	91	91	91	97	97	97
2013/11/27	46	91	27	91	91	91	97	97	97
2013/11/28	32	45	17	91	92	91	97	98	97
2013/11/29	32	45	15	92	93	91	98	99	98
2013/11/30	36	49	20	93	93	92	99	99	98
<i>Monthly</i>	56	94	15	90	93	89	96	99	94

Table 7-12. December 2013 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]	daily average [%]	maximum [%]	minimum [%]
2013/12/1	36	58	14	93	93	92	99	100	99
2013/12/2	37	61	16	93	93	93	100	100	100
2013/12/3	28	47	15	92	93	92	100	100	100
2013/12/4	35	52	14	92	92	91	100	100	100
2013/12/5	34	51	18	92	92	92	100	100	100
2013/12/6	29	47	14	92	92	92	100	100	100
2013/12/7	43	83	32	92	92	92	100	100	100
2013/12/8	31	48	14	92	92	92	100	100	100
2013/12/9	35	55	17	92	92	92	100	100	100
2013/12/10	45	62	20	92	92	92	100	100	100
2013/12/11	45	59	20	92	92	92	100	100	100
2013/12/12	50	70	34	92	92	92	100	100	100
2013/12/13	39	59	16	92	92	92	100	100	100
2013/12/14	45	59	34	92	92	92	100	100	100
2013/12/15	53	69	38	92	92	92	100	100	100
2013/12/16	32	47	18	92	92	92	100	100	100
2013/12/17	30	45	12	91	92	91	100	100	100
2013/12/18	71	94	30	91	91	91	100	100	100
2013/12/19	46	83	30	91	91	90	100	100	100
2013/12/20	58	84	44	91	91	90	100	100	100
2013/12/21	54	82	34	91	91	90	100	100	100
2013/12/22	62	92	50	91	91	91	100	100	100
2013/12/23	57	91	28	91	91	89	100	100	100
2013/12/24	47	92	25	91	91	90	100	101	100
2013/12/25	46	76	32	91	91	91	100	100	100
2013/12/26	32	48	19	90	91	89	100	101	100
2013/12/27	31	81	15	90	91	88	100	101	100
2013/12/28	37	72	18	91	91	89	100	100	100
2013/12/29	34	44	19	90	91	88	100	101	100
2013/12/30	37	48	20	90	91	89	100	101	100
2013/12/31	47	56	39	91	91	91	100	100	100
<i>Monthly</i>	42	94	12	91	93	88	100	101	99

Table 7-13. January 2014 relative humidity (%) immediately adjacent to organism, measured by mini sensors at Sites 1, 2, and 6.

Local time [UTC+3:00]	Site 1 [<i>U. decussata</i>]			Site 2 [<i>C. purpureus</i>]			Site 6 [<i>under a quartz stone</i>]		
	<i>daily</i> <i>average</i>	<i>maximum</i> [%]	<i>minimum</i> [%]	<i>daily</i> <i>average</i>	<i>maximum</i> [%]	<i>minimum</i> [%]	<i>daily</i> <i>average</i>	<i>maximum</i> [%]	<i>minimum</i> [%]
	[%]			[%]			[%]		
2014/1/1	27	50	15	90	91	86	100	101	100
2014/1/2	36	46	26	91	91	90	100	101	100
2014/1/3	43	55	32	91	91	90	100	101	100
2014/1/4	46	87	20	90	91	88	100	101	100
2014/1/5	84	90	68	91	91	91	100	100	100