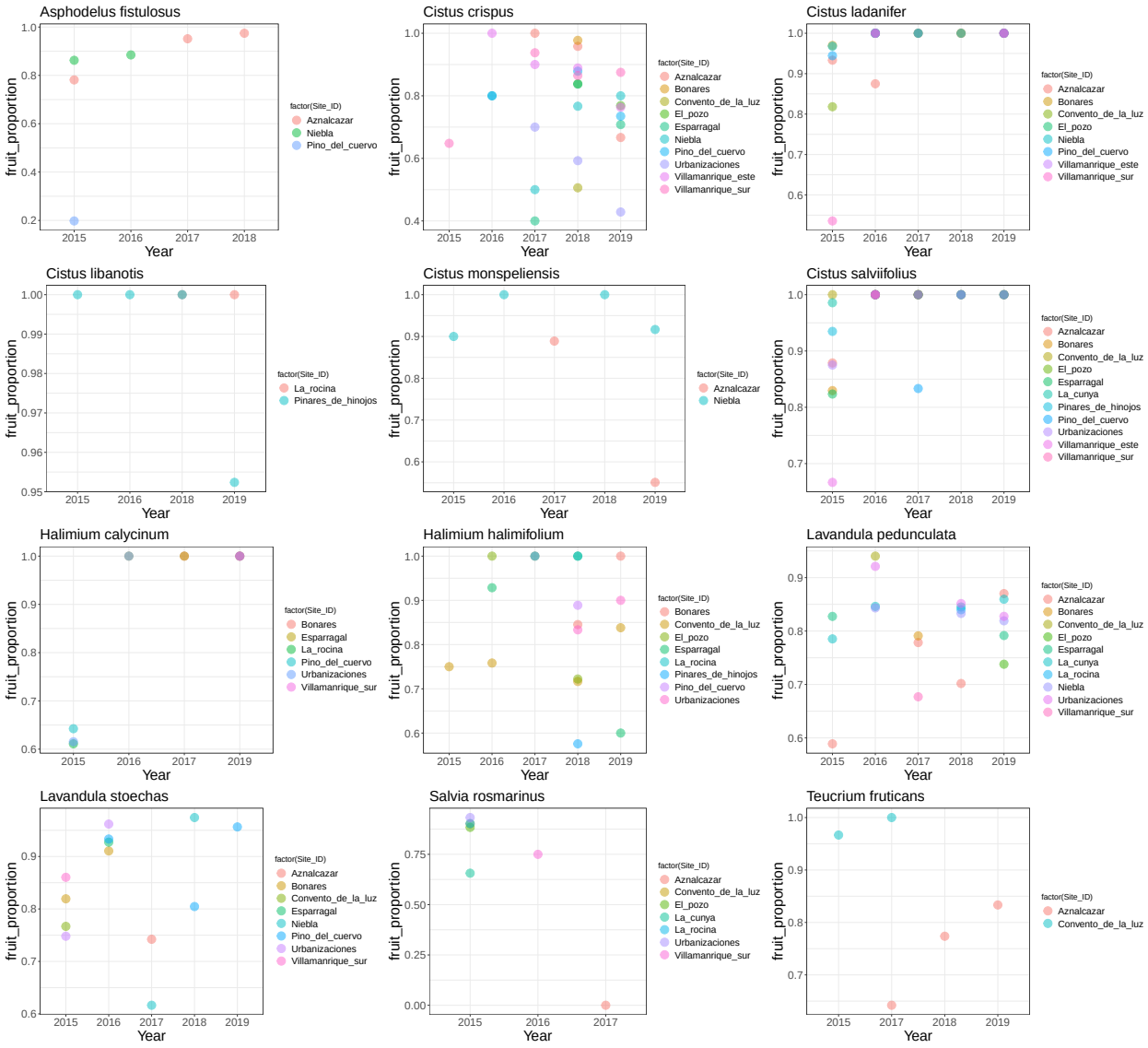
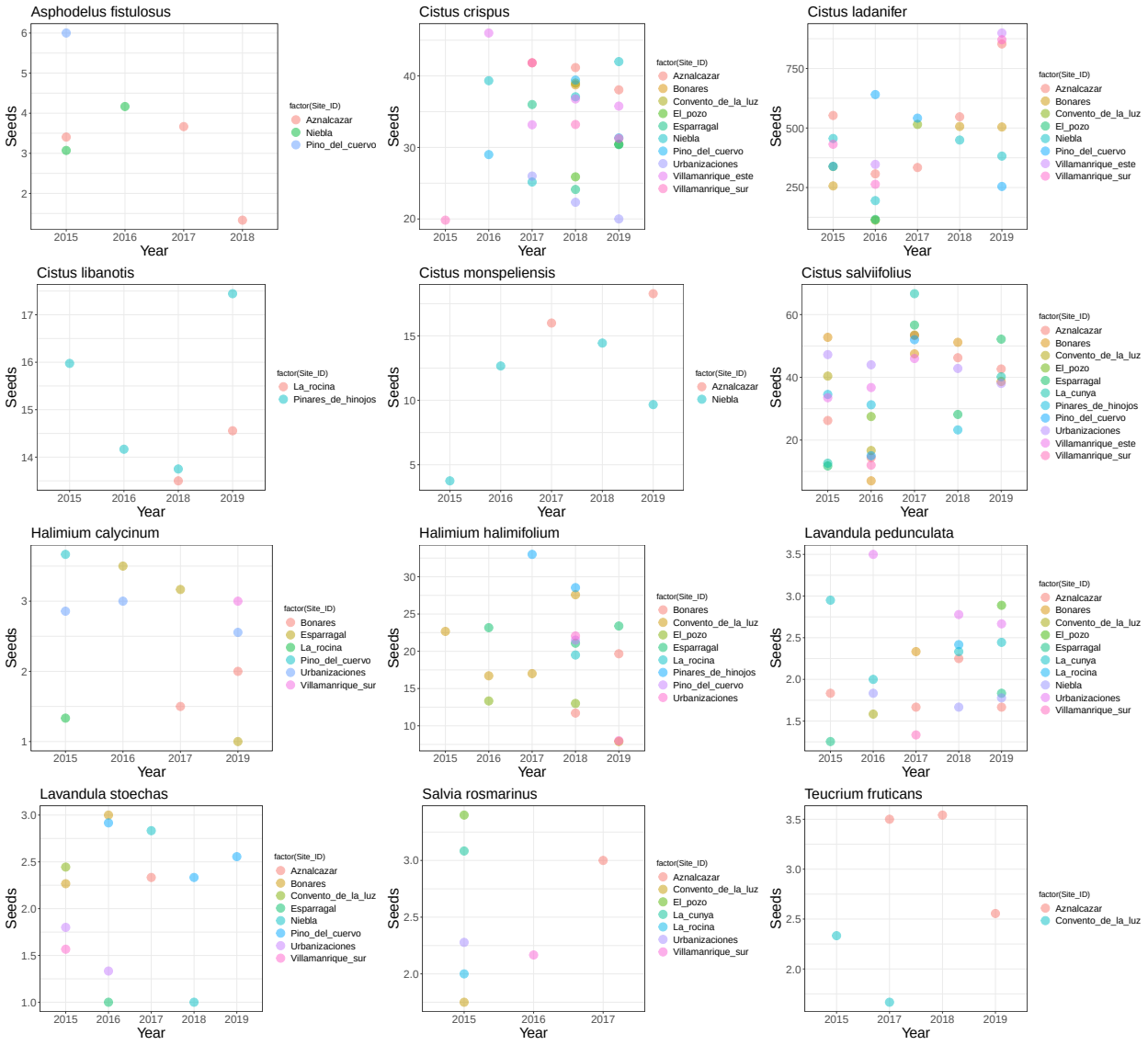
Stability

2022-07-27

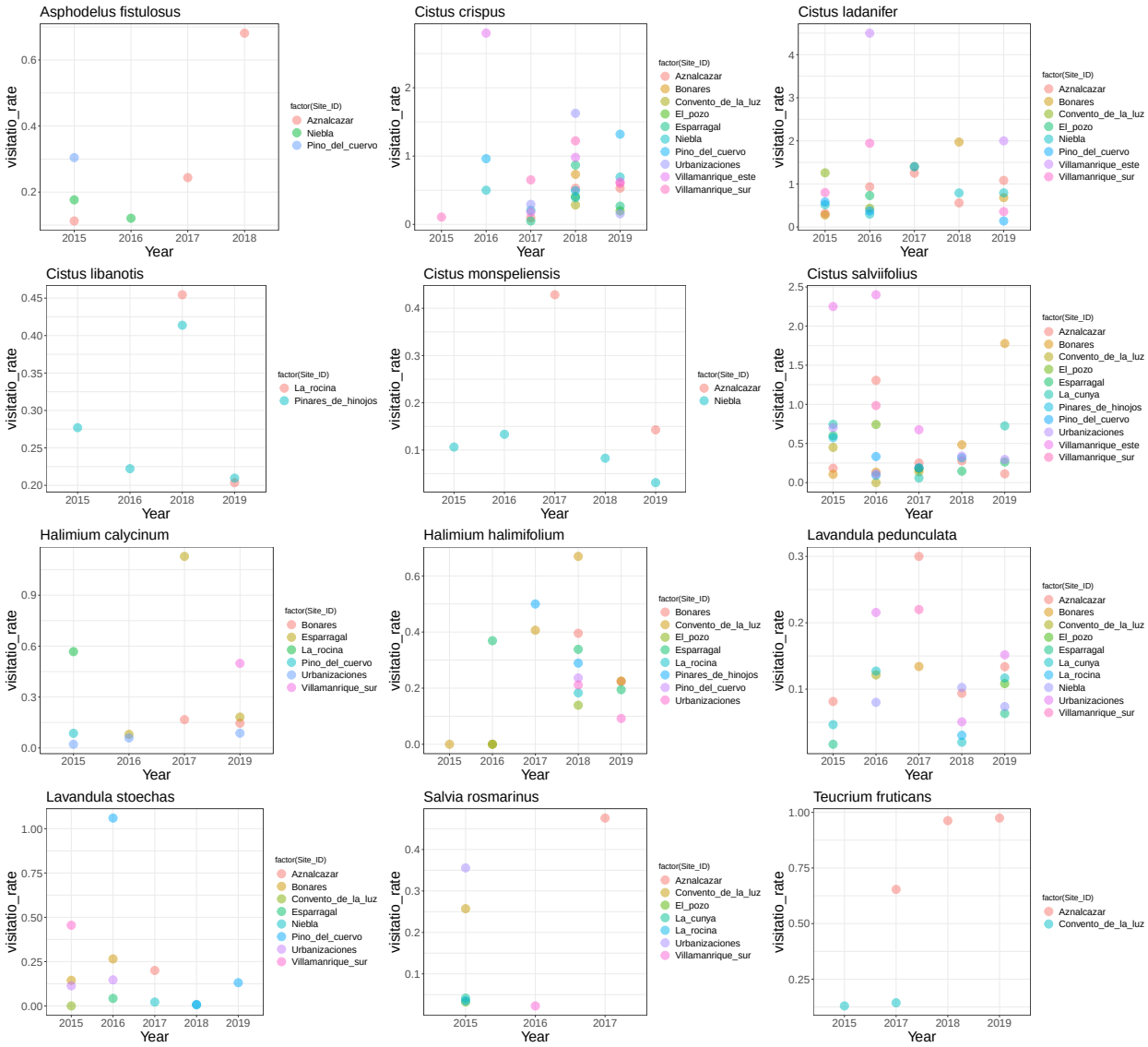
Plots of fruit proportion and year for each plant species and site



Plots of seed number and year for each plant species and site



Plots of visitation rate and year for each plant species and site



For each plant species per site, stability (inverse of the coefficient of variation) of the visitation rate of pollinators (visitation rate calculated like frequency/flower abundance) and also of the fruit proportion and the seed numbers were calculated. Pollinator richness (total and mean) was obtained and furthermore, the log of variance ratio (Lepš et al., 2018) and Loreau & Mazancourt syncrony index were calculated.

Positive values of log var ratio signify synchronization, negative values indicate compensatory dynamics (Lepš et al., 2018). Loreau & Mazancourt index is standardized between 0 (perfect asynchrony) and 1 (perfect synchrony).

note: NA= one data per year

Plant_gen_sp	Site_ID	cv_1_fruit	cv_1_seed	cv_1_visitation	S_total	S_mean	log_VR	syncLM
Asphodelus fistulosus	Aznalcazar	8.5559	2.1917	1.1616	15	5.1667	-1.2321	0.0799
Asphodelus fistulosus	Niebla	55.6671	4.6731	3.7736	4	2.0000	-Inf	0.0000
Asphodelus fistulosus	Pino_del_cuervo	NA	NA	NA	8	4.0000	NA	NA
Cistus crispus	Aznalcazar	4.8190	20.0119	1.5352	20	6.1667	0.9197	0.4526
Cistus crispus	Bonares	NA	NA	NA	10	2.5000	NA	NA
Cistus crispus	Convento_de_la_luz	NA	NA	NA	4	2.0000	NA	NA
Cistus crispus	El_pozo	16.3280	8.7440	2.0208	15	5.0000	1.0586	0.2899
Cistus crispus	Esparragal	2.8856	5.0789	0.9322	31	9.7500	1.3225	0.4095
Cistus crispus	Niebla	4.9324	4.8314	2.2073	17	8.7500	0.5635	0.2675
Cistus crispus	Pino_del_cuervo	11.1785	6.0826	2.2325	17	6.7500	0.2285	0.2501
Cistus crispus	Urbanizaciones	4.1971	7.5309	0.8514	23	9.8333	1.5640	0.8184
Cistus crispus	Villamanrique_este	9.1615	6.7844	0.9950	25	12.3333	0.6190	0.3018
Cistus crispus	Villamanrique_sur	6.5795	3.4830	1.4137	31	11.2500	1.4654	0.3600
Cistus ladanifer	Aznalcazar	17.0519	2.3652	2.1561	27	11.0000	0.2231	0.1047
Cistus ladanifer	Bonares	56.5803	2.9434	1.1055	13	4.3333	-2.5649	0.0184
Cistus ladanifer	Convento_de_la_luz	8.9489	1.5985	1.9759	13	7.5000	0.1178	0.1699
Cistus ladanifer	El_pozo	NA	NA	NA	3	1.5000	NA	NA
Cistus ladanifer	Niebla	61.5000	3.0437	2.5189	19	9.6667	-0.1018	0.0652
Cistus ladanifer	Pino_del_cuervo	35.5000	2.4935	1.1411	12	5.1667	0.0000	0.1072
Cistus ladanifer	Villamanrique_este	Inf	1.5972	1.8385	4	4.0000	-1.0986	0.1111
Cistus ladanifer	Villamanrique_sur	3.1532	1.6655	1.2637	9	4.5000	0.5754	0.3265
Cistus libanotis	La_rocina	Inf	18.7942	1.8551	15	6.3333	-1.9459	0.0204
Cistus libanotis	Pinares_de_hinojos	41.5000	8.9856	3.0029	27	8.2500	1.3028	0.3579
Cistus monspeliensis	Aznalcazar	3.0125	10.6411	1.4132	11	4.3333	1.3471	0.6944
Cistus monspeliensis	Niebla	17.8819	2.1607	2.0344	18	9.1667	1.2098	0.3178
Cistus salviifolius	Aznalcazar	17.9953	2.3028	0.8583	23	9.6667	0.0667	0.1105
Cistus salviifolius	Bonares	12.6807	2.0828	0.7534	31	11.9167	0.2546	0.1521
Cistus salviifolius	Convento_de_la_luz	Inf	1.9740	0.8549	7	5.5000	0.7732	0.3611
Cistus salviifolius	El_pozo	NA	NA	NA	3	1.5000	NA	NA
Cistus salviifolius	Esparragal	10.8333	1.7647	1.4369	14	8.3333	0.7019	0.1704
Cistus salviifolius	La_cunya	120.6662	1.4736	1.3050	14	7.5000	1.7918	0.6391
Cistus salviifolius	Pinares_de_hinojos	25.9808	5.1085	1.3658	8	4.0000	1.2528	0.5833
Cistus salviifolius	Pino_del_cuervo	7.7782	1.2804	2.5927	3	3.0000	-1.0986	0.1111
Cistus salviifolius	Urbanizaciones	15.5000	11.2972	1.4624	12	5.0000	-0.1398	0.1380
Cistus salviifolius	Villamanrique_este	4.6188	5.9748	1.8597	11	9.0000	-1.0986	0.0502
Cistus salviifolius	Villamanrique_sur	NA	NA	NA	2	1.0000	NA	NA
Halimium calycinum	Bonares	Inf	4.9497	10.3835	6	2.6667	0.2809	1.0000
Halimium calycinum	Esparragal	Inf	1.8827	0.8015	7	5.5000	-1.7918	0.0278
Halimium calycinum	La_rocina	NA	NA	NA	3	3.0000	NA	NA
Halimium calycinum	Pino_del_cuervo	NA	NA	NA	3	1.5000	NA	NA
Halimium calycinum	Urbanizaciones	3.9260	12.3590	1.7005	4	2.0000	0.5596	0.9378
Halimium calycinum	Villamanrique_sur	NA	NA	NA	8	2.6667	NA	NA
Halimium halimifolium	Bonares	8.4309	2.7877	2.5561	14	4.7500	0.5108	0.2066
Halimium halimifolium	Convento_de_la_luz	7.1384	2.4892	0.9120	35	10.8333	1.6959	0.5913
Halimium halimifolium	El_pozo	4.3841	55.8614	0.7071	6	2.0000	1.1838	1.0000
Halimium halimifolium	Esparragal	3.9509	17.7275	3.2259	21	6.7500	0.2894	0.3763
Halimium halimifolium	La_rocina	NA	NA	NA	2	2.0000	NA	NA
Halimium halimifolium	Pinares_de_hinojos	2.6259	9.7607	2.6479	12	3.7500	1.4663	0.7511
Halimium halimifolium	Pino_del_cuervo	NA	NA	NA	5	1.6667	NA	NA
Halimium halimifolium	Urbanizaciones	18.3848	1.5120	1.7963	12	5.1667	-0.6286	0.0816
Lavandula pedunculata	Aznalcazar	6.1669	6.7342	1.5073	23	8.8333	0.6451	0.3904

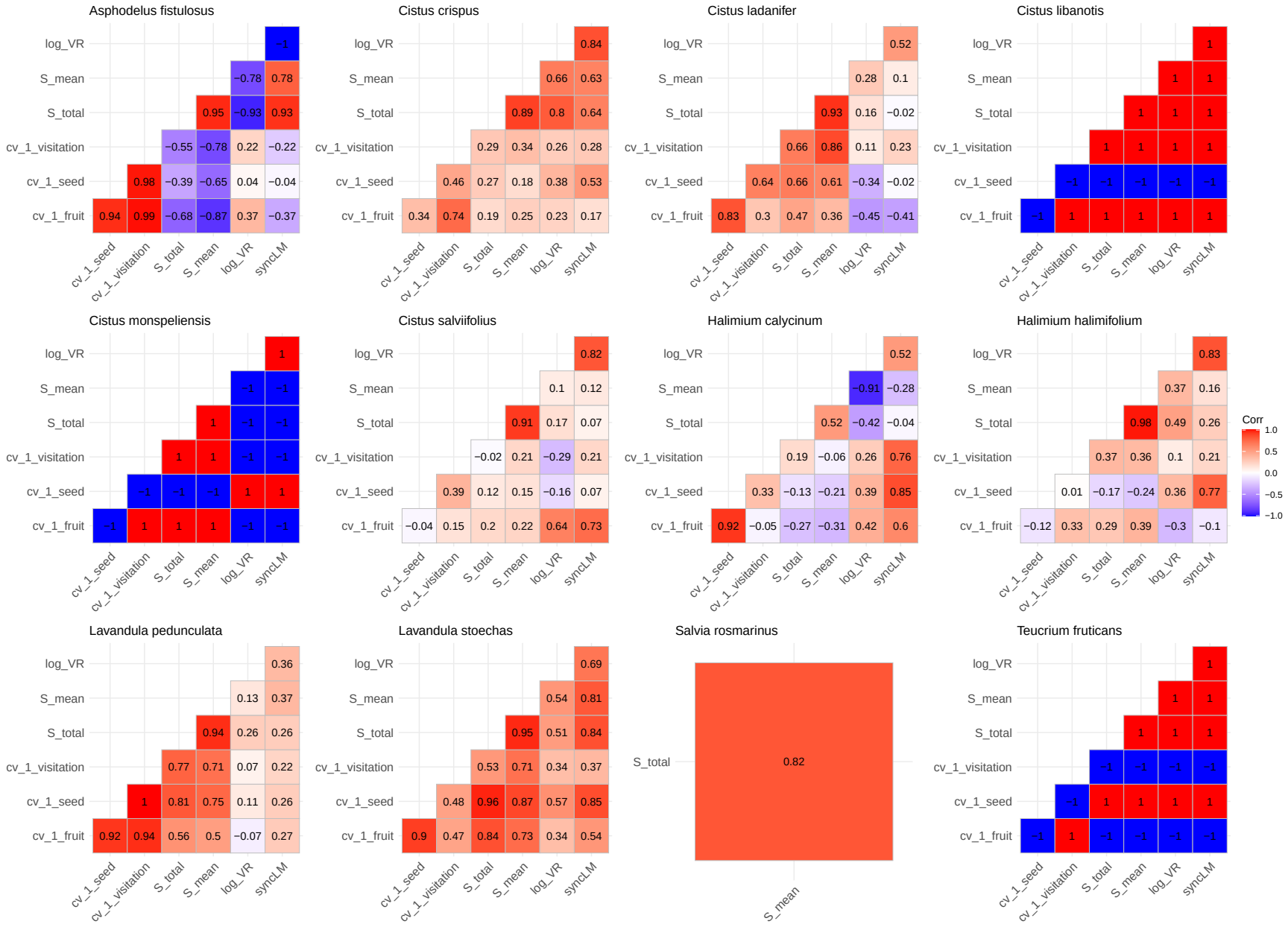
Lavandula pedunculata	Bonares	NA	NA	NA	3	1.5000	NA	NA
Lavandula pedunculata	Convento_de_la_luz	NA	NA	NA	4	2.0000	NA	NA
Lavandula pedunculata	El_pozo	NA	NA	NA	6	2.0000	NA	NA
Lavandula pedunculata	Esparragal	31.9772	3.7680	1.2239	3	1.5000	-0.9163	0.2500
Lavandula pedunculata	La_cunya	25.1644	6.1782	1.4772	10	5.1667	0.4823	0.7153
Lavandula pedunculata	La_rocina	NA	NA	NA	11	2.7500	NA	NA
Lavandula pedunculata	Niebla	68.6603	20.7307	5.6340	25	8.0000	0.2296	0.0915
Lavandula pedunculata	Urbanizaciones	17.8374	6.5893	1.6767	15	7.6667	-1.3291	0.0422
Lavandula pedunculata	Villamanrique_sur	NA	NA	NA	2	2.0000	NA	NA
Lavandula stoechas	Aznalcazar	NA	NA	NA	2	2.0000	NA	NA
Lavandula stoechas	Bonares	13.4040	5.0783	2.4040	8	3.5000	-Inf	0.0000
Lavandula stoechas	Convento_de_la_luz	NA	NA	NA	0	0.0000	NA	NA
Lavandula stoechas	Esparragal	NA	NA	NA	2	1.0000	NA	NA
Lavandula stoechas	Niebla	3.1437	1.4785	1.2825	5	2.5000	-1.9459	0.0400
Lavandula stoechas	Pino_del_cuervo	10.9828	8.8375	0.6949	13	5.3333	1.3610	0.9068
Lavandula stoechas	Urbanizaciones	5.6550	4.7477	5.4540	9	5.5000	1.2730	0.5102
Lavandula stoechas	Villamanrique_sur	NA	NA	NA	4	2.0000	NA	NA
Salvia rosmarinus	Aznalcazar	NA	NA	NA	3	1.5000	NA	NA
Salvia rosmarinus	Convento_de_la_luz	NA	NA	NA	1	0.5000	NA	NA
Salvia rosmarinus	El_pozo	NA	NA	NA	2	2.0000	NA	NA
Salvia rosmarinus	La_cunya	NA	NA	NA	3	1.5000	NA	NA
Salvia rosmarinus	La_rocina	NA	NA	NA	1	1.0000	NA	NA
Salvia rosmarinus	Urbanizaciones	NA	NA	NA	6	2.0000	NA	NA
Salvia rosmarinus	Villamanrique_sur	NA	NA	NA	6	3.0000	NA	NA
Teucrium fruticans	Aznalcazar	7.6622	5.7363	4.7456	31	10.0000	0.5167	0.2935
Teucrium fruticans	Convento_de_la_luz	41.7193	4.2426	13.7054	8	8.0000	-Inf	0.0000

Correlation

	cv_1_fruit	cv_1_seed	cv_1_visitation	S_total	S_mean
cv_1_fruit	1.0000	0.1014	0.3278	0.2615	0.3131
cv_1_seed	0.1014	1.0000	0.2020	0.2327	0.1583
cv_1_visitation	0.3278	0.2020	1.0000	0.2164	0.3149
S_total	0.2615	0.2327	0.2164	1.0000	0.9097
S_mean	0.3131	0.1583	0.3149	0.9097	1.0000

Correlacion indices sincronia

	log_VR	syncLM	av_sync
log_VR	1.0000	0.6237	0.7017
syncLM	0.6237	1.0000	0.6677
av_sync	0.7017	0.6677	1.0000

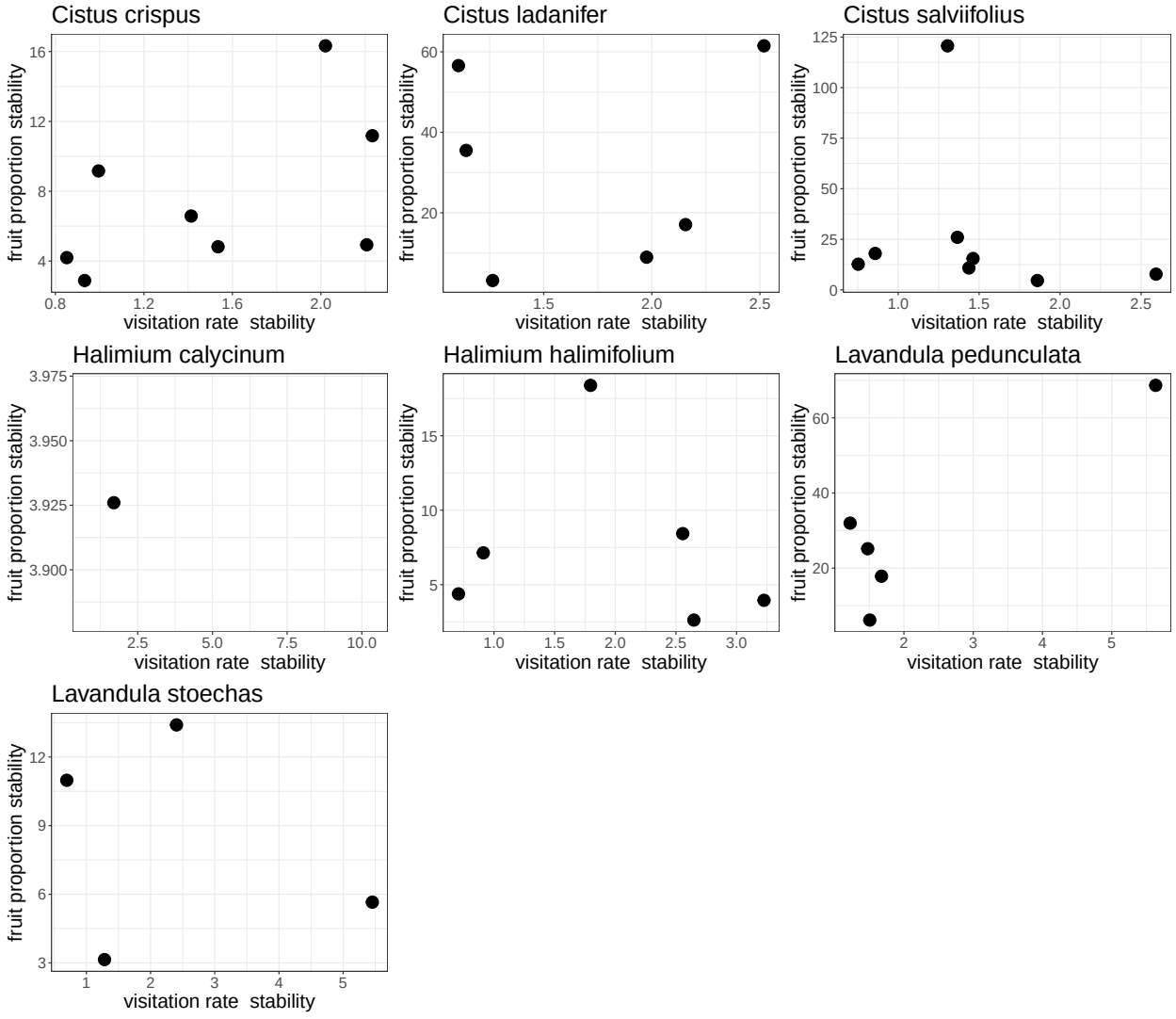

Asphodelus fistulosus
Cistus crispus
Cistus ladanifer
Cistus libanotis
Cistus monspeliensis
Cistus salviifolius
Halimium calycinum
Halimium halimifolium
Lavandula pedunculata
Lavandula stoechas
Salvia rosmarinus
Teucrium fruticans
log_VR
S_mean
S_total
cv_1_visitation
cv_1_seed
cv_1_fruit
syncLM
Corr
1.0
0.5
0.0
−0.5
−1.0
S_total
S_mean
0.82

Data with species in more than 3 sites. I removed 4 plant species (A.fistulosus, C.libanotis, c.monspeliensis, T.fructicans)

Salvia rosmarinus = only one year per site (remove)

Replace Inf and -Inf with NA

We analysed the relationship between fruit proportion stability and visitation rate stability



Halimium calycinum only one observation

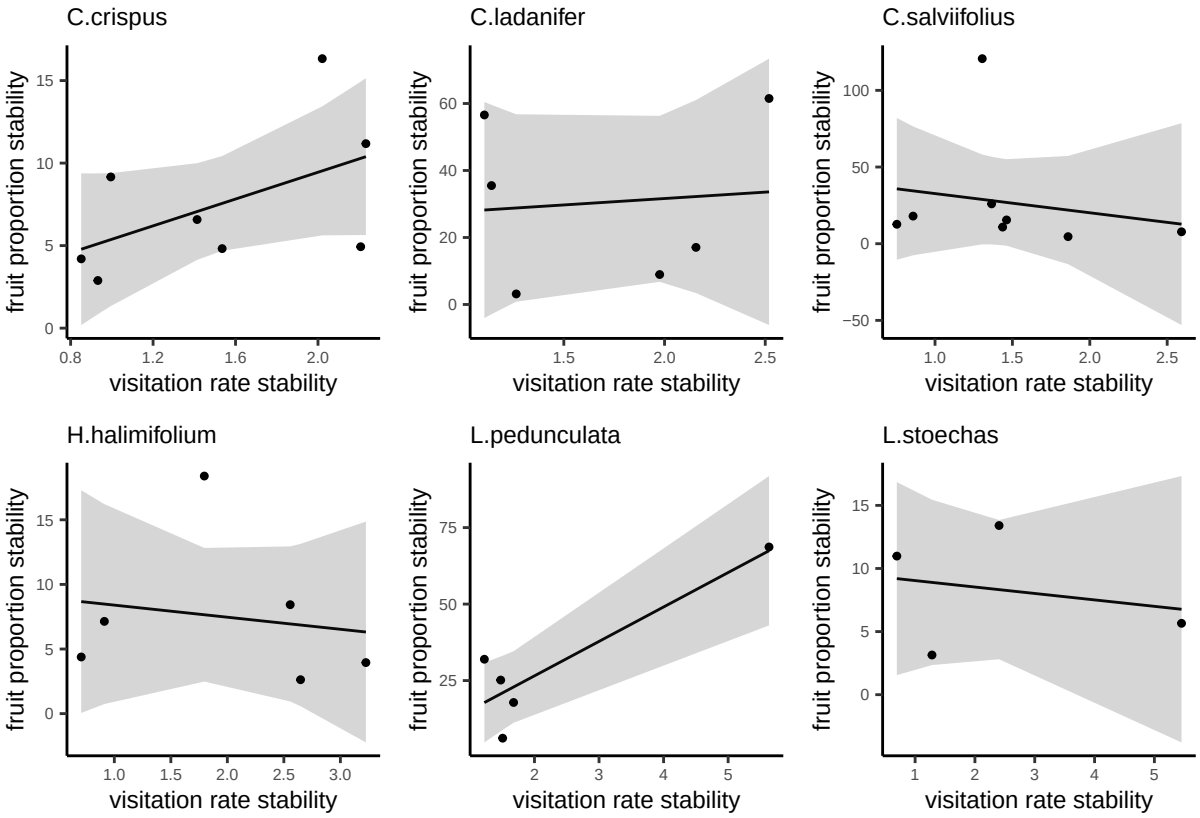
Summary of model per plant species

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	1.3233	4.4025	0.3006	0.7739
	cv_1_visitation	4.0610	2.7251	1.4902	0.1868
Cistus ladanifer	(Intercept)	23.9666	36.4338	0.6578	0.5466
	cv_1_visitation	3.8317	20.4638	0.1872	0.8606
Cistus salviifolius	(Intercept)	45.2096	41.3436	1.0935	0.3161
	cv_1_visitation	-12.5168	26.6478	-0.4697	0.6551
Halimium calycinum	(Intercept)	3.9260			
	cv_1_visitation				
Halimium halimifolium	(Intercept)	9.3305	6.1102	1.5271	0.2015
	cv_1_visitation	-0.9344	2.8031	-0.3334	0.7556
Lavandula pedunculata	(Intercept)	4.0291	9.5139	0.4235	0.7005
	cv_1_visitation	11.2562	3.3427	3.3674	**0.0435**
Lavandula stoechas	(Intercept)	9.5504	4.7042	2.0302	0.1795
	cv_1_visitation	-0.5100	1.5332	-0.3326	0.7711

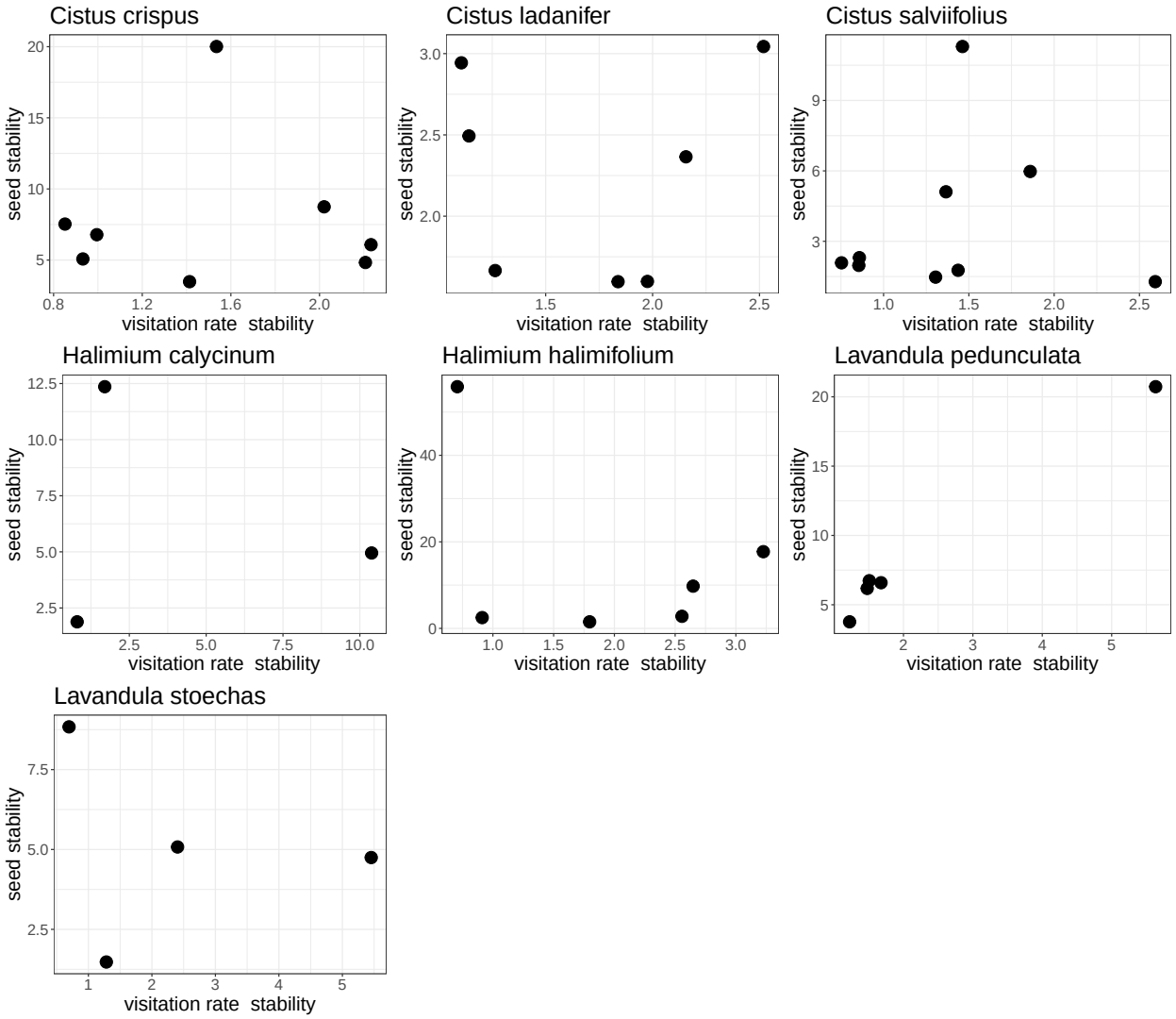
Goodness of fit measures, p-values for hypothesis tests on residuals, and model convergence information.

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.270	0.148	4.142	2.221	0.187	1	-21.571	49.141	49.380	102.950	6	8
C.ladanifer	0.009	-0.239	27.535	0.035	0.861	1	-27.190	60.380	59.755	3032.736	4	6
C.salviifolius	0.035	-0.125	40.740	0.221	0.655	1	-39.858	85.717	85.955	9958.348	6	8
H. calycinum	0.000	0.000					Inf	-Inf	-Inf	0.000	0	1
H.halimifolium	0.027	-0.216	6.346	0.111	0.756	1	-18.384	42.767	42.143	161.062	4	6
L.pedunculata	0.791	0.721	12.492	11.340	0.043	1	-18.443	42.886	41.715	468.181	3	5
L.stoechas	0.052	-0.421	5.627	0.111	0.771	1	-11.200	28.400	26.559	63.328	2	4

checking residuals, I detect problems with the homogeneity of variance for all plant species


C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
L.stoechas
fruit proportion stability
visitation rate stability

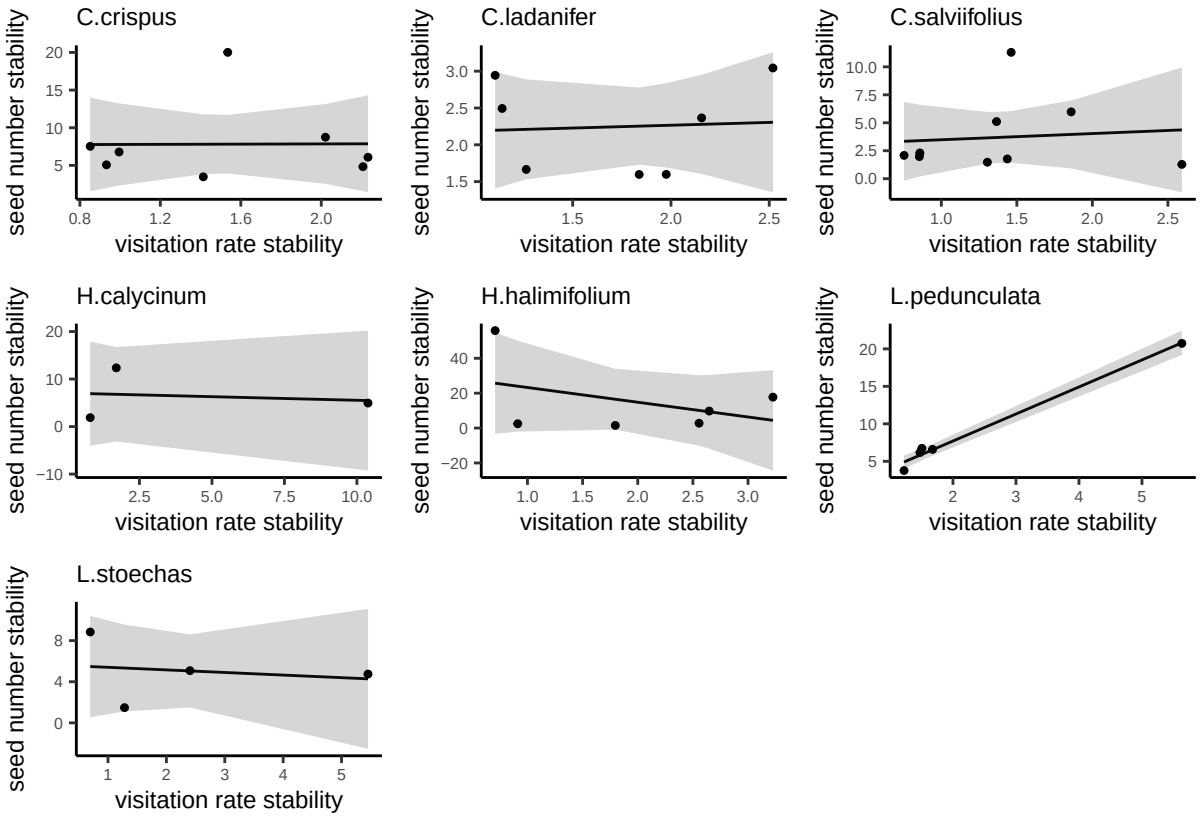
We analysed the relationship between seed number stability and visitation rate stability



Summary of model

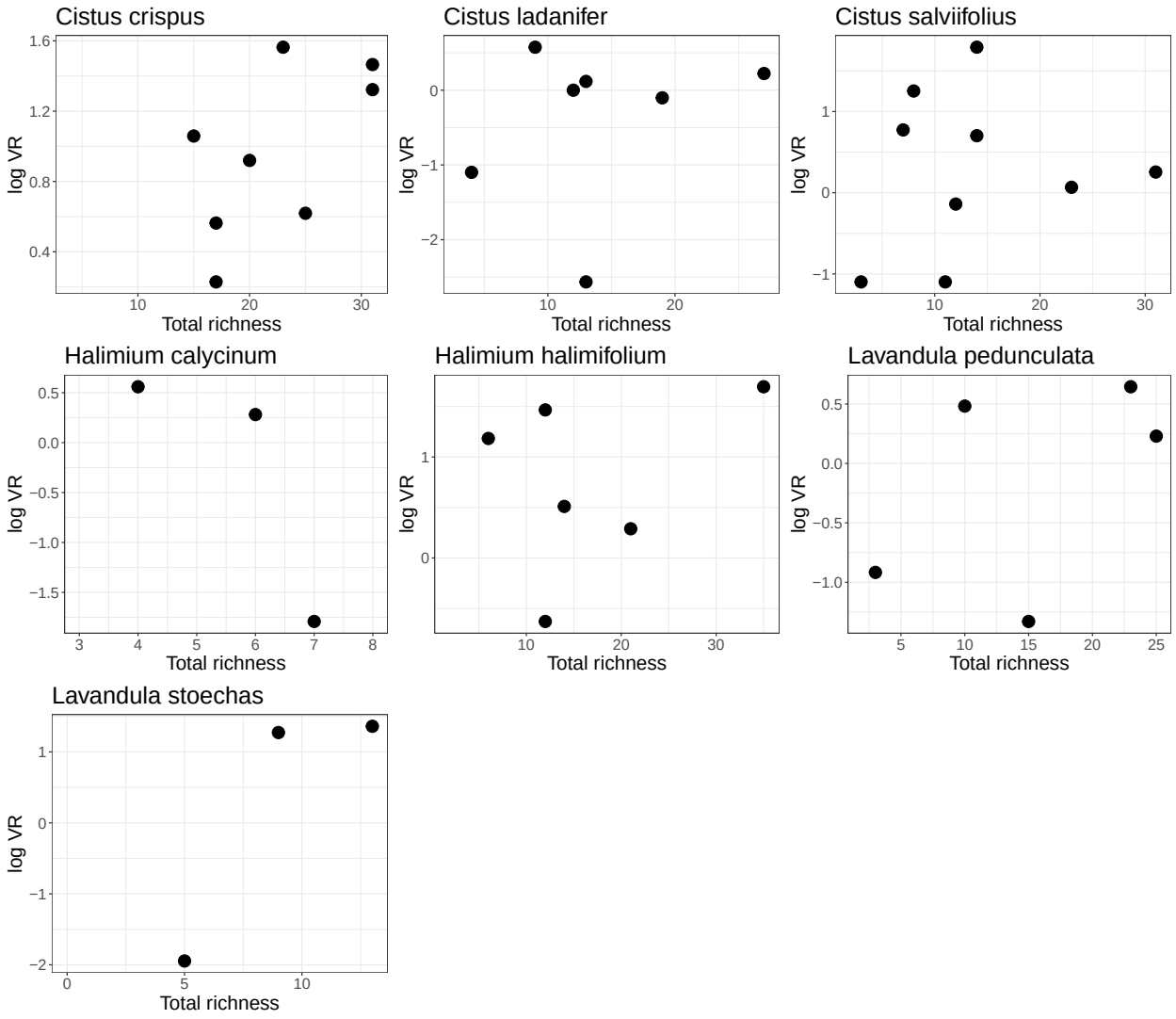
Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	7.7093	5.9637	1.2927	0.2437
	cv_1_visitation	0.0716	3.6915	0.0194	0.9852
Cistus ladanifer	(Intercept)	2.1129	0.9097	2.3226	0.0678
	cv_1_visitation	0.0764	0.5086	0.1502	0.8865
Cistus salviifolius	(Intercept)	2.9282	3.2078	0.9128	0.3917
	cv_1_visitation	0.5529	2.1525	0.2569	0.8047
Halimium calycinum	(Intercept)	7.0497	6.1315	1.1498	0.4557
	cv_1_visitation	-0.1519	1.0064	-0.1510	0.9046
Halimium halimifolium	(Intercept)	31.7071	20.5742	1.5411	0.1981
	cv_1_visitation	-8.4509	9.4385	-0.8954	0.4212
Lavandula pedunculata	(Intercept)	0.4927	0.6344	0.7767	0.4940
	cv_1_visitation	3.6059	0.2229	16.1769	**0.0005**
Lavandula stoechas	(Intercept)	5.6537	3.0339	1.8635	0.2034
	cv_1_visitation	-0.2514	0.9888	-0.2543	0.8230

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.000	-0.167	5.611	0.000	0.985	1	-23.999	53.998	54.236	188.914	6	8
C.ladanifer	0.004	-0.195	0.688	0.023	0.886	1	-6.134	18.268	18.105	2.365	5	7
C.salviifolius	0.009	-0.132	3.509	0.066	0.805	1	-22.936	51.872	52.464	86.167	7	9
H. calycinum	0.022	-0.955	7.532	0.023	0.905	1	-8.666	23.333	20.628	56.727	1	3
H.halimifolium	0.167	-0.041	21.367	0.802	0.421	1	-25.668	57.336	56.712	1826.129	4	6
L.pedunculata	0.989	0.985	0.833	261.691	0.001	1	-4.904	15.809	14.637	2.082	3	5
L.stoechas	0.031	-0.453	3.629	0.065	0.823	1	-9.445	24.891	23.050	26.341	2	4


C.crispus
C.ladanifer
C.salviifolius
H.calycinum
H.halimifolium
L.pedunculata
L.stoechas
seed number stability
visitation rate stability

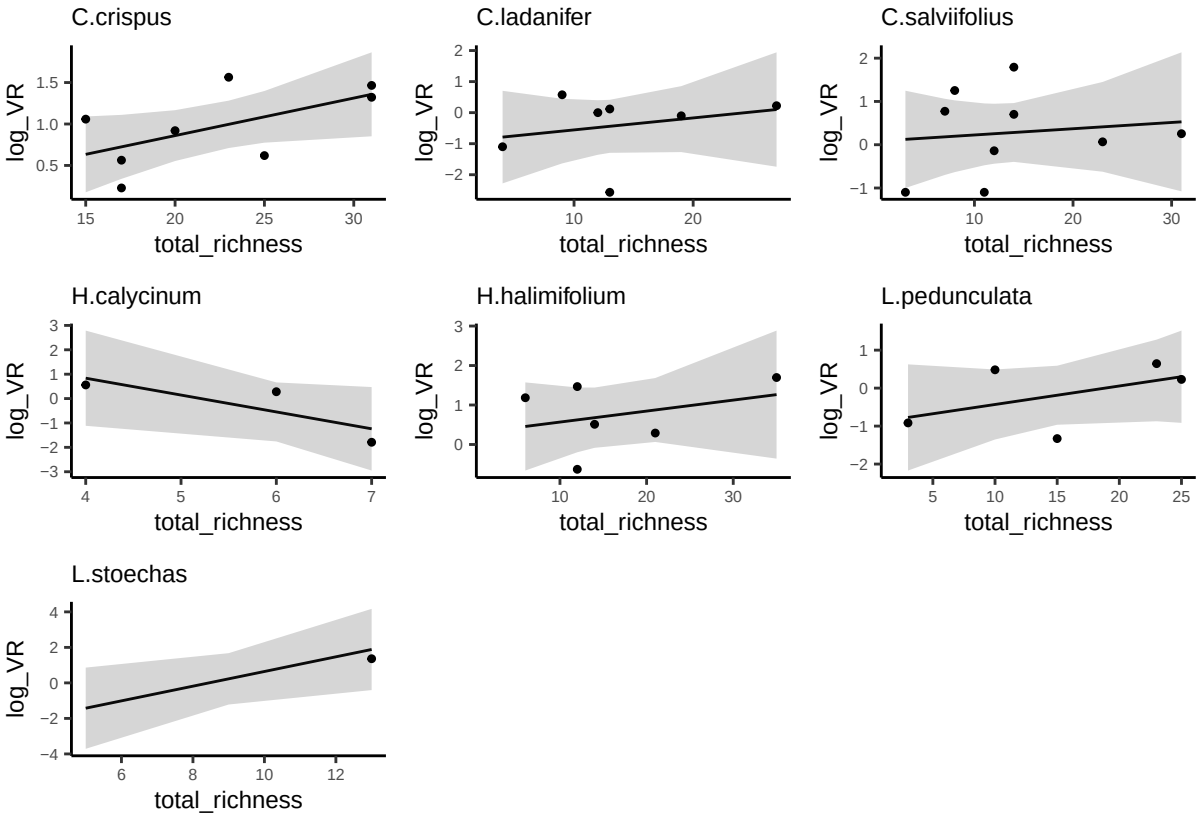
Relationship between synchrony ~ richness with different synchrony indice.

A- log VR ~ Total richness

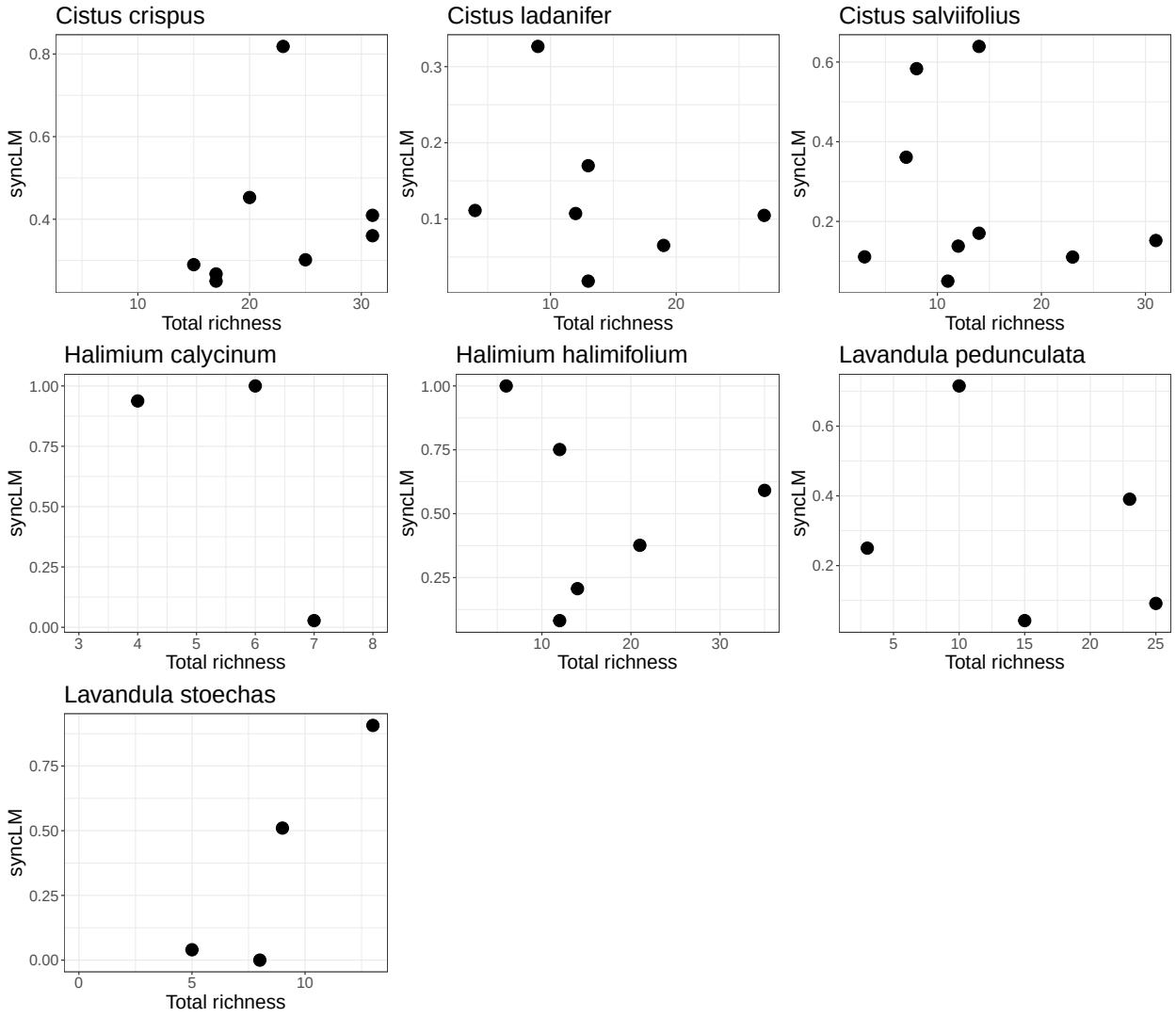


Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	-0.045	0.573	-0.079	0.940
	S_total	0.045	0.025	1.826	0.118
Cistus ladanifer	(Intercept)	-0.942	0.980	-0.961	0.381
	S_total	0.039	0.063	0.608	0.570
Cistus salviifolius	(Intercept)	0.081	0.680	0.119	0.909
	S_total	0.014	0.043	0.337	0.746
Halimium calycinum	(Intercept)	3.603	2.776	1.298	0.418
	S_total	-0.692	0.478	-1.446	0.385
Halimium halimifolium	(Intercept)	0.289	0.768	0.377	0.726
	S_total	0.028	0.040	0.691	0.527
Lavandula pedunculata	(Intercept)	-0.918	0.839	-1.095	0.353
	S_total	0.049	0.049	1.002	0.390
Lavandula stoechas	(Intercept)	-3.491	2.163	-1.614	0.353
	S_total	0.413	0.226	1.829	0.318

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.357	0.250	0.410	3.336	0.118	1	-3.072	12.144	12.383	1.010	6	8
C.ladanifer	0.069	-0.117	1.144	0.370	0.570	1	-9.699	25.397	25.235	6.547	5	7
C.salviifolius	0.016	-0.125	1.039	0.114	0.746	1	-11.982	29.964	30.556	7.554	7	9
H. calycinum	0.676	0.353	1.033	2.091	0.385	1	-2.707	11.415	8.711	1.068	1	3
H.halimifolium	0.107	-0.117	0.917	0.478	0.527	1	-6.778	19.555	18.931	3.364	4	6
L.pedunculata	0.251	0.001	0.887	1.005	0.390	1	-5.217	16.434	15.262	2.359	3	5
L.stoechas	0.770	0.540	1.278	3.347	0.318	1	-3.345	12.690	9.986	1.634	1	3

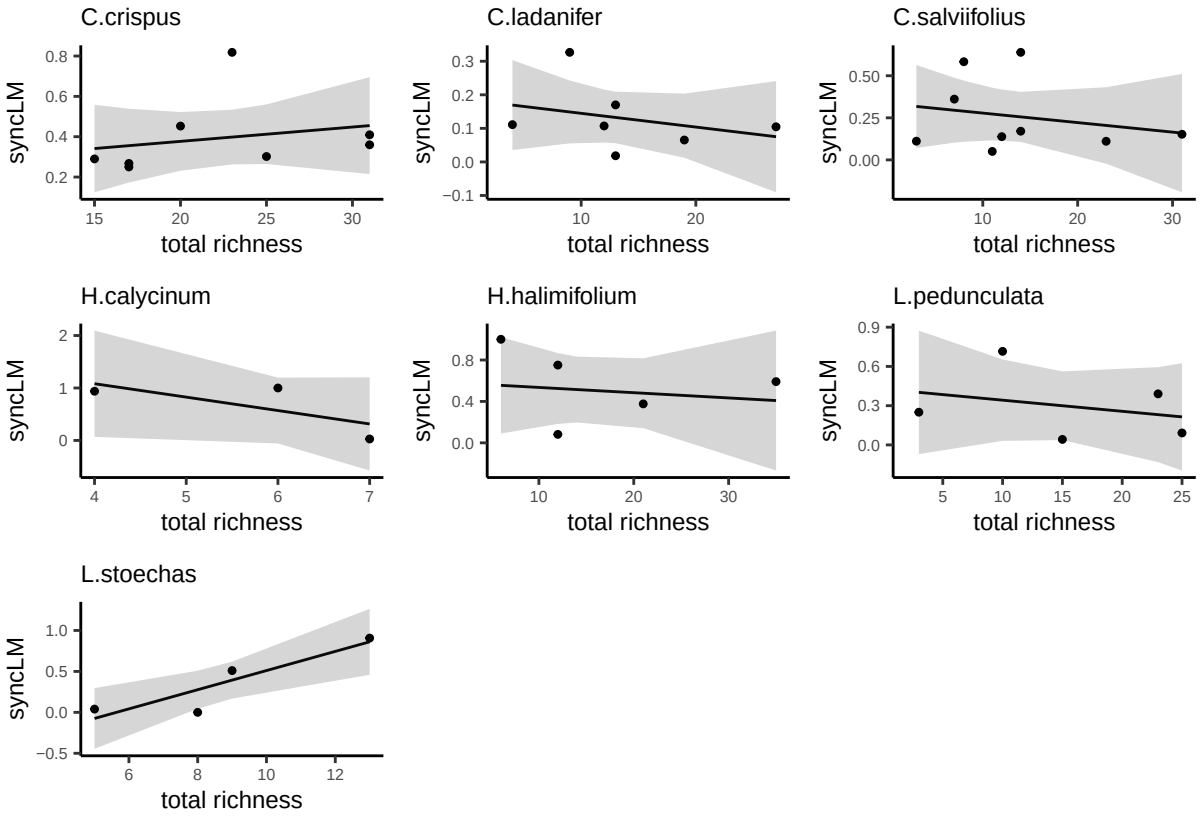

C.crispus
log_VR
total_richness
C.ladanifer
log_VR
total_richness
C.salviifolius
log_VR
total_richness
H.calycinum
log_VR
total_richness
H.halimifolium
log_VR
total_richness
L.pedunculata
log_VR
total_richness
L.stoechas
log_VR
total_richness

B- Loreau & Mazancourt syncrony index ~ total richness



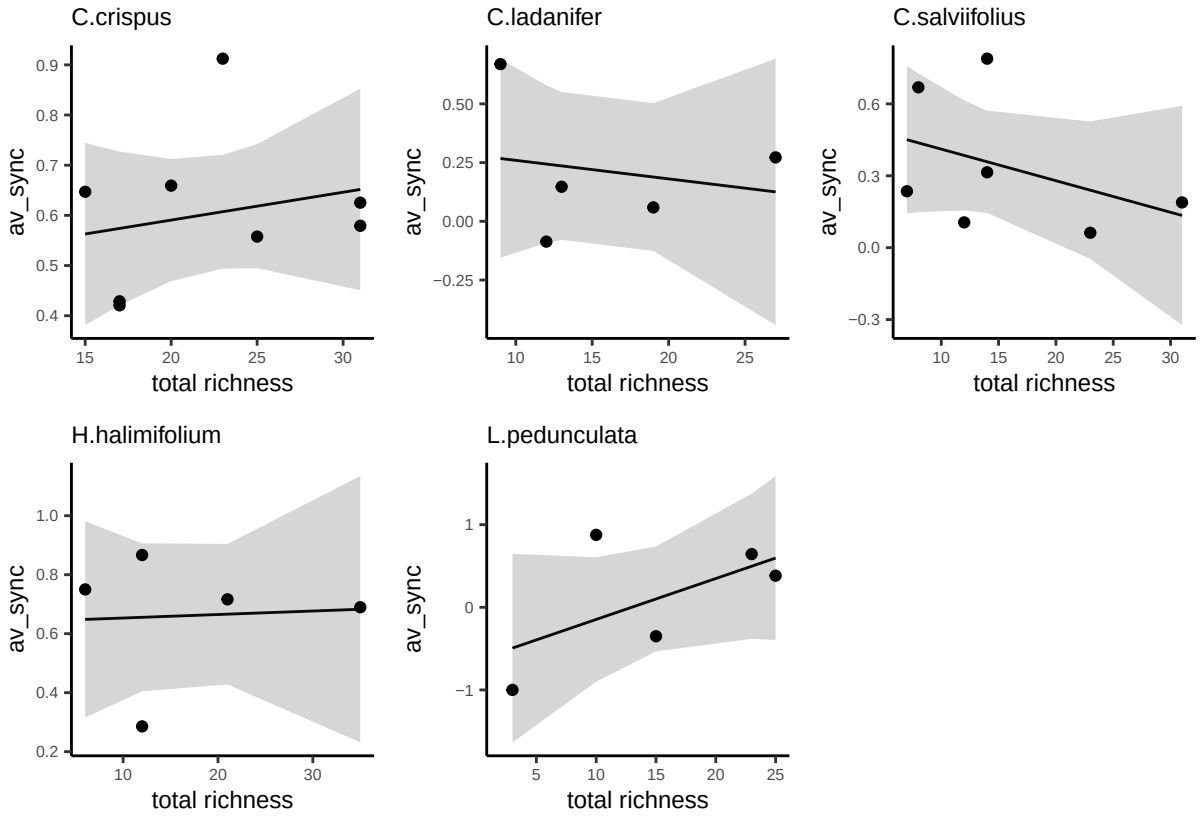
Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	0.235	0.272	0.864	0.421
	S_total	0.007	0.012	0.604	0.568
Cistus ladanifer	(Intercept)	0.186	0.088	2.107	0.089
	S_total	-0.004	0.006	-0.717	0.505
Cistus salviifolius	(Intercept)	0.335	0.149	2.245	0.060
	S_total	-0.006	0.009	-0.602	0.566
Halimium calycinum	(Intercept)	2.103	1.440	1.460	0.382
	S_total	-0.256	0.248	-1.029	0.491
Halimium halimifolium	(Intercept)	0.586	0.320	1.829	0.141
	S_total	-0.005	0.017	-0.302	0.778
Lavandula pedunculata	(Intercept)	0.427	0.283	1.510	0.228
	S_total	-0.009	0.016	-0.519	0.639
Lavandula stoechas	(Intercept)	-0.659	0.369	-1.787	0.216
	S_total	0.117	0.040	2.919	0.100

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.057	-0.100	0.195	0.365	0.568	1	2.895	0.210	0.448	0.227	6	8
C.ladanifer	0.093	-0.088	0.103	0.515	0.505	1	7.163	-8.327	-8.489	0.053	5	7
C.salviifolius	0.049	-0.087	0.228	0.363	0.566	1	1.680	2.640	3.231	0.363	7	9
H. calycinum	0.515	0.029	0.536	1.060	0.491	1	-0.740	7.479	4.775	0.288	1	3
H.halimifolium	0.022	-0.222	0.382	0.091	0.778	1	-1.527	9.054	8.429	0.584	4	6
L.pedunculata	0.082	-0.223	0.299	0.270	0.639	1	0.213	5.575	4.403	0.269	3	5
L.stoechas	0.810	0.715	0.229	8.519	0.100	1	1.600	2.800	0.959	0.105	2	4

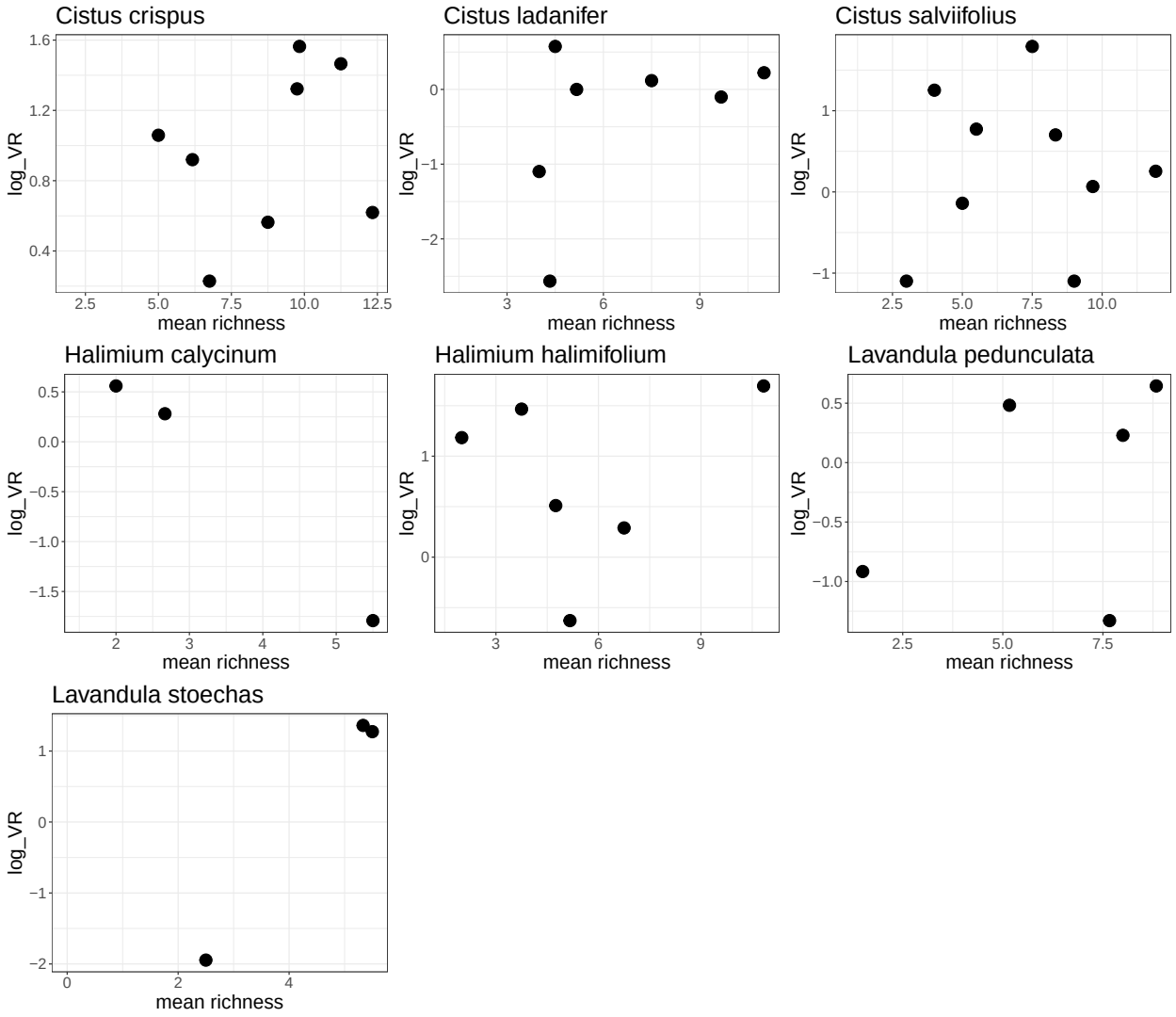

C.crispus
C.ladanifer
C.salviifolius
H.calycinum
H.halimifolium
L.pedunculata
L.stoechas
syncLM
total richness

C- Gross index ~ Total richness

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	0.480	0.228	2.108	0.080
	S_total	0.006	0.010	0.564	0.593
Cistus ladanifer	(Intercept)	0.338	0.392	0.864	0.451
	S_total	-0.008	0.023	-0.347	0.751
Cistus salviifolius	(Intercept)	0.543	0.235	2.309	0.069
	S_total	-0.013	0.013	-0.979	0.372
Halimium calycinum	(Intercept)	0.049			
	S_total				
Halimium halimifolium	(Intercept)	0.641	0.225	2.855	0.065
	S_total	0.001	0.011	0.105	0.923
Lavandula pedunculata	(Intercept)	-0.642	0.685	-0.938	0.418
	S_total	0.050	0.040	1.247	0.301
Lavandula stoechas	(Intercept)	0.864			
	S_total				

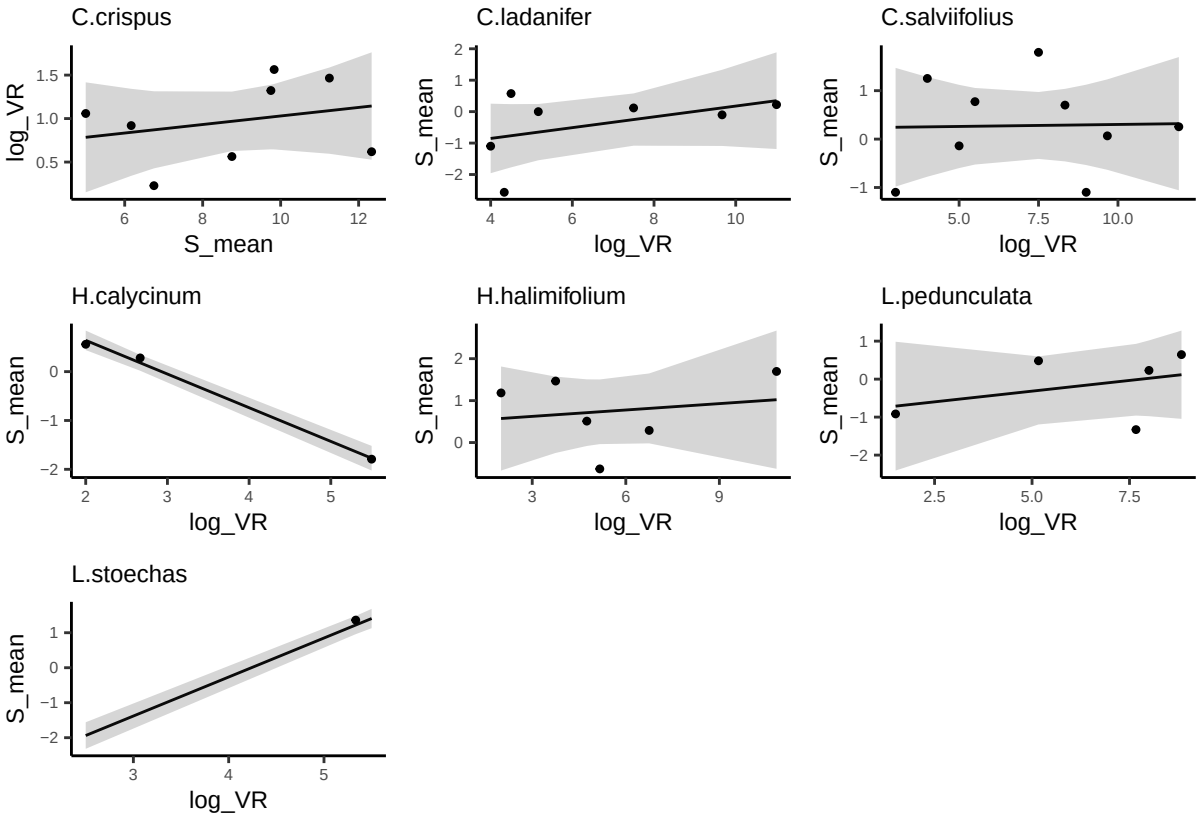

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
av_sync
total richness

D- log VR ~ mean richness

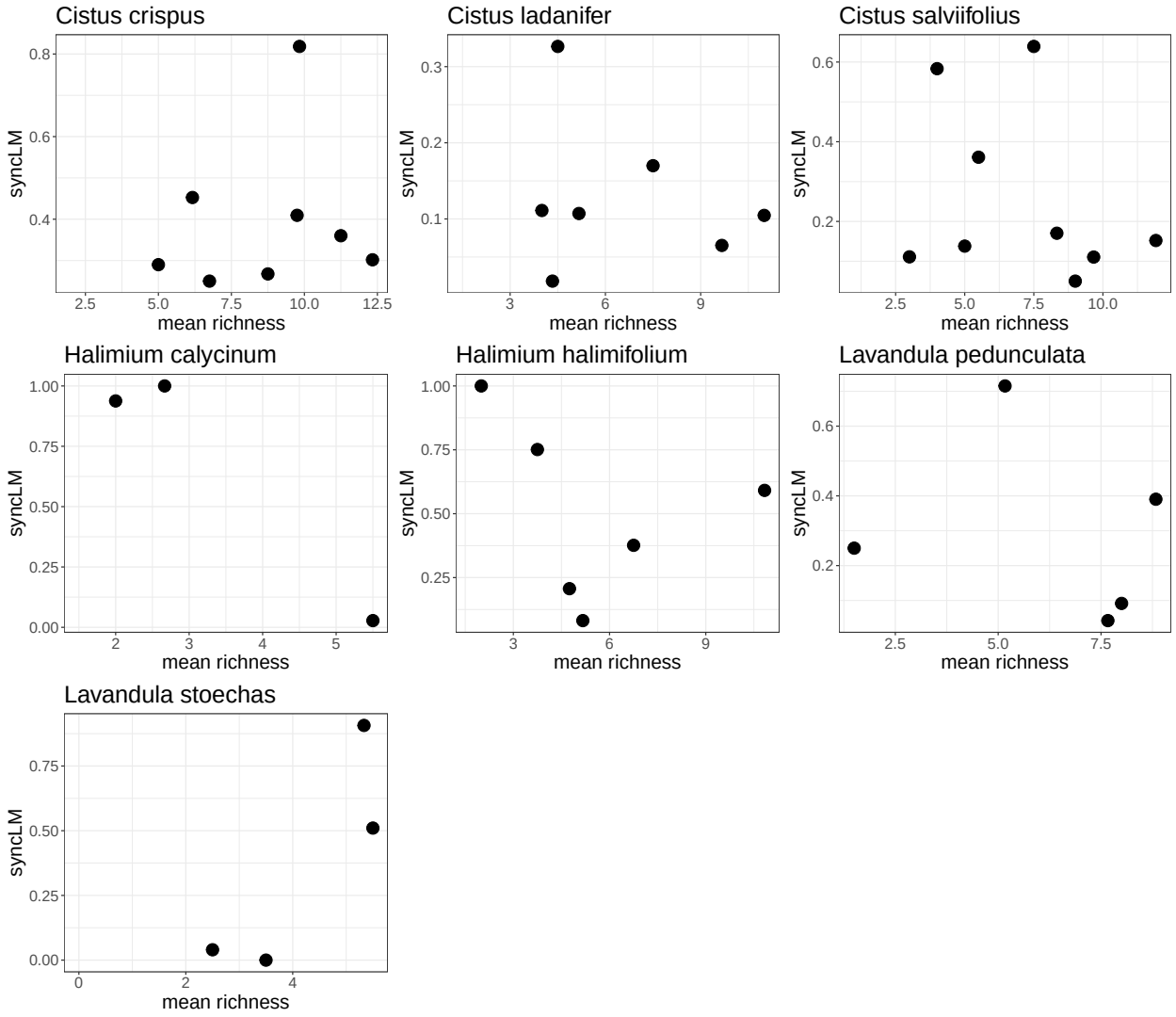


Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	0.539	0.658	0.819	0.444
	S_mean	0.049	0.073	0.675	0.525
Cistus ladanifer	(Intercept)	-1.539	1.087	-1.416	0.216
	S_mean	0.172	0.153	1.120	0.313
Cistus salviifolius	(Intercept)	0.220	0.964	0.228	0.826
	S_mean	0.008	0.127	0.065	0.950
Halimium calycinum	(Intercept)	2.020	0.184	10.991	0.058
	S_mean	-0.690	0.049	-13.933	**0.046**
Halimium halimifolium	(Intercept)	0.471	0.872	0.541	0.618
	S_mean	0.051	0.141	0.361	0.737
Lavandula pedunculata	(Intercept)	-0.881	1.079	-0.816	0.474
	S_mean	0.113	0.159	0.708	0.530
Lavandula stoechas	(Intercept)	-4.725	0.378	-12.491	0.051
	S_mean	1.115	0.081	13.712	**0.046**

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.070	-0.084	0.493	0.455	0.525	1	-4.548	15.096	15.335	1.460	6	8
C.ladanifer	0.201	0.041	1.060	1.255	0.313	1	-9.164	24.329	24.166	5.620	5	7
C.salviifolius	0.001	-0.142	1.047	0.004	0.950	1	-12.052	30.104	30.695	7.672	7	9
H. calycinum	0.995	0.990	0.130	194.116	0.046	1	3.510	-1.020	-3.725	0.017	1	3
H.halimifolium	0.031	-0.211	0.955	0.130	0.737	1	-7.020	20.041	19.416	3.647	4	6
L.pedunculata	0.143	-0.142	0.948	0.501	0.530	1	-5.553	17.106	15.934	2.699	3	5
L.stoechas	0.995	0.989	0.194	188.007	0.046	1	2.313	1.373	-1.331	0.038	1	3

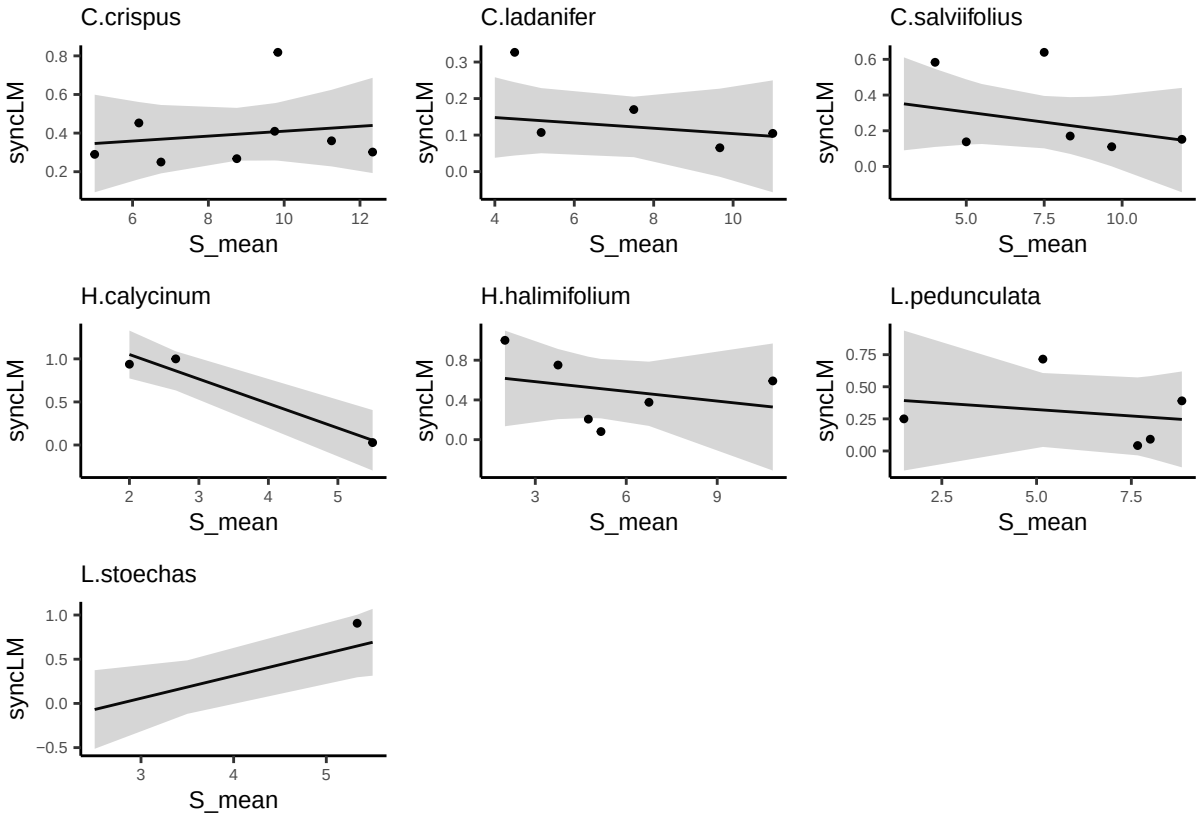

C.crispus
log_VR
S_mean
C.ladanifer
S_mean
log_VR
C.salviifolius
S_mean
log_VR
H.calycinum
S_mean
log_VR
H.halimifolium
S_mean
log_VR
L.pedunculata
S_mean
log_VR
L.stoechas
S_mean
log_VR

E- Loreau & Mazancourt syncrony index ~ mean richness



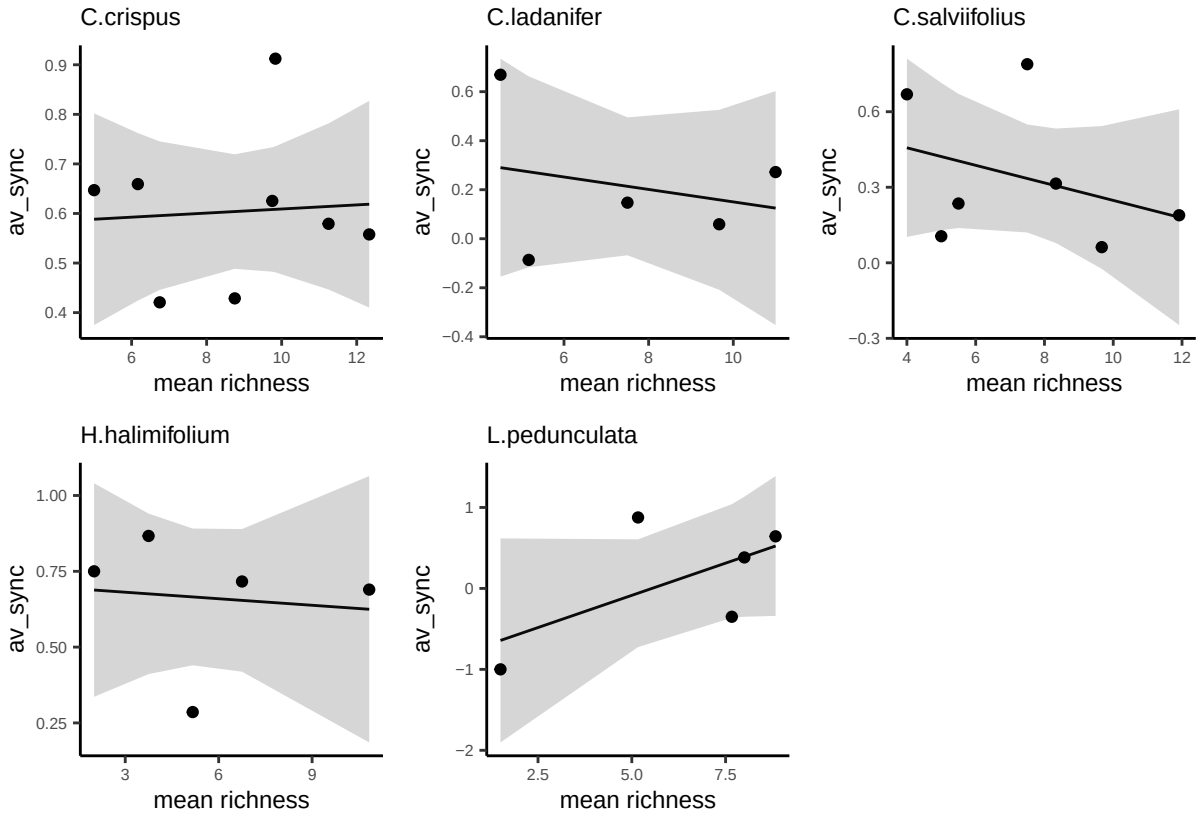
Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	0.282	0.263	1.073	0.325
	S_mean	0.013	0.029	0.438	0.677
Cistus ladanifer	(Intercept)	0.177	0.108	1.639	0.162
	S_mean	-0.007	0.015	-0.481	0.651
Cistus salviifolius	(Intercept)	0.419	0.205	2.046	0.080
	S_mean	-0.023	0.027	-0.847	0.425
Halimium calycinum	(Intercept)	1.620	0.256	6.332	0.100
	S_mean	-0.285	0.069	-4.131	0.151
Halimium halimifolium	(Intercept)	0.682	0.338	2.014	0.114
	S_mean	-0.033	0.055	-0.596	0.583
Lavandula pedunculata	(Intercept)	0.422	0.347	1.218	0.310
	S_mean	-0.020	0.051	-0.391	0.722
Lavandula stoechas	(Intercept)	-0.703	0.469	-1.497	0.273
	S_mean	0.254	0.107	2.372	0.141

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.031	-0.130	0.197	0.192	0.677	1	2.785	0.430	0.668	0.233	6	8
C.ladanifer	0.044	-0.147	0.106	0.232	0.651	1	6.979	-7.958	-8.120	0.056	5	7
C.salviifolius	0.093	-0.037	0.222	0.718	0.425	1	1.892	2.216	2.808	0.346	7	9
H. calycinum	0.945	0.889	0.181	17.067	0.151	1	2.518	0.965	-1.739	0.033	1	3
H.halimifolium	0.082	-0.148	0.370	0.356	0.583	1	-1.339	8.679	8.054	0.549	4	6
L.pedunculata	0.048	-0.269	0.305	0.153	0.722	1	0.121	5.758	4.586	0.279	3	5
L.stoechas	0.738	0.607	0.269	5.628	0.141	1	0.957	4.086	2.245	0.145	2	4


C.crispus
C.ladanifer
C.salviifolius
H.calycinum
H.halimifolium
L.pedunculata
L.stoechas
syncLM
S_mean

C- Gross index ~ mean richness

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	0.568	0.222	2.552	**0.043**
	S_mean	0.004	0.025	0.168	0.872
Cistus ladanifer	(Intercept)	0.404	0.457	0.885	0.441
	S_mean	-0.025	0.057	-0.443	0.688
Cistus salviifolius	(Intercept)	0.596	0.331	1.803	0.131
	S_mean	-0.035	0.042	-0.828	0.446
Halimium calycinum	(Intercept)	0.049			
	S_mean				
Halimium halimifolium	(Intercept)	0.703	0.243	2.894	0.063
	S_mean	-0.007	0.038	-0.191	0.861
Lavandula pedunculata	(Intercept)	-0.881	0.803	-1.098	0.352
	S_mean	0.159	0.118	1.344	0.272
Lavandula stoechas	(Intercept)	0.864			
	S_mean				

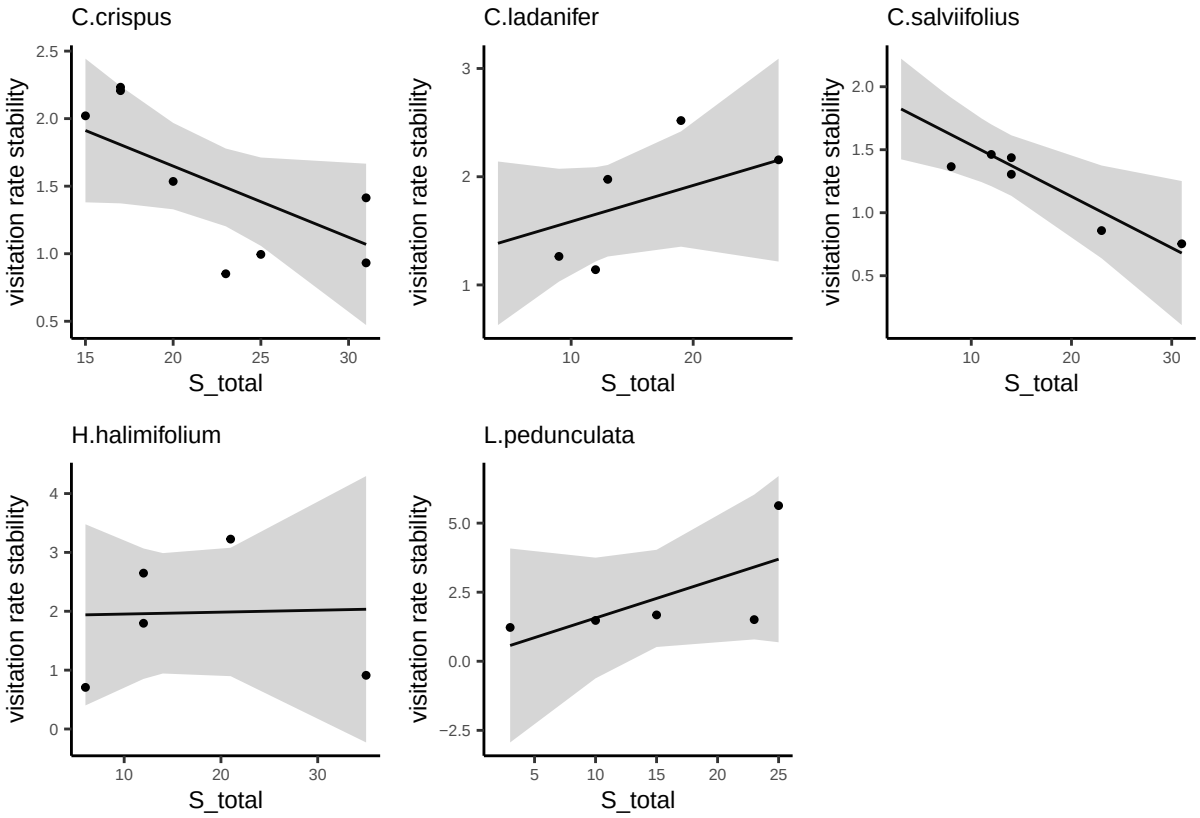

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
av_sync
mean richness

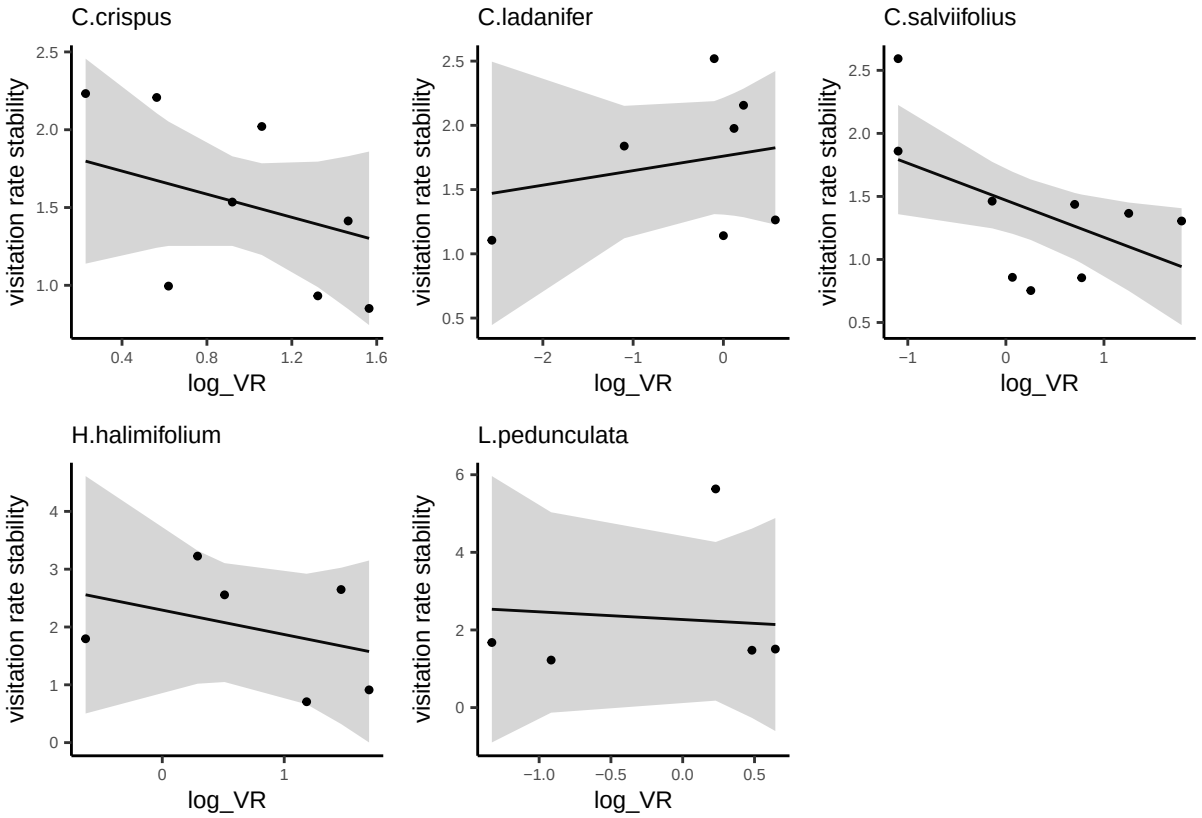
We analysed whether the visitation rate stability is affected by richness and synchrony for each plant species separately

A) total richness + log VR

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	3.062	0.576	5.317	**0.003**
	S_total	-0.053	0.031	-1.698	0.150
	log_VR	-0.371	0.410	-0.906	0.406
Cistus ladanifer	(Intercept)	1.297	0.528	2.458	0.070
	S_total	0.033	0.033	1.027	0.363
	log_VR	0.113	0.221	0.511	0.637
Cistus salviifolius	(Intercept)	2.028	0.241	8.421	**0.000**
	S_total	-0.041	0.015	-2.674	**0.037**
	log_VR	-0.294	0.134	-2.199	0.070
Halimium calycinum	(Intercept)	-23.710			
	S_total	5.345			
	log_VR	7.202			
Halimium halimifolium	(Intercept)	2.238	1.042	2.146	0.121
	S_total	0.003	0.057	0.058	0.958
	log_VR	-0.422	0.667	-0.633	0.572
Lavandula pedunculata	(Intercept)	0.110	2.245	0.049	0.965
	S_total	0.142	0.127	1.117	0.380
	log_VR	-0.199	1.306	-0.153	0.893
Lavandula stoechas	(Intercept)	13.096			
	S_total	-1.253			
	log_VR	2.852			

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.633	0.486	0.412	4.311	0.082	2	-2.375	12.749	13.067	0.848	5	8
C.ladanifer	0.299	-0.051	0.566	0.854	0.491	2	-3.990	15.980	15.764	1.282	4	7
C.salviifolius	0.695	0.594	0.367	6.846	0.028	2	-1.932	11.864	12.653	0.809	6	9
H. calycinum	1.000					2	Inf	-Inf	-Inf	0.000	0	3
H.halimifolium	0.124	-0.460	1.223	0.213	0.820	2	-7.643	23.285	22.452	4.488	3	6
L.pedunculata	0.424	-0.153	2.006	0.735	0.576	2	-8.285	24.571	23.009	8.050	2	5
L.stoechas	1.000					2	Inf	-Inf	-Inf	0.000	0	3

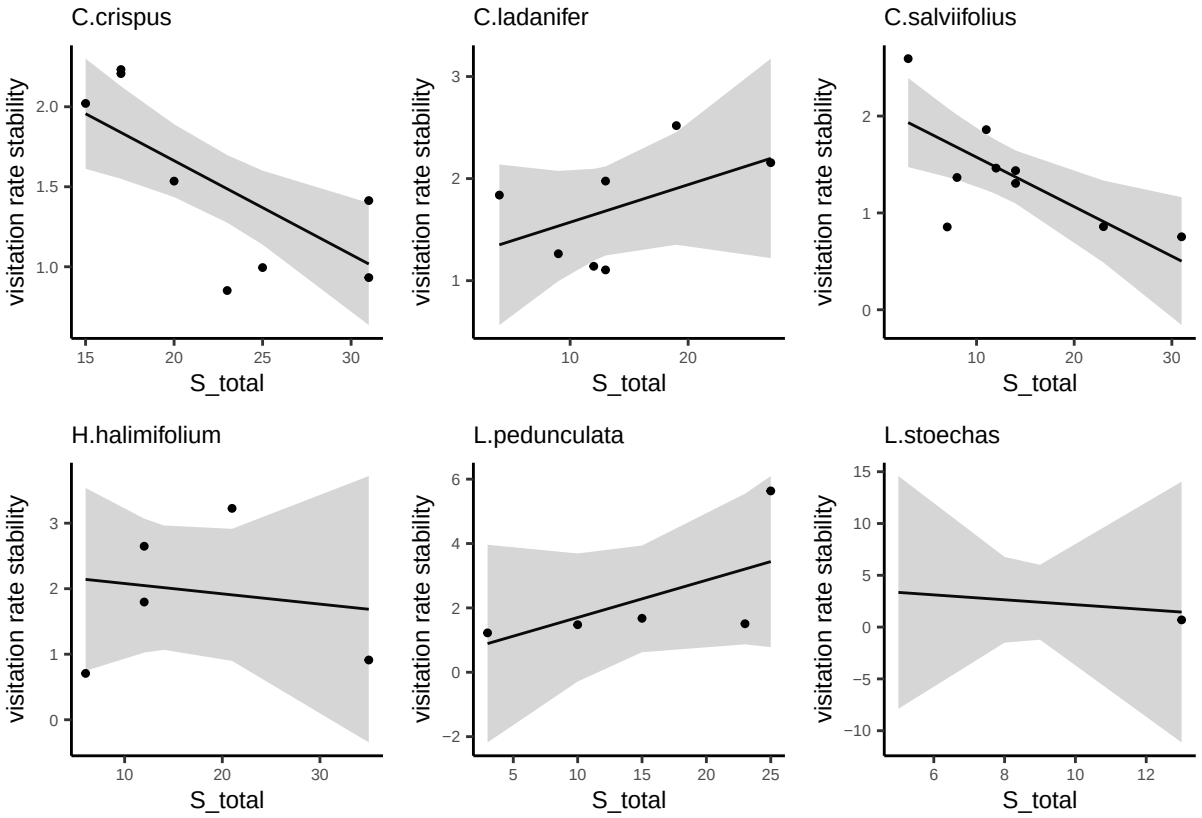

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
S_total

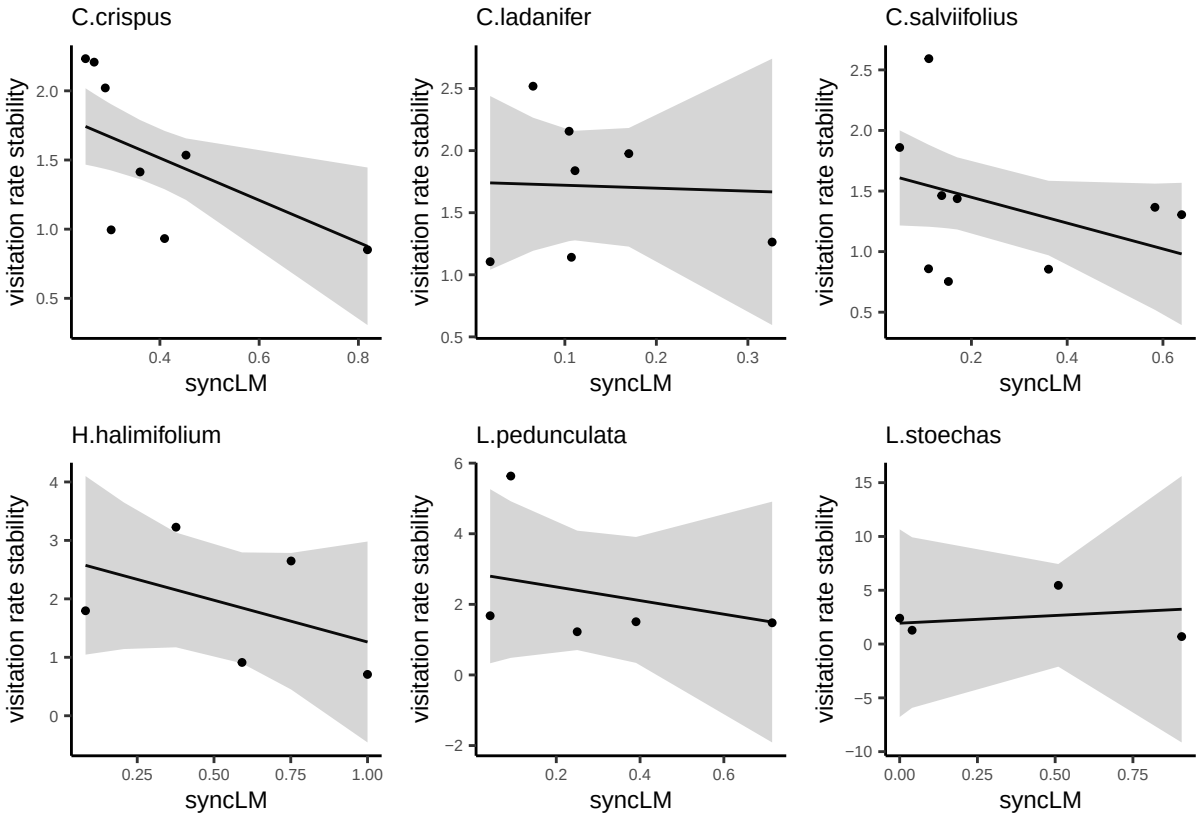

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
log_VR

B) total richness + Lorea and Mazancourt index

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	3.437	0.449	7.651	**0.001**
	S_total	-0.059	0.019	-3.110	**0.027**
	syncLM	-1.524	0.636	-2.397	0.062
Cistus ladanifer	(Intercept)	1.235	0.687	1.797	0.147
	S_total	0.037	0.034	1.083	0.340
	syncLM	-0.235	2.536	-0.093	0.931
Cistus salviifolius	(Intercept)	2.360	0.359	6.571	**0.001**
	S_total	-0.051	0.018	-2.889	**0.028**
	syncLM	-1.066	0.694	-1.534	0.176
Halimium calycinum	(Intercept)	-26.954			
	S_total	3.910			
	syncLM	13.877			
Halimium halimifolium	(Intercept)	2.952	1.293	2.282	0.107
	S_total	-0.016	0.051	-0.311	0.776
	syncLM	-1.428	1.490	-0.958	0.409
Lavandula pedunculata	(Intercept)	1.118	2.371	0.471	0.684
	S_total	0.116	0.108	1.071	0.396
	syncLM	-1.929	3.645	-0.529	0.649
Lavandula stoechas	(Intercept)	4.013	9.380	0.428	0.743
	S_total	-0.237	1.450	-0.163	0.897
	syncLM	1.426	11.155	0.128	0.919

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.801	0.722	0.303	10.072	0.018	2	0.077	7.846	8.164	0.459	5	8
C.ladanifer	0.255	-0.117	0.584	0.685	0.555	2	-4.203	16.407	16.191	1.362	4	7
C.salviifolius	0.605	0.473	0.418	4.592	0.062	2	-3.102	14.203	14.992	1.050	6	9
H. calycinum	1.000					2	Inf	-Inf	-Inf	0.000	0	3
H.halimifolium	0.240	-0.267	1.139	0.474	0.663	2	-7.217	22.435	21.602	3.895	3	6
L.pedunculata	0.489	-0.023	1.890	0.955	0.511	2	-7.987	23.973	22.411	7.143	2	5
L.stoechas	0.028	-1.916	3.619	0.014	0.986	2	-8.048	24.095	21.640	13.094	1	4

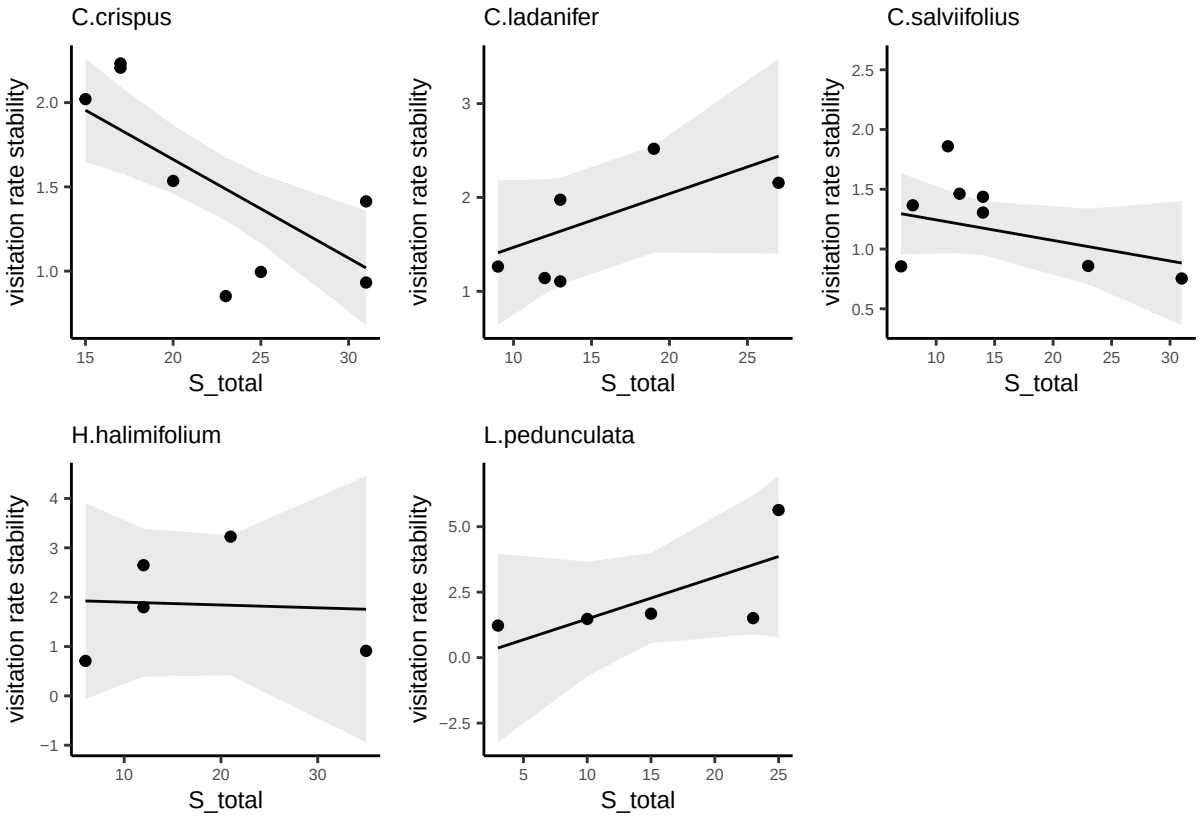

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
L.stoechas
visitation rate stability
S_total

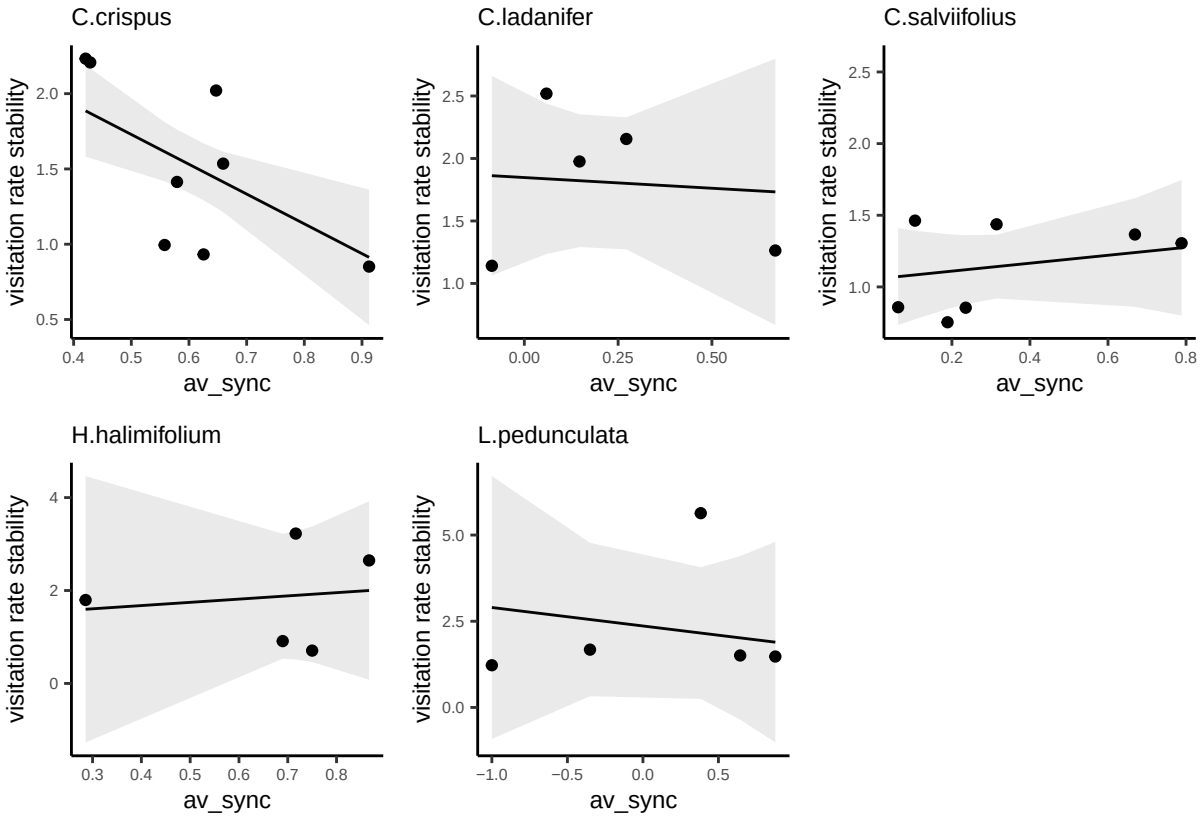

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
L.stoechas
visitation rate stability
syncLM

C) total richness + Gross index

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	4.028	0.498	8.092	**0.000**
	S_total	-0.059	0.017	-3.496	**0.017**
	av_sync	-1.979	0.677	-2.923	**0.033**
Cistus ladanifer	(Intercept)	0.933	0.791	1.180	0.359
	S_total	0.057	0.042	1.365	0.306
	av_sync	-0.171	1.043	-0.164	0.884
Cistus salviifolius	(Intercept)	1.322	0.358	3.698	**0.021**
	S_total	-0.017	0.016	-1.106	0.331
	av_sync	0.277	0.473	0.585	0.590
Halimium calycinum	(Intercept)	1.701			
	S_total				
	av_sync				
Halimium halimifolium	(Intercept)	1.498	2.584	0.580	0.621
	S_total	-0.006	0.067	-0.086	0.939
	av_sync	0.694	3.446	0.202	0.859
Lavandula pedunculata	(Intercept)	-0.051	2.109	-0.024	0.983
	S_total	0.159	0.132	1.199	0.353
	av_sync	-0.536	1.563	-0.343	0.764
Lavandula stoechas	(Intercept)	0.695			
	S_total				
	av_sync				

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.842	0.779	0.270	13.351	0.010	2	1.004	5.992	6.310	0.364	5	8
C.ladanifer	0.507	0.014	0.587	1.028	0.493	2	-2.136	12.273	10.710	0.688	2	5
C.salviifolius	0.383	0.075	0.299	1.243	0.380	2	0.476	7.048	6.832	0.358	4	7
H. calycinum	0.000	0.000					Inf	-Inf	-Inf	0.000	0	1
H.halimifolium	0.023	-0.955	1.519	0.023	0.977	2	-6.893	21.786	20.223	4.612	2	5
L.pedunculata	0.449	-0.101	1.961	0.816	0.551	2	-8.172	24.343	22.781	7.692	2	5
L.stoechas	0.000	0.000					Inf	-Inf	-Inf	0.000	0	1

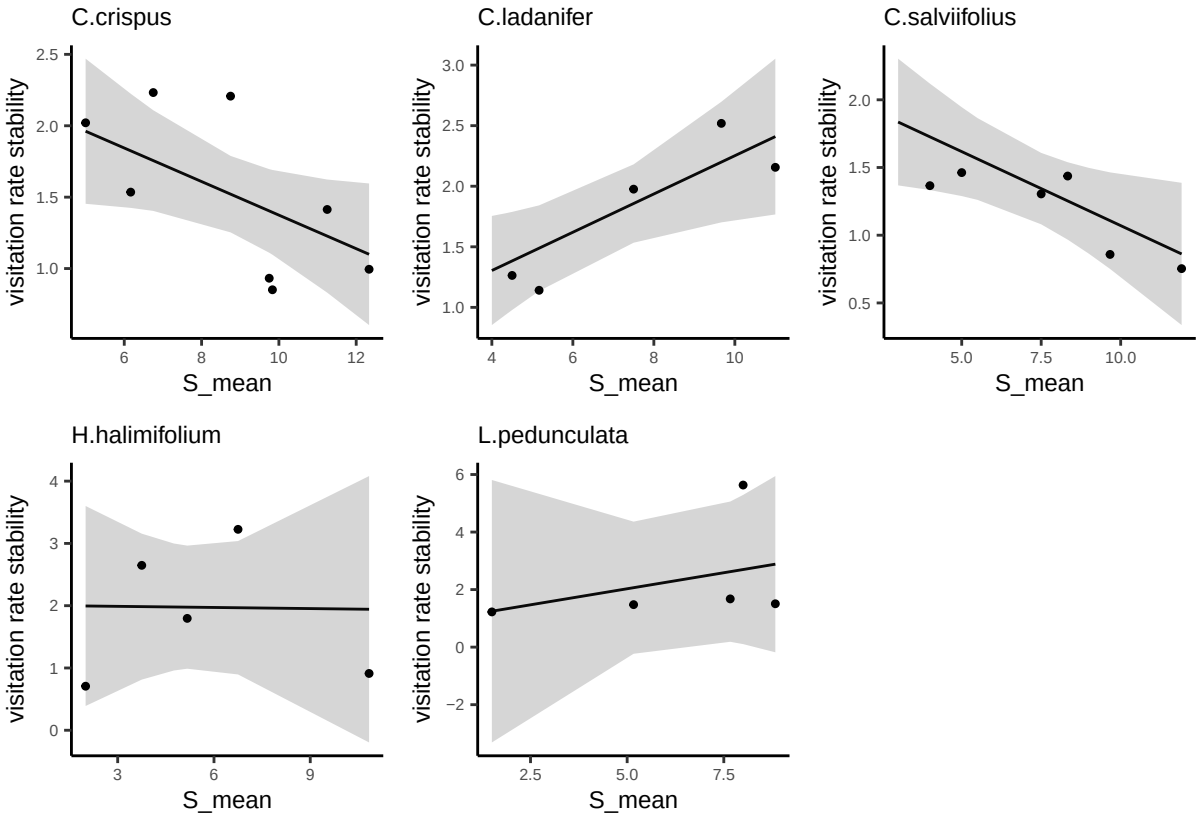

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
S_total

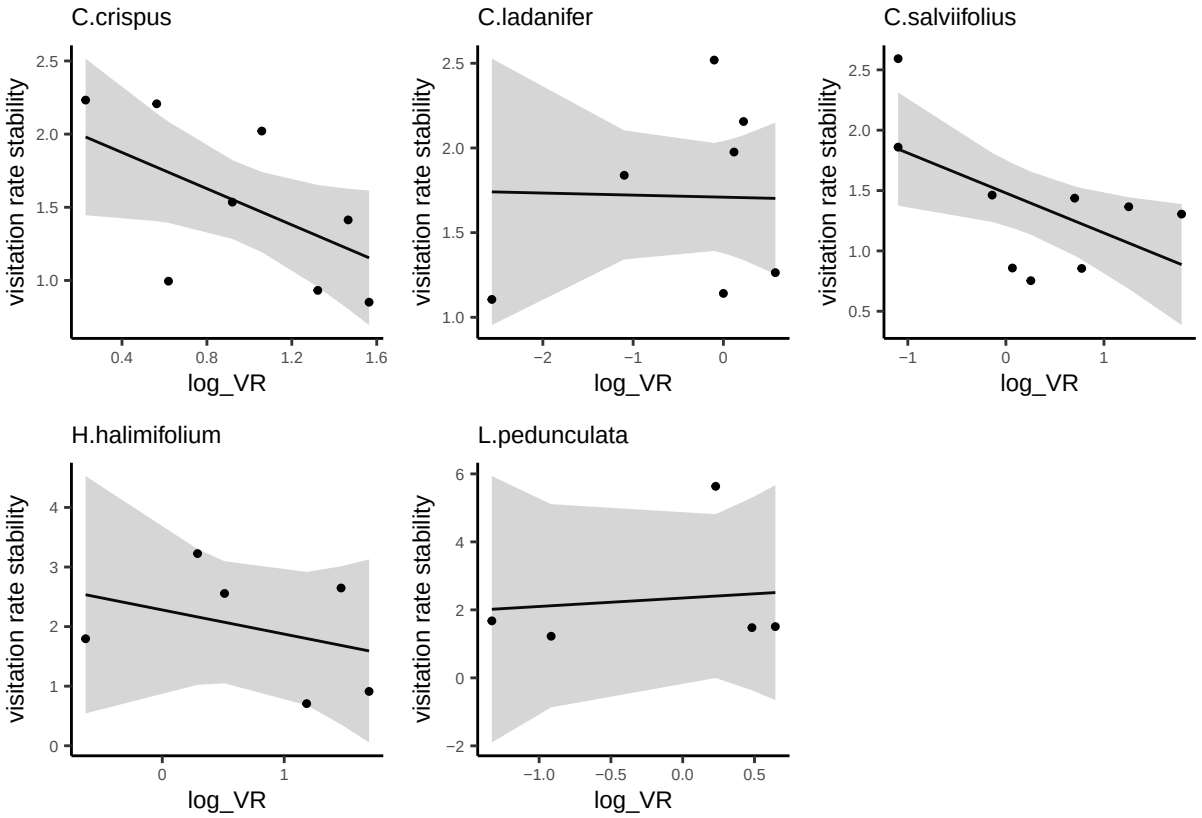

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
av_sync

D) mean richness + log VR

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	3.148	0.544	5.788	**0.002**
	S_mean	-0.118	0.059	-1.989	0.103
	log_VR	-0.618	0.320	-1.934	0.111
Cistus ladanifer	(Intercept)	0.667	0.494	1.351	0.248
	S_mean	0.158	0.066	2.401	0.074
	log_VR	-0.012	0.172	-0.071	0.947
Cistus salviifolius	(Intercept)	2.256	0.369	6.109	**0.001**
	S_mean	-0.109	0.048	-2.262	0.064
	log_VR	-0.331	0.144	-2.295	0.062
Halimium calycinum	(Intercept)	-97.402			
	S_mean	34.906			
	log_VR	52.340			
Halimium halimifolium	(Intercept)	2.313	1.158	1.997	0.140
	S_mean	-0.006	0.183	-0.033	0.976
	log_VR	-0.406	0.641	-0.633	0.571
Lavandula pedunculata	(Intercept)	0.958	3.025	0.317	0.782
	S_mean	0.223	0.436	0.511	0.660
	log_VR	0.249	1.464	0.170	0.881
Lavandula stoechas	(Intercept)	-80.721			
	S_mean	19.595			
	log_VR	-16.967			

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.677	0.548	0.386	5.238	0.059	2	-1.864	11.728	12.046	0.746	5	8
C.ladanifer	0.637	0.456	0.407	3.514	0.132	2	-1.684	11.369	11.152	0.663	4	7
C.salviifolius	0.640	0.519	0.400	5.322	0.047	2	-2.689	13.377	14.166	0.958	6	9
H. calycinum	1.000					2	Inf	-Inf	-Inf	0.000	0	3
H.halimifolium	0.124	-0.461	1.224	0.211	0.821	2	-7.645	23.290	22.457	4.492	3	6
L.pedunculata	0.172	-0.656	2.405	0.208	0.828	2	-9.191	26.382	24.820	11.564	2	5
L.stoechas	1.000					2	Inf	-Inf	-Inf	0.000	0	3

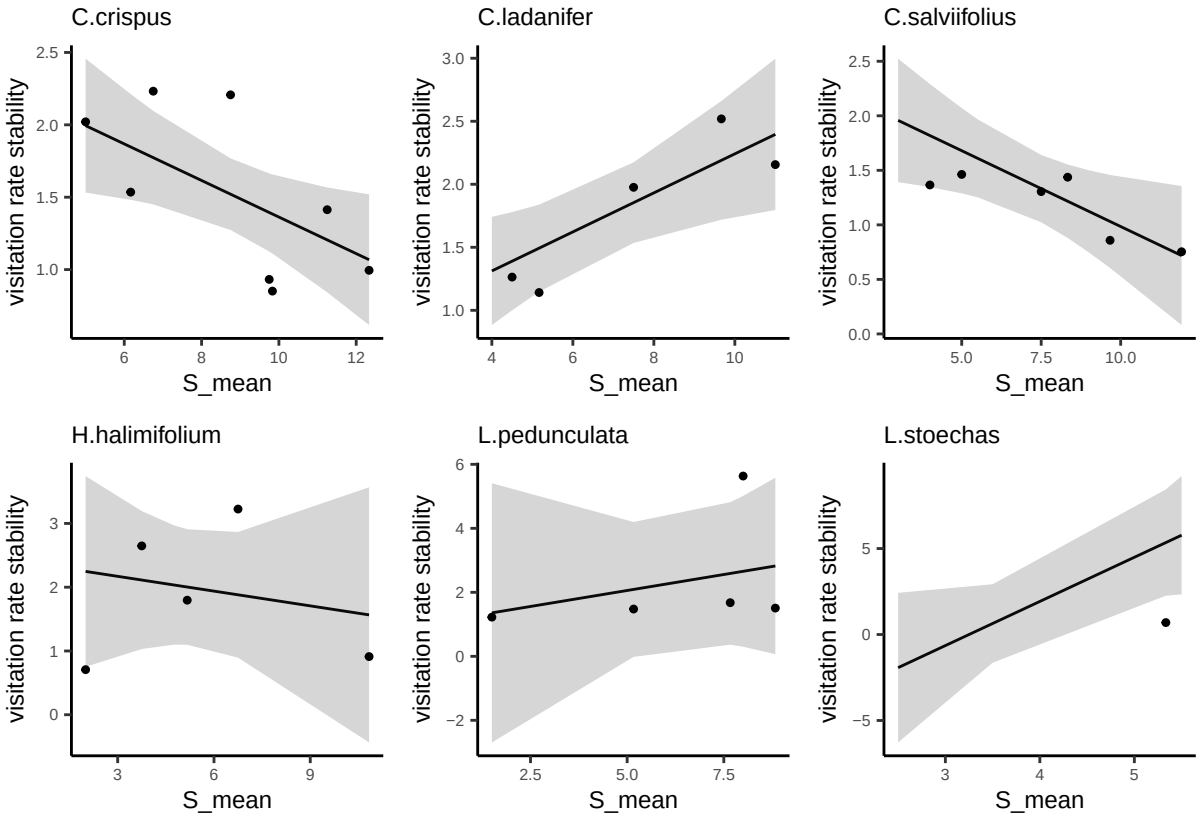

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
S_mean

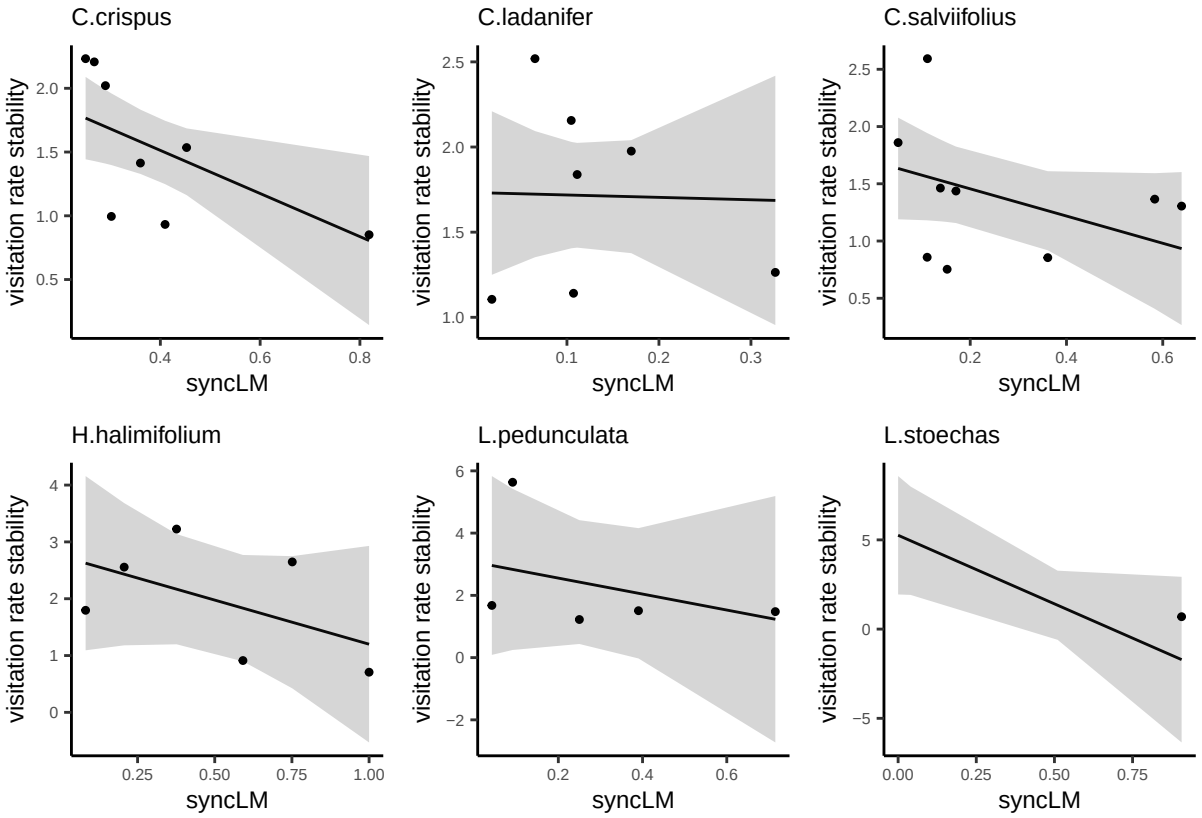

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
log_VR

E) mean richness + Lorea & Mazancourt index

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	3.292	0.520	6.327	**0.001**
	S_mean	-0.126	0.053	-2.362	0.065
	syncLM	-1.691	0.739	-2.288	0.071
Cistus ladanifer	(Intercept)	0.711	0.517	1.375	0.241
	S_mean	0.155	0.060	2.574	0.062
	syncLM	-0.140	1.723	-0.082	0.939
Cistus salviifolius	(Intercept)	2.681	0.544	4.929	**0.003**
	S_mean	-0.139	0.059	-2.345	0.057
	syncLM	-1.188	0.794	-1.496	0.185
Halimium calycinum	(Intercept)	-52.592			
	S_mean	9.518			
	syncLM	37.594			
Halimium halimifolium	(Intercept)	3.180	1.453	2.188	0.116
	S_mean	-0.077	0.172	-0.447	0.685
	syncLM	-1.552	1.513	-1.026	0.380
Lavandula pedunculata	(Intercept)	1.823	3.094	0.589	0.615
	S_mean	0.200	0.383	0.522	0.654
	syncLM	-2.567	4.212	-0.609	0.604
Lavandula stoechas	(Intercept)	-5.546	3.981	-1.393	0.396
	S_mean	2.567	1.216	2.112	0.281
	syncLM	-7.686	4.118	-1.866	0.313

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.724	0.614	0.357	6.561	0.040	2	-1.233	10.466	10.784	0.637	5	8
C.ladanifer	0.637	0.456	0.407	3.517	0.131	2	-1.683	11.366	11.150	0.663	4	7
C.salviifolius	0.507	0.343	0.467	3.085	0.120	2	-4.097	16.194	16.983	1.310	6	9
H. calycinum	1.000					2	Inf	-Inf	-Inf	0.000	0	3
H.halimifolium	0.265	-0.226	1.121	0.540	0.631	2	-7.119	22.238	21.405	3.769	3	6
L.pedunculata	0.292	-0.417	2.224	0.412	0.708	2	-8.801	25.602	24.039	9.894	2	5
L.stoechas	0.817	0.452	1.569	2.236	0.427	2	-4.705	17.410	14.955	2.462	1	4

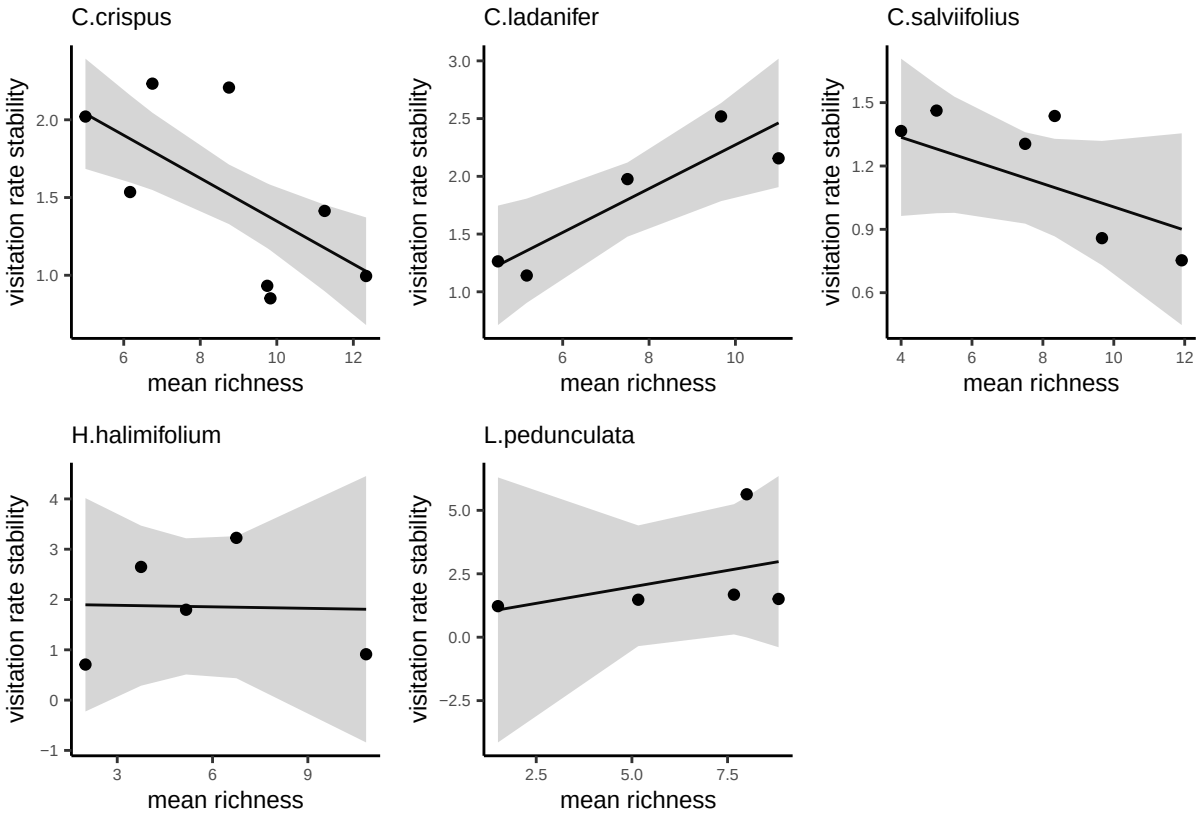

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
L.stoechas
visitation rate stability
S_mean

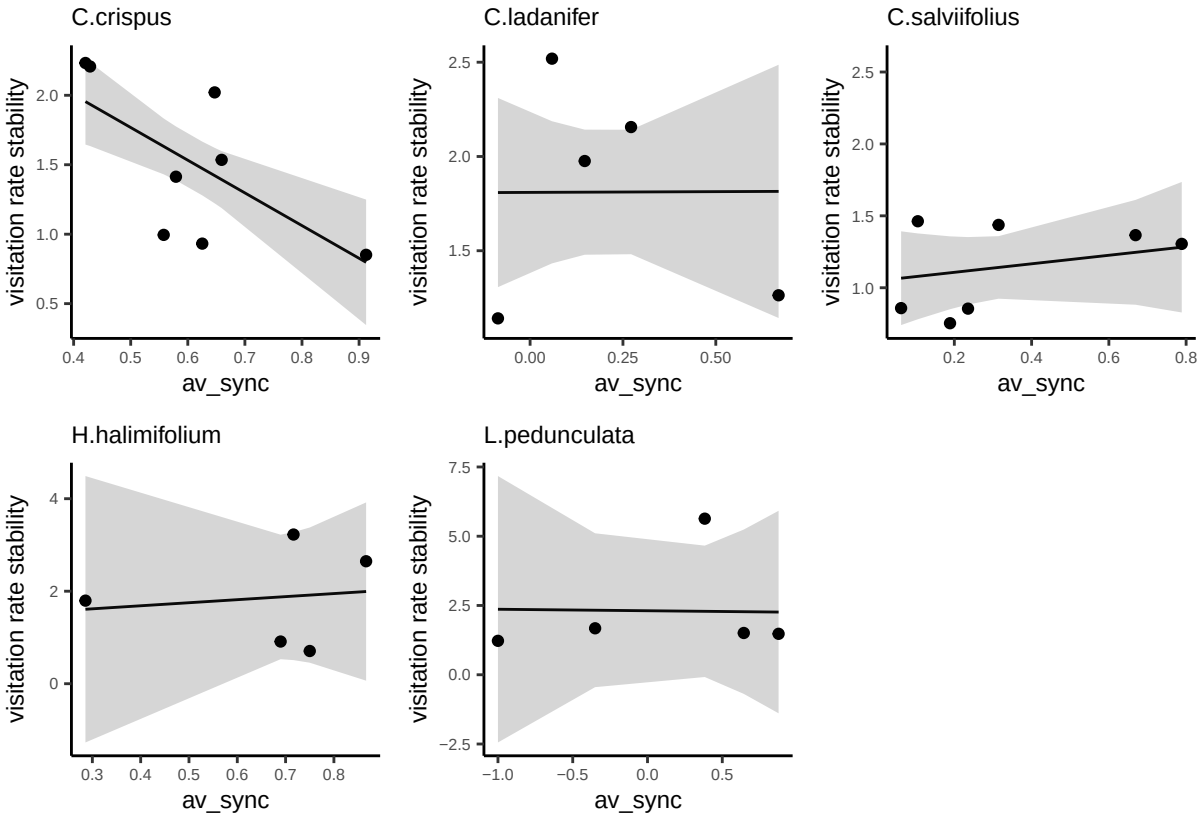

C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
L.stoechas
visitation rate stability
syncLM

F) mean richness + Gross index

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Cistus crispus	(Intercept)	4.150	0.533	7.793	**0.001**
	S_mean	-0.138	0.041	-3.383	**0.020**
	av_sync	-2.353	0.677	-3.478	**0.018**
Cistus ladanifer	(Intercept)	0.373	0.585	0.638	0.589
	S_mean	0.190	0.068	2.811	0.107
	av_sync	0.008	0.659	0.012	0.991
Cistus salviifolius	(Intercept)	1.456	0.429	3.397	**0.027**
	S_mean	-0.055	0.045	-1.215	0.291
	av_sync	0.297	0.451	0.657	0.547
Halimium calycinum	(Intercept)	1.701			
	S_mean				
	av_sync				
Halimium halimifolium	(Intercept)	1.479	2.837	0.521	0.654
	S_mean	-0.010	0.227	-0.044	0.969
	av_sync	0.660	3.465	0.190	0.867
Lavandula pedunculata	(Intercept)	0.692	3.263	0.212	0.852
	S_mean	0.260	0.515	0.505	0.664
	av_sync	-0.054	1.982	-0.027	0.981
Lavandula stoechas	(Intercept)	0.695			
	S_mean				
	av_sync				

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
C.crispus	0.835	0.769	0.276	12.634	0.011	2	0.819	6.362	6.680	0.382	5	8
C.ladanifer	0.808	0.615	0.366	4.202	0.192	2	0.218	7.564	6.002	0.268	2	5
C.salviifolius	0.412	0.117	0.292	1.399	0.346	2	0.641	6.718	6.502	0.341	4	7
H. calycinum	0.000	0.000					Inf	-Inf	-Inf	0.000	0	1
H.halimifolium	0.020	-0.960	1.521	0.020	0.980	2	-6.900	21.799	20.237	4.625	2	5
L.pedunculata	0.160	-0.679	2.421	0.191	0.840	2	-9.226	26.452	24.889	11.727	2	5
L.stoechas	0.000	0.000					Inf	-Inf	-Inf	0.000	0	1


C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
mean richness


C.crispus
C.ladanifer
C.salviifolius
H.halimifolium
L.pedunculata
visitation rate stability
av_sync