mathematics

MDPI

Supplementary Material to

Realistic choice of annual matrices contracts the range of λ_S estimates

Dmitrii O. Logofet [1,*], Leonid L. Golubyatnikov [1] and Nina G. Ulanova [2]

[1] Laboratory of Mathematical Ecology, A.M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences, Moscow 119 017, Russia; danilal@postman.ru, golub@ifaran.ru
[2] Biological Department, Moscow State University, Moscow, 119234, Russia; nulanova@mail.ru
* Correspondence: danilal@postman.ru

The study allows us to conclude that the $\lambda_1(t)$ variable correlates positively with the minimum air temperatures in May–June in the alpine heath; this turned out to be the only significant predictor in the models with one factor included. The best multiple regression model explains 99% of the variance and includes three factors: minimum air temperatures in May–June, precipitation from November to May, and maximum 10cm-depth soil temperatures in May–June (**Table S1**).

Table S1. Results of multiple regression models

Model	n	df	R^2	p	Factors	B	StE_B	p_F
Teberda State Meteorological Station								
Pr 11-05	9	7	0.428	$0.056^{n.s.}$	Pr 11-05	-0.002	0.001	$0.056^{n.s.}$
Pr 11-05 + Mean T 05	9	6	0.600	$0.064^{n.s.}$	Pr 11-05 Mean T 05	-0.003 0.150	0.001 0.093	0.028 $0.160^{n.s.}$
Alpine heaths								
Min T 05-06	9	5	0.499	0.033	Min T 05-06	0.154	0.058	0.033
Min T 05-06 + Pr 11-05 + Max TS10 05-06	7	3	0.993	0.001	Min T 05-06 Pr 11-05 MaxTS 10 05-06	0.190 -0.003 0.030	0.013 0.0001 0.003	< 0.001 < 0.00 0.003
Min T 05-06 + Pr 11-05	8	5	0.859	0.007	Min T 05-06 Pr 11-05	0.133 -0.002	0.037 0.000	0.015 0.017

Notations: n, the number of observations; df, degrees of freedom; R^2, the coefficient of determination; p, the significance level for the entire model; B, the regression coefficient; StE_B, the error of the regression coefficient; p_F, significance levels for factors;
Mean T 05, minimum air temperatures in May–June in the alpine heath;
Min T o5-06, minimum air temperatures in May–June;
Pr 11-05, precipitation from November to May, and
Max TS10 05-06, maximum 10cm-depth soil temperatures in May–June.