

Table S1 Models sets and model selection results for each species.

Model	ΔAICc^a	Akaike weight^b	K^c	2log-likelihood
<i>P. esculentus</i>				
psi(.), p(PASTPOP, TIMESINCE)	0.00	0.579	5	424.85
psi(.), p(PASTPOP)	0.64	0.420	4	427.49
psi(.), p(AIRT)	16.18	0.000	4	443.03
psi(.), p(VISIT, VISITSQ)	17.26	0.000	5	442.11
psi(.), p(SOILT)	18.47	0.000	4	445.31
psi(.), p(WIND)	19.01	0.000	4	445.85
psi(.), p(.)	21.90	0.000	2	452.74
psi(.), p(REED)	22.72	0.000	4	449.56
psi(.), p(WSURFACE)	22.77	0.000	4	449.61
psi(.), p(FLOATINGP)	23.66	0.000	4	450.50
psi(.), p(RESTRICTED)	24.31	0.000	4	451.15
psi(.), p(RAIN)	24.34	0.000	4	451.19
psi(.), p(UNDERWP)	24.36	0.000	4	451.21
<i>A. obstetricans</i>				
psi(.), p(SOILT)	0.00	0.347	4	279.78
psi(.), p(AIRT)	0.18	0.317	4	279.95
psi(.), p(PASTPOP)	2.35	0.107	4	282.12
psi(.), p(VISIT, VISITSQ)	2.99	0.077	5	280.76
psi(.), p(PASTPOP, TIMESINCE)	4.34	0.039	5	282.11
psi(.), p(WSURFACE)	4.46	0.037	4	284.24
psi(.), p(RESTRICTED)	4.81	0.031	4	284.59

psi(.), p(WIND)	4.99	0.028	4	284.77
psi(.), p(RAIN)	6.48	0.013	4	286.25
psi(.), p(.)	27.90	0.000	2	311.68
<i>B. calamita</i>				
psi(.), p(PASTPOP, TIMESINCE)	0.00	0.255	5	167.59
psi(.), p(PASTPOP)	1.00	0.154	4	170.58
psi(.), p(SOILT)	1.48	0.121	4	171.07
psi(.), p(AIRT)	1.62	0.113	4	171.20
psi(.), p(RAIN)	1.97	0.095	4	171.56
psi(.), p(VISIT, VISITSQ)	1.98	0.094	5	169.56
psi(.), p(WSURFACE)	2.88	0.060	4	172.47
psi(.), p(WIND)	3.16	0.052	4	172.74
psi(.), p(RESTRICTED)	3.24	0.052	4	172.82
psi(.), p(.)	10.04	0.001	2	183.62
<i>B. variegata</i>				
psi(.), p(WIND)	0.00	0.518	4	289.22
psi(.), p(AIRT)	0.57	0.389	4	298.80
psi(.), p(VISIT, VISITSQ)	5.70	0.030	5	301.92
psi(.), p(SOILT)	6.15	0.023	4	304.37
psi(.), p(RAIN)	7.60	0.011	4	305.83
psi(.), p(WSURFACE)	8.10	0.009	4	306.33
psi(.), p(PASTPOP)	8.58	0.007	4	306.81
psi(.), p(RESTRICTED)	8.61	0.007	4	306.83
psi(.), p(PASTPOP, TIMESINCE)	9.84	0.003	5	306.07
psi(.), p(.)	24.70	0.000	2	326.93

M. alpestris

psi(.), p(PASTPOP)	0.00	0.236	4	513.53
psi(.), p(VISIT, VISITSQ)	1.03	0.141	5	512.55
psi(.), p(SOILT)	1.06	0.139	4	514.59
psi(.), p(PASTPOP, TIMESINCE)	1.15	0.133	5	512.67
psi(.), p(RAIN)	1.66	0.103	4	515.19
psi(.), p(AIRT)	2.00	0.087	4	515.52
psi(.), p(FLOATINGP)	3.01	0.052	4	516.53
psi(.), p(UNDERWP)	3.90	0.033	4	517.43
psi(.), p(WSURFACE)	4.38	0.026	4	517.91
psi(.), p(REED)	4.62	0.023	4	518.15
psi(.), p(RESTRICTED)	4.71	0.022	4	518.24
psi(.), p(.)	83.36	0.000	2	600.89

T. cristatus

psi(.), p(PASTPOP, TIMESINCE)	0.00	0.738	5	112.12
psi(.), p(PASTPOP)	3.17	0.151	4	117.29
psi(.), p(FLOATINGP)	5.53	0.046	4	119.66
psi(.), p(RESTRICTED)	6.65	0.026	4	120.77
psi(.), p(UNDERWP)	6.72	0.025	4	120.84
psi(.), p(AIRT)	11.05	0.002	4	125.18
psi(.), p(SOILT)	11.48	0.002	4	125.61
psi(.), p(RAIN)	11.80	0.002	4	125.92
psi(.), p(REED)	12.42	0.001	4	126.55
psi(.), p(WSURFACE)	12.74	0.001	4	126.87
psi(.), p(VISIT, VISITSQ)	12.81	0.001	5	124.94

psi(.), p(.)	21.65	0.000	2	139.78
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^a ΔAICc is the difference between the AICc of the best model and the focal model.

^b K is the number of parameters included in the model.

^c The sum of all Akaike weights in a set of candidate models is 1. The higher the weight, the better the model is supported by the data.