Supplementary Information 2 – Model Selection

A. Model selection based on AIC or qAIC for all experiments

Table 1. Comparison of generalised linear models for pressure experiments.

Periphyton experiment (Gaussian distribution)		**AIC**
A1	algae dry mass = $a + b_1$(pressure)	-535.85
A2	algae dry mass = $a + b_1$(pressure^2) + b_2(pressure)	**-547.66**
A3	algae dry mass = $a + b_1$(pressure^2)	-537.75
A4	algae dry mass = $a + b_1$(pressure) + b_2(orientation)	-537.09
A5	algae dry mass = $a + b_1$(pressure) + b_2(orientation) + b_3(pressure:orientation)	-535.10
Gel experiment (Poisson distribution)		**qAIC**
G1	log number of leaves = $a + b_1$(pressure)	479.00
G2	log number of leaves = $a + b_1$(pressure^2)	503.34
G3	log number of leaves = $a + b_1$(pressure^2) + b_2(pressure)	419.46
G5	log number of leaves = $a + b_1$(orientation)	509.05
G6	log number of leaves = $a + b_1$(pressure) + b_2(orientation) + b_3(pressure:orientation)	472.62
G7	log number of leaves = $a + b_1$(pressure) + b_2(orientation)	473.88
G8	log number of leaves = $a + b_1$(pressure^2) + b_2(pressure) + b_3(orientation)	**414.34**

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on AIC/qAIC and parsimony are indicated in boldface.

Table 2. Comparison of logistic regression models for experiments on banded mystery snails and zebra mussels, using qAIC.

		Banded mystery snails	Small zebra mussels	Large zebra mussels
Hot water experiment			**qAIC**	
HW1	log odds survival = $a + b_1$(temperature)	248.77	64.18	90.62
HW2	log odds survival = $a + b_1$(immersion time)	2929.93	159.51	175.73
HW3	log odds survival = $a + b_1$(temperature^2)	248.94	59.30	82.34
HW4	log odds survival = $a + b_1$(temperature) + b_2(immersion time) + b_3(temperature:immersion time)	**137.62**	65.59	87.00
HW5	log odds survival = $a + b_1$(temperature) + b_2(immersion time)	168.98	64.53	87.38
HW6	log odds survival = $a + b_1$(temperature^2) + b_2(immersion time) + b_3(temperature^2: immersion time)	137.24	60.33	77.32
HW7	log odds survival = $a + b_1$(temperature^2) + b_2(immersion time)	169.06	59.58	78.91
HW8	log odds survival = $a + b_1$(temperature^2) + b_2(temperature) + b_3(immersion time)	170.97	**55.83**	**67.78**
Air-drying experiments			**qAIC**	
AD1	log odds survival = $a + b_1$(drying time)	53.43	113.36	152.99
AD2	log odds survival = $a + b_1$(drying time^2) + b_2(drying time)	**51.20**	**43.45**	136.03
AD3	log odds survival = $a + b_1$(drying time^2)	59.10	74.57	**135.72**
Experiments combining hot water and air-drying			**qAIC**	
C1	log odds survival = $a + b_1$(drying time) + b_2(temperature) + b_3(drying time:temperature)	136.26	118.88	57.47
C2	log odds survival = $a + b_1$(drying time) + b_2(temperature)	136.21	119.79	58.43
C3	log odds survival = $a + b_1$(drying time^2) + b_2(temperature) + b_3(drying time^2:temperature)	153.66	115.89	53.41
C4	log odds survival = $a + b_1$(drying time) + b_2(temperature^2) + b_3(drying time:temperature^2)	126.78	108.38	50.92
C5	log odds survival = $a + b_1$(drying time^2) + b_2(drying time) + b_3(temperature)	110.93	117.22	52.38
C6	log odds survival = $a + b_1$(temperature^2) + b_2(temperature) + b_3(drying time)	**108.60**	**77.53**	**30.38**
C7	log odds survival = $a + b_1$(drying time^2) + b_2(temperature)	152.22	115.28	51.60
C8	log odds survival = $a + b_1$(drying time) + b_2(temperature^2)	125.71	108.67	51.05
C9	log odds survival = $a + b_1$(drying time)	190.27	261.33	154.57
C10	log odds survival = $a + b_1$(temperature)	171.43	302.36	170.08
C11	log odds survival = $a + b_1$(drying time^2)	202.56	254.43	149.11
C12	log odds survival = $a + b_1$(temperature^2)	162.49	291.98	163.45

C13	log odds survival = $a + b_1$(drying time^2) + b_2(temperature^2)	142.53	104.40	45.00

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on qAIC and parsimony are indicated in boldface.

Table 3. Comparison of logistic regression models for acclimation experiments on invertebrates, using qAIC.

Invertebrates		Banded mystery snails	Zebra mussels
Logistic regression models		**qAIC**	
A1	log odds survival = $a + b_1$(hot water) + b_2(acclimation) + b_3(hot water:acclimation)	77.83	74.12
A2	log odds survival = $a + b_1$(hot water) + b_2(acclimation)	81.15	86.06
A3	log odds survival = $a + b_1$(hot water^2) + b_2(acclimation) + b_3(hot water^2:acclimation)	71.89	66.91
A4	log odds survival = $a + b_1$(hot water^2) + b_2(hot water) + b_3(acclimation)	**69.65**	**50.71**
A5	log odds survival = $a + b_1$(hot water^2) + b_2(acclimation)	74.93	73.86
A6	log odds survival = $a + b_1$(hot water)	79.65	87.99
A7	log odds survival = $a + b_1$(acclimation)	151.74	519.47
A8	log odds survival = $a + b_1$(hot water^2)	73.47	76.30

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on qAIC and parsimony are indicated in boldface.

Table 4. Comparison of Poisson regression models for experiments on Eurasian watermilfoil and Carolina fanwort.

			Number of leaves	Number of roots	Number of branches
Hot water experiments		**Species**		**qAIC**	
HW1	log count = *a* + b_1(temperature)	EWM	64.41	121.45	125.96
		CF	92.01	114.47	198.17
HW2	log count = *a* + b_1(immersion time)	EWM	168.14	224.09	224.68
		CF	176.60	233.56	180.72
HW3	log count = *a* + b_1(temperature^2)	EWM	52.61	114.25	116.19
		CF	86.53	108.73	185.74
HW4	log count = *a* + b_1(temperature) + b_2(immersion time) + b_3(temperature:immersion time)	EWM CF	66.92 94.18	122.31 116.12	127.91 200.62
HW5	log count = *a* + b_1(temperature) + b_2(immersion time)	EWM CF	65.36 92.43	120.38 114.17	126.13 198.64
HW6	log count = *a* + b_1(temperature^2) + b_2(immersion time) + b_3(temperature^2: immersion time)	EWM CF	55.05 88.77	115.14 110.37	118.48 188.19
HW7	log count = *a* + b_1(temperature)^2 + b_2(immersion time)	EWM CF	53.55 86.94	113.18 108.44	116.67 186.21
HW8	log count = *a* + b_1(temperature^2) + b_2(temperature) + b_3(immersion time)	EWM CF	27.75 86.07	111.06 108.83	110.13 171.81
HW9	log count = *a* + b_1(temperature^2) + b_2(immersion time^2)	EWM CF	53.92 86.63	113.29 **107.55**	117.05 186.43
HW10	log count = *a* + b_1(temperature^2) + b_2(temperature)	EWM CF	**26.80** **85.66**	**112.13** 109.12	**109.95** **171.34**
Air-drying experiments		**Species**		**qAIC or AIC (*)**	
AD1	log count = *a* + b_1(drying time)	EWM	**23.40**	**41.66**	**42.79**
		CF	**24.74**	43.12	96.48*
AD2	log count = *a* + b_1(drying time^2) + b_2(drying time)	EWM CF	24.68 26.69	41.06 38.00	43.88 95.87*
AD3	log count = *a* + b_1(drying time^2)	EWM	28.34	47.82	47.01
		CF	25.23	**37.97**	**94.10***
Experiments combining hot water and air-drying		**Species**		**qAIC or AIC (*)**	
C1	log count = *a* + b_1(drying time) + b_2(temperature) + b_3(drying time:temperature)	EWM CF	47.35 **151.75**	274.10* 259.23*	248.95* 329.90
C2	log count = *a* + b_1(drying time) + b_2(temperature)	EWM CF	47.38 161.60	284.32* **281.16***	255.81* 346.94
C3	log count = *a* + b_1(drying time^2) + b_2(temperature) + b_3(drying time^2:temperature)	EWM CF	49.19 166.61	304.92* 288.14*	274.00* 356.02
C4	log count = *a* + b_1(drying time) + b_2(temperature^2) + b_3(drying time:temperature^2)	EWM CF	46.82 152.16	267.31* 256.78*	242.89* **325.61**
C5	log count = *a* + b_1(drying time^2) + b_2(drying time) + b_3(temperature)	EWM CF	49.01 157.77	**267.08*** 270.35*	**239.81*** 337.17
C6		EWM	49.13	277.50*	147.73*

	log count = $a + b_1$(temperature^2) + b_2(temperature) + b_3(drying time)	CF	163.59	282.54*	346.30
C7	log count = $a + b_1$(drying time^2) + b_2(temperature)	EWM	50.20	312.40*	278.17*
		CF	175.68	307.45*	368.98
C8	log count = $a + b_1$(drying time) + b_2(temperature^2)	EWM	**47.13**	279.73*	251.72*
		CF	162.94	280.86*	344.51
C9	log count = $a + b_1$(drying time)	EWM	59.17	319.79*	276.88*
		CF	215.56	370.17*	408.34
C10	log count = $a + b_1$(temperature)	EWM	59.06	356.52*	309.74*
		CF	205.99	359.92*	413.36
C11	log count = $a + b_1$(drying time^2)	EWM	61.99	347.88*	299.24*
		CF	229.64	396.45*	430.38
C12	log count = $a + b_1$(temperature^2)	EWM	58.80	351.93*	305.64*
		CF	207.33	359.62*	410.93
C13	log count = $a + b_1$(drying time^2) + b_2(temperature^2)	EWM	49.95	307.81*	274.08*
		CF	177.02	307.14*	366.55
C14	log count = $a + b_1$(drying time^2) + b_2(drying time)	EWM	60.80	302.55*	260.78*
		CF	211.74	359.35*	398.57
C15	log count = $a + b_1$(temperature^2) + b_2(temperature)	EWM	60.80	349.70*	301.65*
		CF	207.98	361.30*	412.72
C16	log count = $a + b_1$(drying time^2) + b_2(temperature^2) + b_3(drying time^2:temperature^2)	EWM	48.85	349.70*	268.63*
		CF	167.64	286.96*	352.40

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on AIC/qAIC and parsimony are indicated in boldface.

Table 5. Comparison of Poisson regression models for acclimation experiments on Eurasian watermilfoil.				
Poisson regression models		Number of leaves	Number of roots	Number of branches
			qAIC	
A9	log odds survival = a + b_1(acclimation) + b_2(hot water) + b_3(acclimation:hot water)	107.65	184.09	218.66
A10	log odds survival = a + b_1(acclimation) + b_2(hot water)	105.65	182.58	216.99
A11	log count = a + b_1(acclimation^2) + b_2(hot water) + b_3(acclimation^2:hot water)	108.48	184.59	218.90
A12	log count = a + b_1(acclimation) + b_2(hot water^2) + b_3(acclimation:hot water^2)	93.44	175.27	202.22
A13	log count = a + b_1(acclimation^2) + b_2(acclimation) + b_3(hot water)	103.20	182.27	218.26
A14	log count = a + b_1(hot water^2) + b_2(hot water) + b_3(acclimation)	**60.93**	165.12	172.17
A15	log count = a + b_1(acclimation^2) + b_2(hot water)	106.48	182.94	217.20
A16	log count = a + b_1(acclimation) + b_2(hot water^2)	91.44	173.64	200.46
A17	log count = a + b_1(acclimation)	172.11	246.29	300.90
A18	log count = a + b_1(hot water)	107.65	182.09	216.36
A19	log count = a + b_1(acclimation^2)	172.94	246.65	301.10
A20	log count = a + b_1(hot water^2)	93.44	173.15	199.83
A21	log count = a + b_1(acclimation^2) + b_2(hot water^2)	92.27	174.00	200.67
A22	log count = a + b_1(acclimation^2) + b_2(acclimation)	169.66	245.98	302.12
A23	log count = a + b_1(hot water^2) + b_2(hot water)	62.93	**164.63**	**171.54**
A24	log count = a + b_1(acclimation^2) + b_2(hot water^2) + b_3(acclimation^2:hot water^2)	94.27	175.74	202.46

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on qAIC and parsimony are indicated in boldface.

Table 6. Comparison of poisson regression models for experiments on European frogbit.

		Number of leaves	Number of turions
Hot water experiments		**qAIC**	
HW1	log count = $a + b_1$(temperature)	284.23	613.47
HW2	log count = $a + b_1$(immersion time)	303.81	670.66
HW3	log count = $a + b_1$(temperature^2)	**283.77**	614.58
HW4	log count = $a + b_1$(temperature) + b_2(immersion time) + b_3(temperature:immersion time)	286.76	612.35
HW5	log count = $a + b_1$(temperature) + b_2(immersion time)	285.35	**613.35***
HW6	log count = $a + b_1$(temperature^2) + b_2(immersion time) + b_3(temperature^2:immersion time)	286.31	613.58
HW7	log count = $a + b_1$(temperature^2) + b_2(immersion time)	284.89	614.45
HW8	log count = $a + b_1$(temperature^2) + b_2(temperature) + b_3(immersion time)	286.89	615.34
HW9	log count = $a + b_1$(temperature^2) + b_2(immersion time^2)	285.45	613.61
HW10	log count = $a + b_1$(temperature^2) + b_2(temperature)	285.77	615.47
Air-drying experiments		**qAIC**	
AD1	log count = $a + b_1$(drying time)	194.37	364.97
AD2	log count = $a + b_1$(drying time^2) + b_2(drying time)	**191.74**	**359.87**
AD3	log count = $a + b_1$(drying time^2)	197.58	372.67
Experiments combining hot water and air-drying		**qAIC**	
C1	log count = $a + b_1$(drying time) + b_2(temperature) + b_3(drying time:temperature)	64.14	114.24
C2	log count = $a + b_1$(drying time) + b_2(temperature)	62.16	113.02
C3	log count = $a + b_1$(drying time^2) + b_2(temperature) + b_3(drying time^2:temperature)	63.62	113.14
C4	log count = $a + b_1$(drying time) + b_2(temperature^2) + b_3(drying time:temperature^2)	63.89	114.62
C5	log count = $a + b_1$(drying time^2) + b_2(drying time) + b_3(temperature)	63.65	114.94
C6	log count = $a + b_1$(temperature^2) + b_2(temperature) + b_3(drying time)	63.78	114.81
C7	log count = $a + b_1$(drying time^2) + b_2(temperature)	61.71	113.12
C8	log count = $a + b_1$(drying time) + b_2(temperature^2)	61.91	113.38
C9	log count = $a + b_1$(drying time)	63.59	116.13
C10	log count = $a + b_1$(temperature)	62.22	**111.32**
C11	log count = $a + b_1$(drying time^2)	63.14	116.23
C12	log count = $a + b_1$(temperature^2)	61.97	111.69
C13	log count = $a + b_1$(drying time^2) + b_2(temperature^2)	**61.46**	113.48
C14	log count = $a + b_1$(drying time^2) + b_2(drying time)	65.08	118.05
C15	log count = $a + b_1$(temperature^2) + b_2(temperature)	63.83	113.11
C16	log count = $a + b_1$(drying time^2) + b_2(temperature^2) + b_3(drying time^2:temperature^2)	63.35	113.46

Note: Models are shown with the link function applied to the response variable; a and b_i represent regression coefficients; ":" represents the interaction between variables. Selected models based on qAIC and parsimony are indicated in boldface. Otherwise, model not having the lowest qAIC was selected to avoid overfitting to the data (*).

B. Selected models for experiments on macrophytes

Table 1. Summary of statistical methods and best models for hot water, air-drying, and combined treatment experiments including three macrophyte species.

Hot water experiments		
Eurasian watermilfoil	*Transformed data, GLM, quasi-Poisson family*	
	Leaf Root Branch	log count = a + b_1(temperature^2) + b_2(temperature)
Carolina fanwort	*Transformed data, GLM, quasi-Poisson family*	
	Leaf	log count = a + b_1(temperature^2) + b_2(temperature)
	Root	log count = a + b_1(temperature^2) + b_2(time^2)
	Branch	log count = a + b_1(temperature^2) + b_2(temperature)
European frogbit	*Transformed data, GLM, quasi-Poisson family*	
	Leaf	log count = a + b_1(temperature^2)
	Turion	log count = a + b_1(temperature) + b_2(time)
Air-drying experiments		
Eurasian watermilfoil	*Transformed data, GLM, quasi-Poisson family*	
	Leaf Root Branch	log count = a + b_1(time)
Carolina fanwort	*Transformed data, GLM, quasi-Poisson family*	
	Leaf	log count = a + b_1(time)
	Root	log count = a + b_1(time^2)
	Transformed data, GLM, Poisson family	
	Branch	log count = a + b_1(time^2)
European frogbit	*Transformed data, GLM, quasi-Poisson family*	
	Leaf Turion	log count = a + b_1(time^2) + b_2(time)
Experiments combining hot water and air-drying		
Eurasian watermilfoil	*Transformed data, GLM, quasi-Poisson family*	
	Leaf	log count = a + b_1(time) + b_2(temperature^2)
	Transformed data, GLM, Poisson family	
	Root Branch	log count = a + b_1(time)^2 + b_2(time) + b_3(temperature)
Carolina fanwort	*Transformed data, GLM, quasi-Poisson family*	
	Leaf	log count = a + b_1(time) + b_2(temperature) + b_3(time:temperature)
	Branch	log count = a + b_1(time) + b_2(temperature^2) + b_3(time:temperature^2)
	Transformed data, GLM, Poisson family	
	Root	log count = a + b_1(time) + b_2(temperature)
European frogbit	Data not transformed, GLM, quasi-Poisson family	
	Leaf	log count = a + b_1(time^2) + b_2(temperature^2)
	Turion	log count = a + b_1(temperature)

Note: (i) a and b_i represent regression coefficients; (ii) ":" represents the interaction between variables; (iii) data was transformed by adding 1 to all counts.

Statistical results

Pressure washing experiments

Table 9. Results from regression analyses for pressure washing experiments using surfaces naturally colonised by periphyton, or gel-seeded plant fragments. Best fit regression models are indicated.

Variable	Regression coefficient	Standard Error (SE)	p-value
Periphyton experiment (GLM; Gaussian regression)			
Pressure^2	1.811×10^{-8}	4.785×10^{-9}	< 0.001*
Pressure	-3.339×10^{-5}	9.545×10^{-6}	< 0.001*
Gel experiment (GLM; quasi-Poisson regression)			
Pressure^2	1.526×10^{-6}	1.934×10^{-7}	< 0.001*
Pressure	-3.398×10^{-3}	3.786×10^{-4}	< 0.001*
Orientation (vertical relative to angled)	0.306	0.103	0.003*

Note: * statistically significant

Table 10. Results from logistic regression analyses for brief hot water immersion experiments (simulating rinsing) on banded mystery snails, including acclimation experiment. Best fit regression models are indicated.

Variable	Estimate	95% CI	p-value
Hot water experiment (GLM; quasi-binomial regression)			
Temperature	-0.692	-0.871 – -0.564	< 0.001*
Exposure time	-0.473	-0.713 – -0.292	< 0.001*
Acclimation experiment (GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
Hot water temperature^2	-0.006	-0.010 – -0.002	0.005*
Hot water temperature	0.381	0.067 – 0.728	0.026*
Acclimation temperature	-0.046	-0.187 – 0.089	0.504

Note: * statistically significant

Table 11. Results from logistic regression analyses for brief hot water immersion experiments on two size classes of zebra mussels, and acclimation experiments on large zebra mussels. Best fit regression models are indicated.

Variable	Estimate	95% CI	p-value
Small zebra mussels (8-12mm – GLM; quasi-binomial regression)			
Temperature^2	-0.009	-0.016 – -0.004	0.005*
Temperature	0.556	0.131 – 1.042	0.022*
Exposure time	-0.110	-0.260 – 0.034	0.148
Large zebra mussels (15-20mm – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
Temperature^2	-0.008	0.987 – 0.995	< 0.001*
Temperature	0.549	1.308 – 2.419	0.001*
Exposure time	-0.149	0.771 – 0.958	0.010*
Acclimation experiment (15-20mm zebra mussels only – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
Hot water temperature^2	-0.024	-0.030 – -0.019	< 0.001*
Hot water temperature	1.523	1.137 – 1.947	< 0.001*
Acclimation temperature	0.202	0.098 – 0.322	< 0.001*

Note: * statistically significant

Table 12. Results from logistic regression analyses for air-drying experiments on invertebrates. Best fit regression models are indicated.

Banded mystery snails (GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
$Time^2$	0.0002	8.330×10^{-6} – 0.0004	0.063
Time	-0.051	-0.009 – -0.018	0.011*
Small zebra mussels (8-12mm – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
$Time^2$	-0.546	-0.807 – -0.180	0.979
Time	8.789	8.025 – 9.553	0.946
Large zebra mussels (15-20mm – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
$Time^2$	0.9983	0.9979 – 0.9986	< 0.001*

Note: * statistically significant

Results from air-drying experiments on small zebra mussels

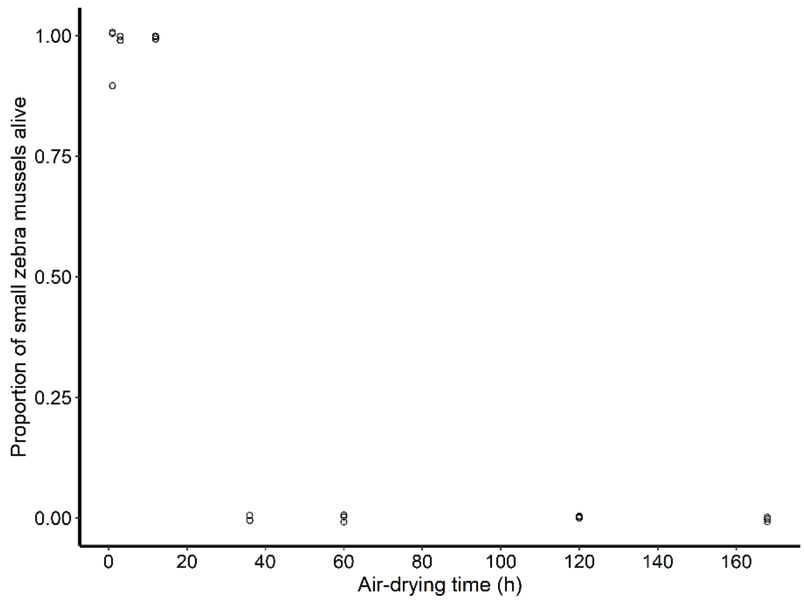

Figure 6. Scatterplot showing the proportion of small (8-12mm) zebra mussels surviving after air-drying for 1h to 7 days. Survival was very high in air-drying groups of up to 12h, with a sudden drop resulting in complete mortality in the air-drying groups of 36h and above.

Statistical results (continued)

Table 13. Results from logistic regression analyses for combined treatment experiments using brief hot water exposure followed by air-drying among invertebrates. Best fit regression models are indicated.

Variable	Estimate	95% CI	p-value
Banded mystery snails (GLM; quasi-binomial regression)			
Water temperature^2	-4.110	-7.244 – -1.103	< 0.001*
Water temperature	0.361	0.214 – 0.522	< 0.001*
Air-drying duration	-0.026	-0.034 – -0.018	< 0.001*
Small zebra mussels (8-12mm – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
Air-drying duration^2	-0.008	-0.013 – -0.004	0.006*
Large zebra mussels (15-20mm – GLM; quasi-binomial regression)			
Variable	**Estimate**	**95% CI**	**p-value**
Air-drying duration^2	-0.004	-0.006 – -0.003	< 0.001*

Note: * statistically significant

Results from experiments on macrophytes

Table 15. Results from quasi-Poisson regression analyses for hot water experiments on Eurasian watermilfoil, including acclimation experiments

	Variable	**Regression coefficient**	**Standard Error (SE)**	**p-value**
Leaf growth	Temperature^2	-0.009	0.004	0.022*
	Temperature	0.553	0.248	0.031*
Root growth	Temperature^2	-0.002	0.001	0.003*
	Temperature	0.099	0.050	0.053
Branch growth	Temperature^2	-0.002	0.001	< 0.001*
	Temperature	0.137	0.044	0.003*

Acclimation experiment

	Variable	**Regression coefficient**	**Standard Error (SE)**	**p-value**
Leaf growth	Water temperature^2	-0.004	0.0004	< 0.001*
	Water temperature	0.265	0.038	< 0.001*
	Acclimation temperature	-0.030	0.011	< 0.001*
Root growth	Water temperature^2	-0.002	0.0004	< 0.001*
	Water temperature	0.118	0.033	< 0.001*
Branch growth	Water temperature^2	-0.002	0.0003	< 0.001*
	Water temperature	0.173	0.024	< 0.001*

Note: * statistically significant

Table 16. Results from quasi-Poisson regression analyses for hot water experiments on Carolina fanwort.

	Variable	**Regression coefficient**	**Standard Error (SE)**	**p-value**
Leaf growth	Temperature^2	-0.002	0.001	0.006*
	Temperature	0.094	0.053	0.082
Root growth	Temperature^2	-7.517×10^{-4}	-7.712×10^{-5}	< 0.001*
	Immersion time^2	-0.004	0.002	0.078
Branch growth	Temperature^2	-0.002	0.0003	< 0.001*
	Temperature	0.131	0.026	< 0.001

Note: * statistically significant

Table 17. Results from quasi-Poisson regression analyses for hot water experiments on European frogbit.

	Variable	**Regression coefficient**	**Standard Error (SE)**	**p-value**
Leaf growth	Temperature^2	-2.439×10^{-4}	5.416×10^{-5}	< 0.001*
Turion growth	Temperature	-0.025	0.003	< 0.001*
	Immersion time	-0.022	0.016	0.158

Note: * statistically significant

Figures showing results from experiments on macrophytes

Hot water experiments

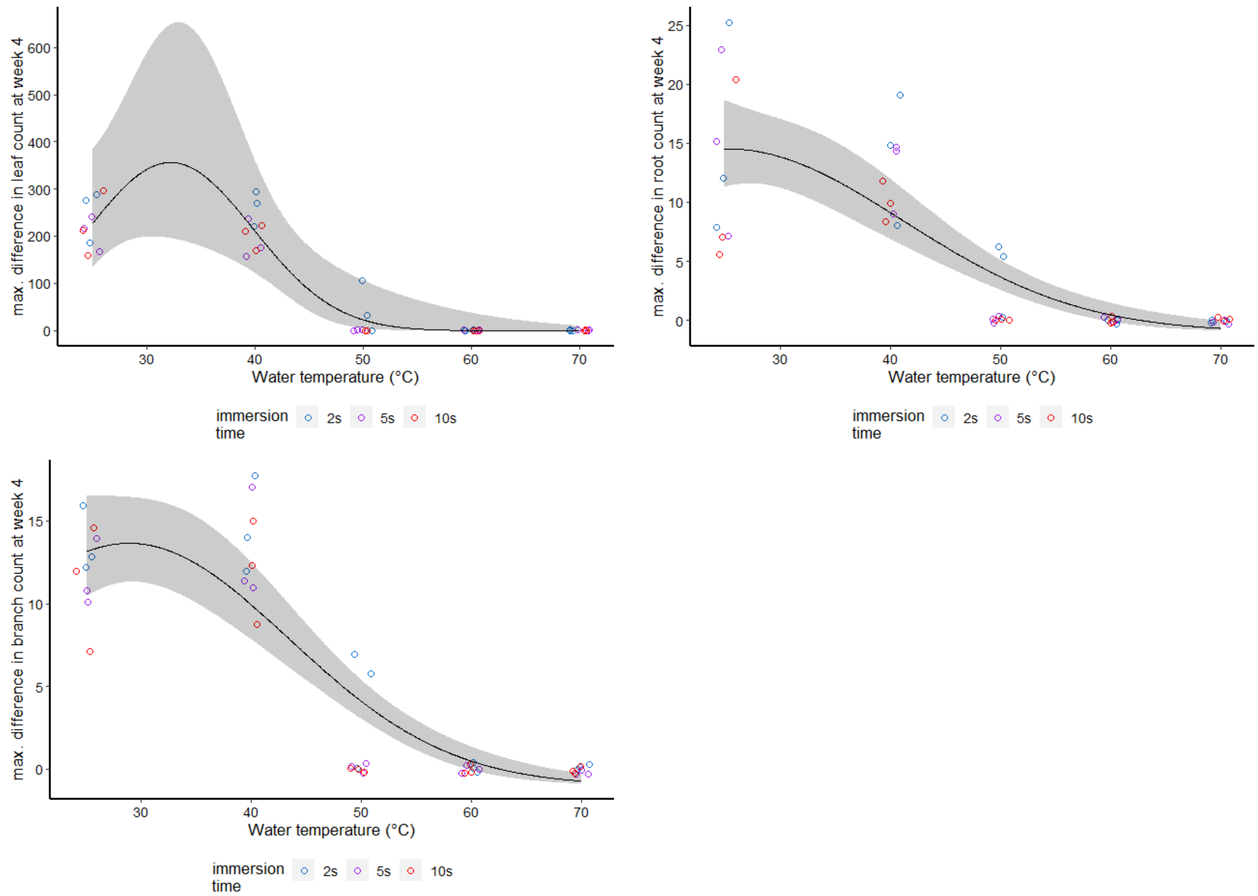

Figure 8. Relationship between new leaf (top left), root (top right) and branch (bottom) growth at week 4 and hot water temperature among Eurasian watermilfoil fragments. Jittered circles represent the observed data; the solid line and the shaded area represent the regression and the 95% confidence band, respectively.

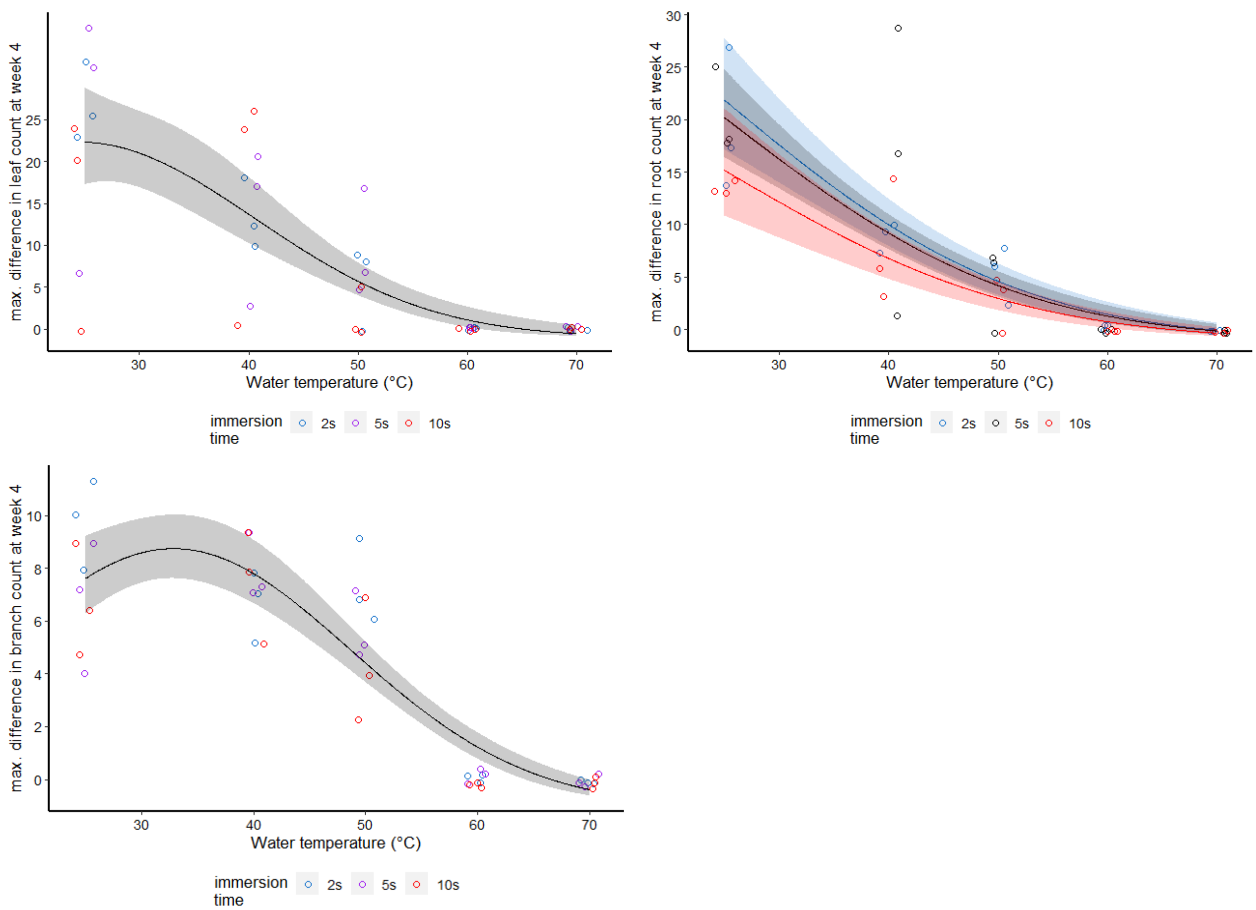

Figure 9. Relationship between new leaf (top left), root (top right) and branch (bottom) growth at week 4 and hot water temperature among Carolina fanwort fragments.

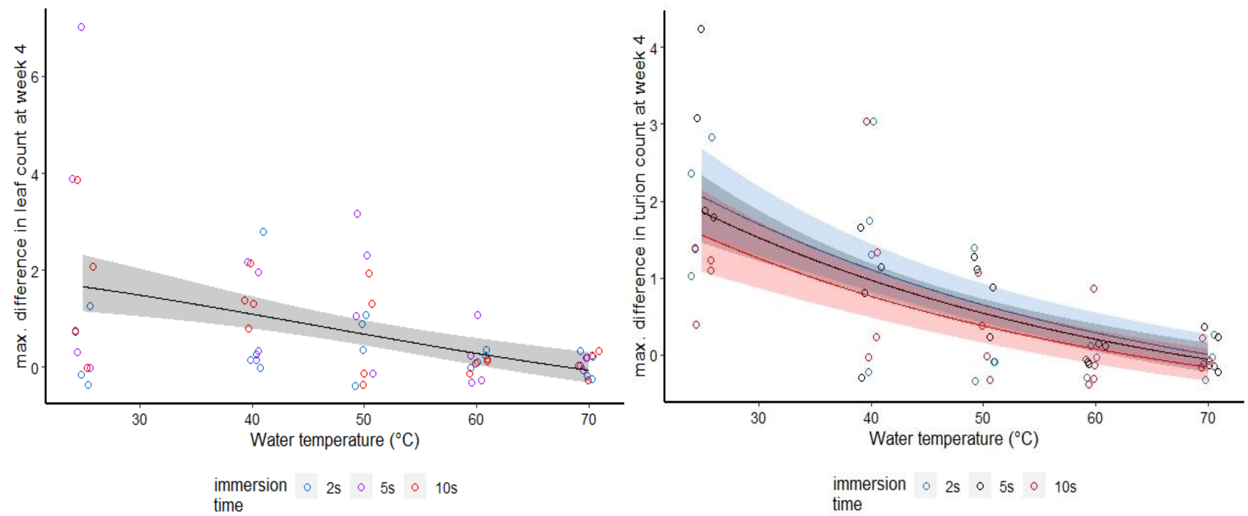

Figure 10. Relationship between hot water temperature and new leaf (left) and turion (right) growth at week 4 among European frogbit rosettes.

Statistical results (continued)

Experiments on macrophytes

Table 18. Results from Poisson/quasi-Poisson regression analyses for air-drying experiments on three aquatic plant species

	Variable	Regression coefficient	Standard Error (SE)	p-value
Eurasian watermilfoil				
Leaf growth	Air-drying duration	-0.048	0.016	0.009*
Root growth	Air-drying duration	-0.021	0.006	0.004*
Branch growth	Air-drying duration	-0.017	0.005	0.002*
Carolina fanwort				
Leaf growth	Air-drying duration	-0.018	0.008	0.030*
Root growth	Air-drying duration^2	-1.097×10^{-4}	3.897×10^{-5}	0.011*
Branch growth	Air-drying duration^2	-9.755×10^{-5}	1.942×10^{-5}	< 0.001*
European frogbit				
Leaf growth	Air-drying duration^2	9.234×10^{-5}	4.314×10^{-5}	0.043*
	Air-drying duration	-0.019	-0.007	0.012*
Turion growth	Air-drying duration^2	7.963×10^{-5}	2.990×10^{-5}	0.014*
	Air-drying duration	-0.018	-0.005	< 0.001*

Note: * statistically significant

Figures showing results from experiments on macrophytes (continued)

Air-drying experiments

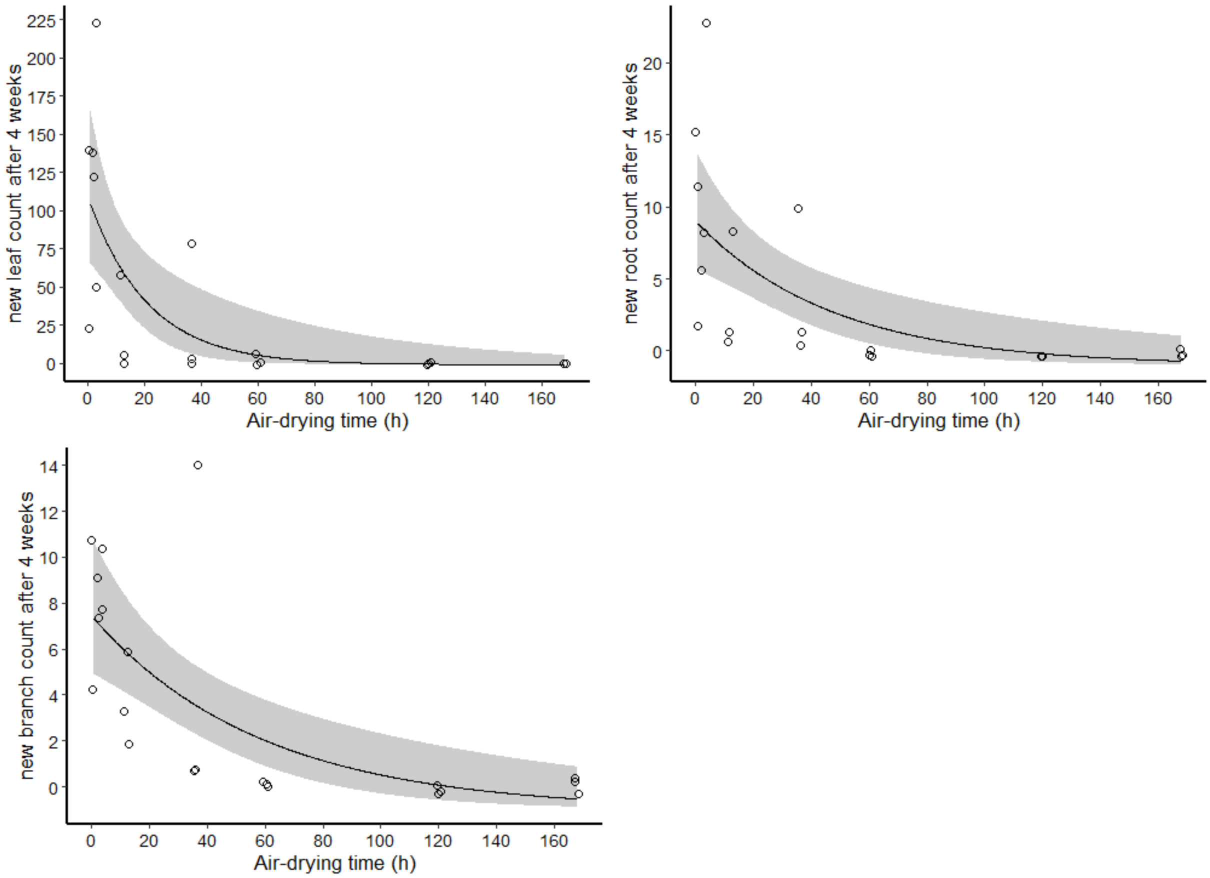

Figure 11. Relationship between air-drying duration and new leaf (top left), root (top right), and branch (bottom) growth among Eurasian watermilfoil.

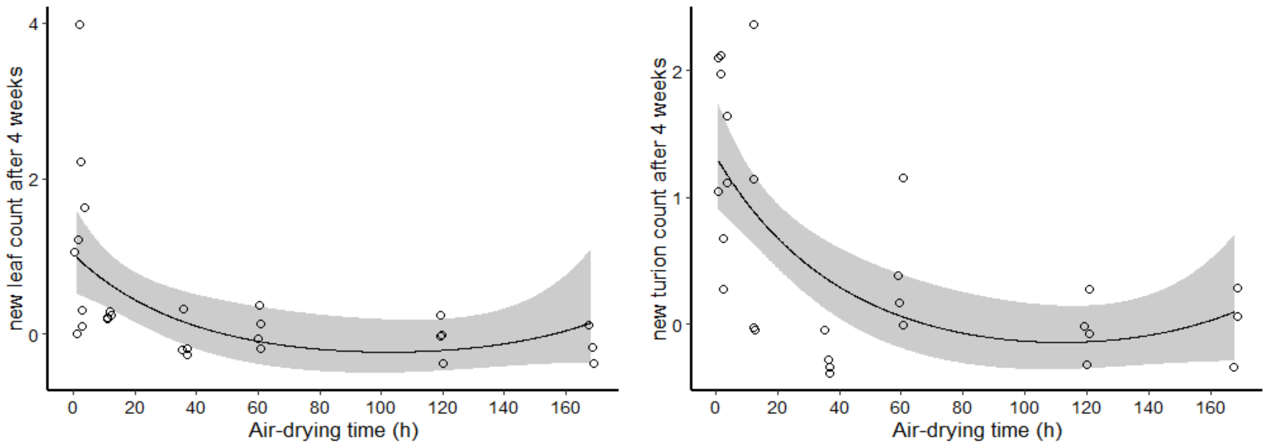

Figure 12. Relationship between air-drying duration and new leaf (left) and turion (right) growth among European frogbit.

Statistical results (continued)

Experiments on macrophytes

Table 19. Results from Poisson/quasi-Poisson regression analyses for combination experiments on three aquatic plant species

	Variable	Regression coefficient	Standard Error (SE)	p-value
Eurasian watermilfoil				
Leaf growth	Air-drying duration	-0.030	0.009	0.001*
	Water temperature^2	-0.0007	0.0002	< 0.001*
Root growth	Air-drying duration^2	2.869×10^{-4}	6.642×10^{-5}	< 0.001*
	Air-drying duration	-0.050	0.008	< 0.001*
	Water temperature	-0.028	0.005	< 0.001*
Branch growth	Air-drying duration^2	2.864×10^{-4}	6.885×10^{-5}	< 0.001*
	Air-drying duration	-0.049	0.008	< 0.001*
	Water temperature	-0.024	0.005	< 0.001*
Carolina fanwort				
Leaf growth	Air-drying duration	-0.051	0.009	< 0.001*
	Hot water temperature	-0.064	0.008	< 0.001*
	Interaction	0.0007	0.0002	< 0.001*
Root growth	Air-drying duration	-0.039	0.005	< 0.001*
	Hot water temperature^2	-7.435×10^{-4}	7.765×10^{-5}	< 0.001*
	Interaction	9.063×10^{-6}	1.645×10^{-6}	< 0.001*
Branch growth	Air-drying duration	-0.030	0.003	< 0.001*
	Hot water temperature^2	-5.586×10^{-4}	5.454×10^{-5}	< 0.001*
	Interaction	6.564×10^{-6}	1.145×10^{-6}	< 0.001*
European frogbit				
Leaf growth	Air-drying duration^2	-1.204×10^{-4}	9.392×10^{-5}	0.203
	Hot water temperature^2	3.862×10^{-4}	2.085×10^{-4}	0.067
Turion growth	Hot water temperature	0.032	0.015	0.033*

Note: * statistically significant

Figures showing results from experiments on macrophytes (continued)

Hot water and air-drying combination

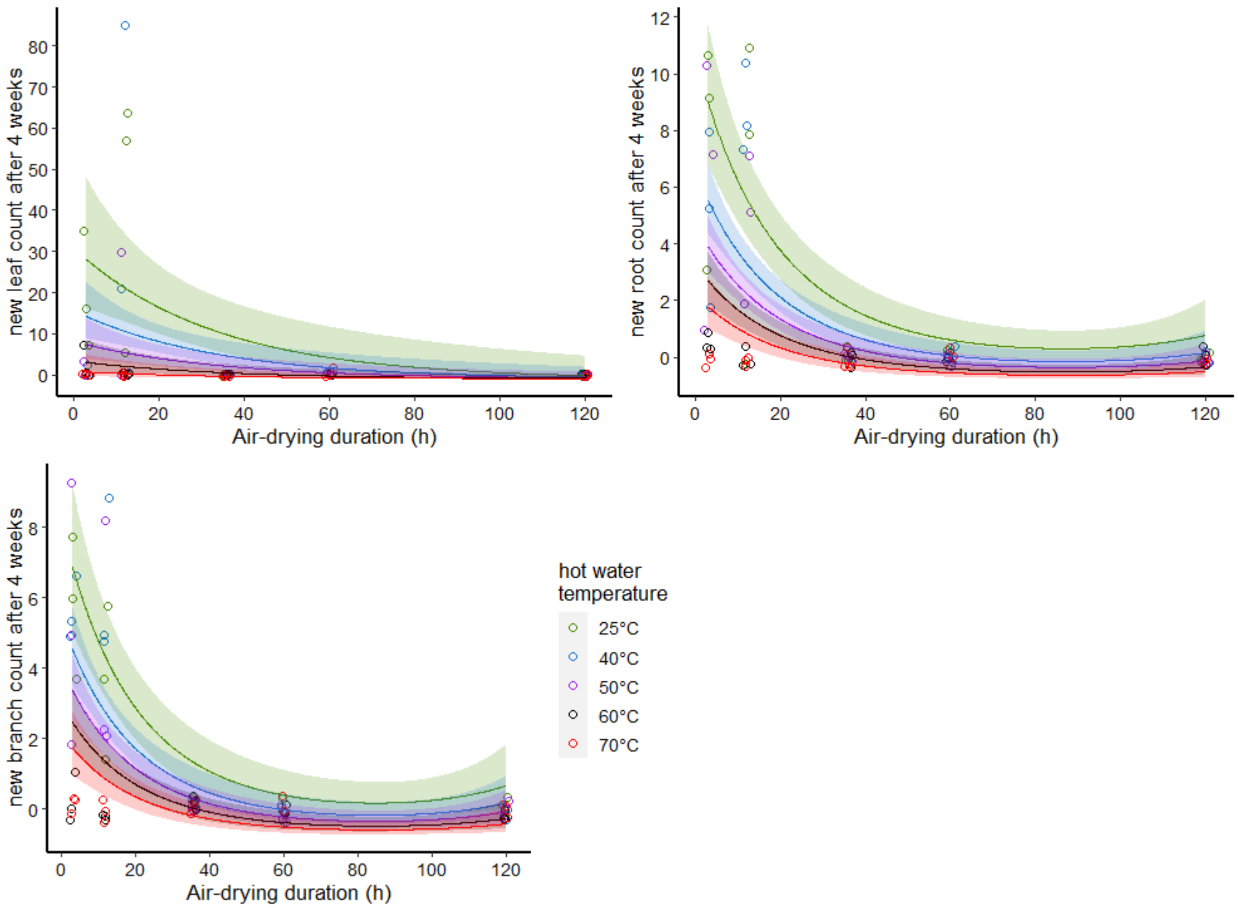

Figure 13. New leaf (top left), root (top right), and branch (bottom) growth after four weeks among Eurasian watermilfoil fragments with increasing air-drying duration, after exposure to hot water.

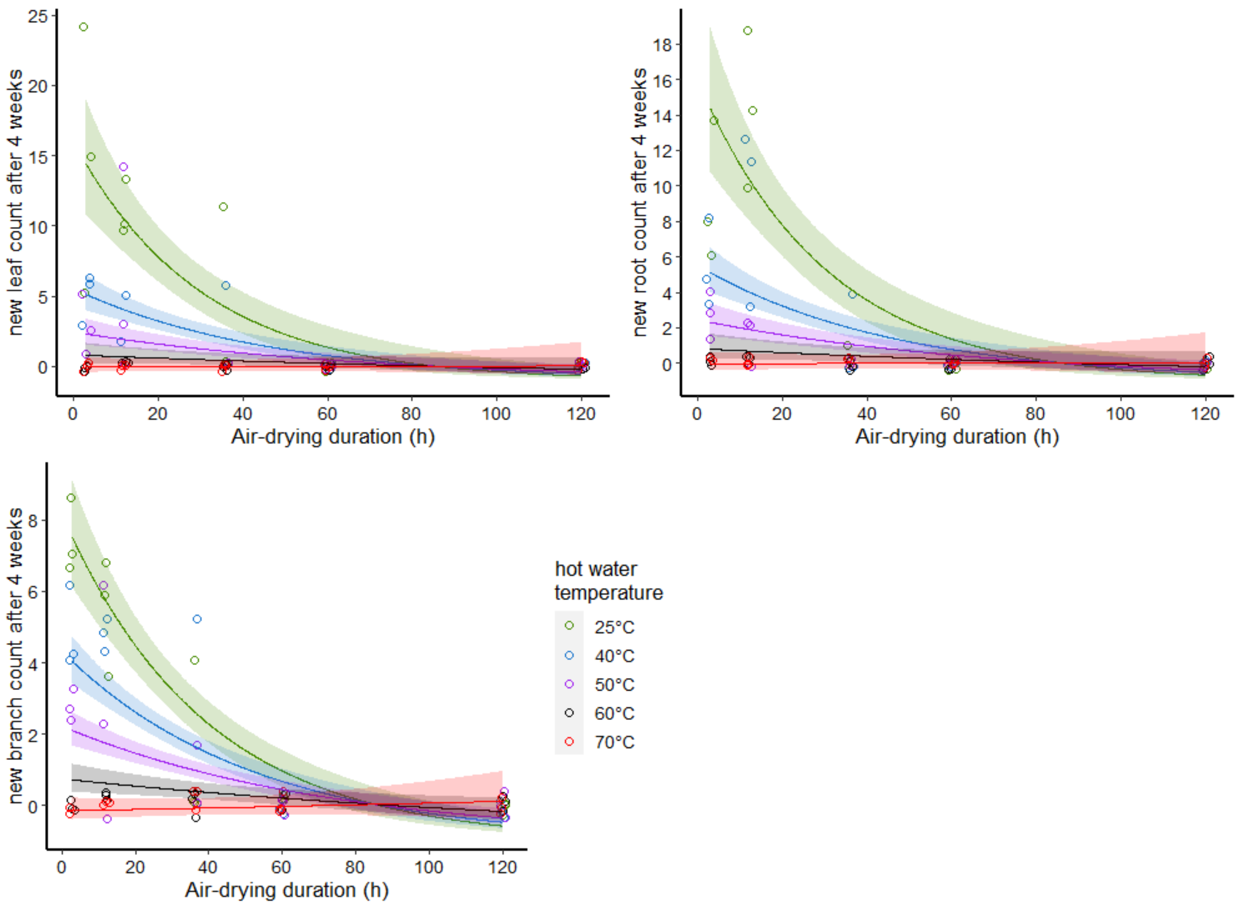

Figure 14. New leaf (top left), root (top right), and branch (bottom) growth after four weeks among Carolina fanwort fragments with increasing air-drying duration, after exposure to hot water.

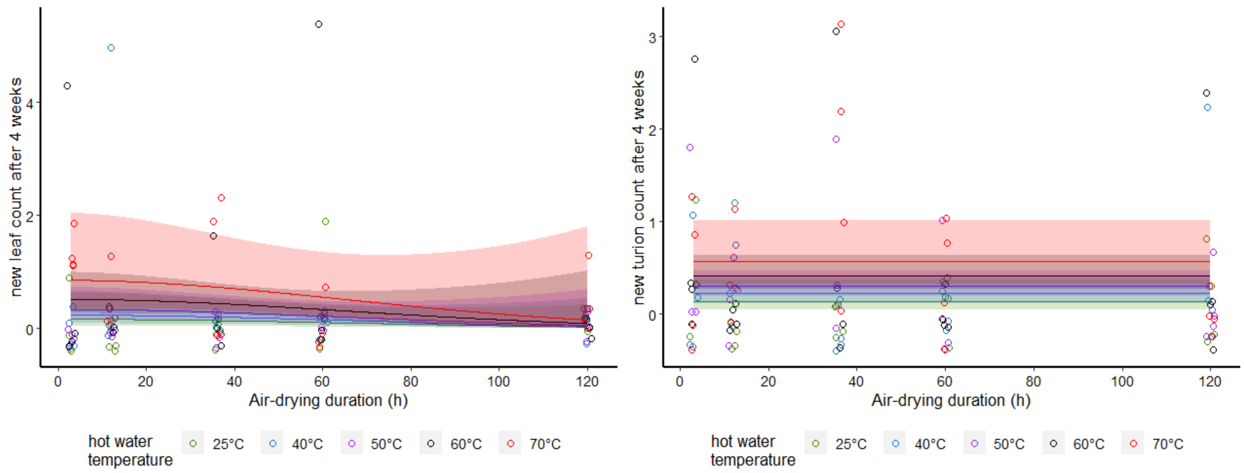

Figure 15. New leaf (left) and turion (right) growth at week 4 among European frogbit rosettes with increasing air-drying duration, after exposure to hot water.