

Supplementary material for the article “Habitat connectivity supports local abundance of fire salamanders (*Salamandra salamandra*) but also the spread of *Batrachochytrium salamandrivorans*” by Leonard Bolte, Forough Goudarzi, Reinhard Klenke, Sebastian Steinfartz, Annegret-Grimm Seyfarth and Klaus Henle published in *Landscape Ecology*

Supplementary information 6 (SI6): All model-averaged parameter importance for the presence of Bsal

Table SI6a: Model-averaged parameter importance for the presence of Bsal in 167 tested and untested fire salamander occurrences: Bsal positive sites ($n = 17$) and untested/Bsal negative ($n = 150$). The importance of the parameters “Visitors” (predicted number of visitors per year and ha, Schägner et al. 2021) and “Trails” (proportional cover of hiking trails in a 500 m radius, Beukema et al. 2021) and “Visitors:Trails” was averaged across all 10 calls.

Parameter	Estimate	Std. Error	z value	Pr(> z)	Importance	Rank
R _{Bsal} (L)	-0.409	0.355	-1.152	0.249	0.728	1
R _{Bsal} (LQH)	-0.402	0.356	-1.129	0.259	0.718	2
R _{Sum} 32 (L)	-0.266	0.310	-0.858	0.391	0.590	3
R _{Sum} 16 (LQH):Trail	0.256	0.308	0.833	0.405	0.565	4
R _{Sum} 32 (LQH)	-0.201	0.278	-0.723	0.469	0.515	5
R _{Sum} 8 (LQH):Trail	0.206	0.282	0.729	0.466	0.514	6
R _{Sum} 8 (LQH)	-0.174	0.257	-0.677	0.498	0.486	7
R _{Sum} (LQH)	-0.166	0.255	-0.653	0.514	0.473	8
Trail:Visitors	-0.147	0.259	-0.568	0.570	0.440	9
R _{Sum} (L):Trail	0.161	0.277	0.583	0.560	0.440	10
R _{Sum} 16 (LQH)	-0.137	0.236	-0.581	0.561	0.434	11
R _{Sum} 32 (LQH):Trail	0.151	0.264	0.572	0.567	0.422	12
R _{Sum} 16 (L)	-0.128	0.236	-0.543	0.587	0.413	13
D _{Bsal} (km):Visitors	0.151	0.294	0.512	0.608	0.398	14
R _{Sum} (LQH):Trail	0.123	0.249	0.494	0.621	0.382	15
R _{Sum} 16 (L):Trail	0.114	0.238	0.481	0.631	0.379	16
R _{Sum} 8 (L)	-0.099	0.210	-0.472	0.637	0.375	17
R _{Sum} (L)	-0.095	0.209	-0.456	0.649	0.368	18
R _{Bsal} (LQH):Trail	0.111	0.239	0.465	0.642	0.365	19
R _{Sum} 32 (L):Trail	0.092	0.217	0.423	0.673	0.352	20
R _{Sum} (LQH):Visitors	0.094	0.239	0.393	0.694	0.344	21
R _{Sum} 8 (L):Trail	0.069	0.186	0.371	0.711	0.330	22
R _{Sum} 32 (LQH):Visitors	0.067	0.230	0.290	0.772	0.315	23
Visitors	0.055	0.177	0.310	0.757	0.310	24
R _{Sum} 16 (L):Visitors	-0.047	0.182	-0.257	0.797	0.308	25
R _{Sum} 8 (L):Visitors	-0.039	0.179	-0.220	0.826	0.295	26
R _{Bsal} (L):Visitors	-0.034	0.179	-0.191	0.848	0.295	27
R _{Sum} (L):Visitors	-0.023	0.166	-0.141	0.888	0.290	28
R _{Sum} 32 (L):Visitors	0.018	0.171	0.108	0.914	0.285	29
R _{Bsal} (L):Trail	0.020	0.159	0.125	0.901	0.281	30
D _{Bsal} (km)	-0.034	0.153	-0.221	0.825	0.281	31
Trail	0.019	0.154	0.122	0.904	0.281	32
R _{Sum} 16 (LQH):Visitors	0.004	0.179	0.020	0.984	0.279	33
R _{Sum} 8 (LQH):Visitors	-0.011	0.175	-0.061	0.951	0.277	34
D _{Bsal} (km):Trail	-0.028	0.164	-0.170	0.865	0.273	35
R _{Bsal} (LQH):Visitors	0.004	0.172	0.023	0.981	0.267	36

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Table 6b: Model-averaged parameter importance for the presence of *Bsal* in 39 tested fire salamander occurrences: *Bsal* positive ($n = 17$) and *Bsal* negative ($n = 22$). The importance of the parameters “Visitors” (predicted number of visitors per year and ha, Schägner et al. 2021) and “Trails” (proportional cover of hiking trails in a 500 m radius, Beukema et al. 2021) were averaged across all calls. No interactions could be modelled due to the reduced sampling size of tested sites.

Parameter	Estimate	Std. Error	z value	Pr(> z)	Importance	Rank
R_{Bsal} (LQH)	-0.334	0.387	-0.862	0.388	0.587	1
R_{Sum8} (LQH)	-0.280	0.335	-0.838	0.402	0.572	2
R_{Bsal} (L)	-0.273	0.387	-0.706	0.480	0.500	3
R_{Sum} (LQH)	-0.200	0.305	-0.656	0.512	0.463	4
R_{Sum16} (LQH)	-0.170	0.272	-0.627	0.531	0.445	5
R_{Sum32} (L)	-0.184	0.315	-0.582	0.560	0.421	6
R_{Sum32} (LQH)	-0.142	0.250	-0.569	0.569	0.412	7
R_{Sum8} (L)	-0.143	0.286	-0.499	0.618	0.371	8
R_{Sum16} (L)	-0.116	0.256	-0.451	0.652	0.344	9
R_{Sum} (L)	-0.075	0.215	-0.349	0.727	0.299	10
Visitors	-0.095	0.276	-0.344	0.731	0.297	11
Trails	0.076	0.236	0.319	0.750	0.289	12
D_{Bsal} (km)	-0.008	0.208	-0.039	0.969	0.242	13

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