

Models with year

2022-10-05

Seed number

Visitation rate (all pollinators)

we analyse whether the visitation rate of all pollinators, years and their interaction affect to the seed number for each plant species

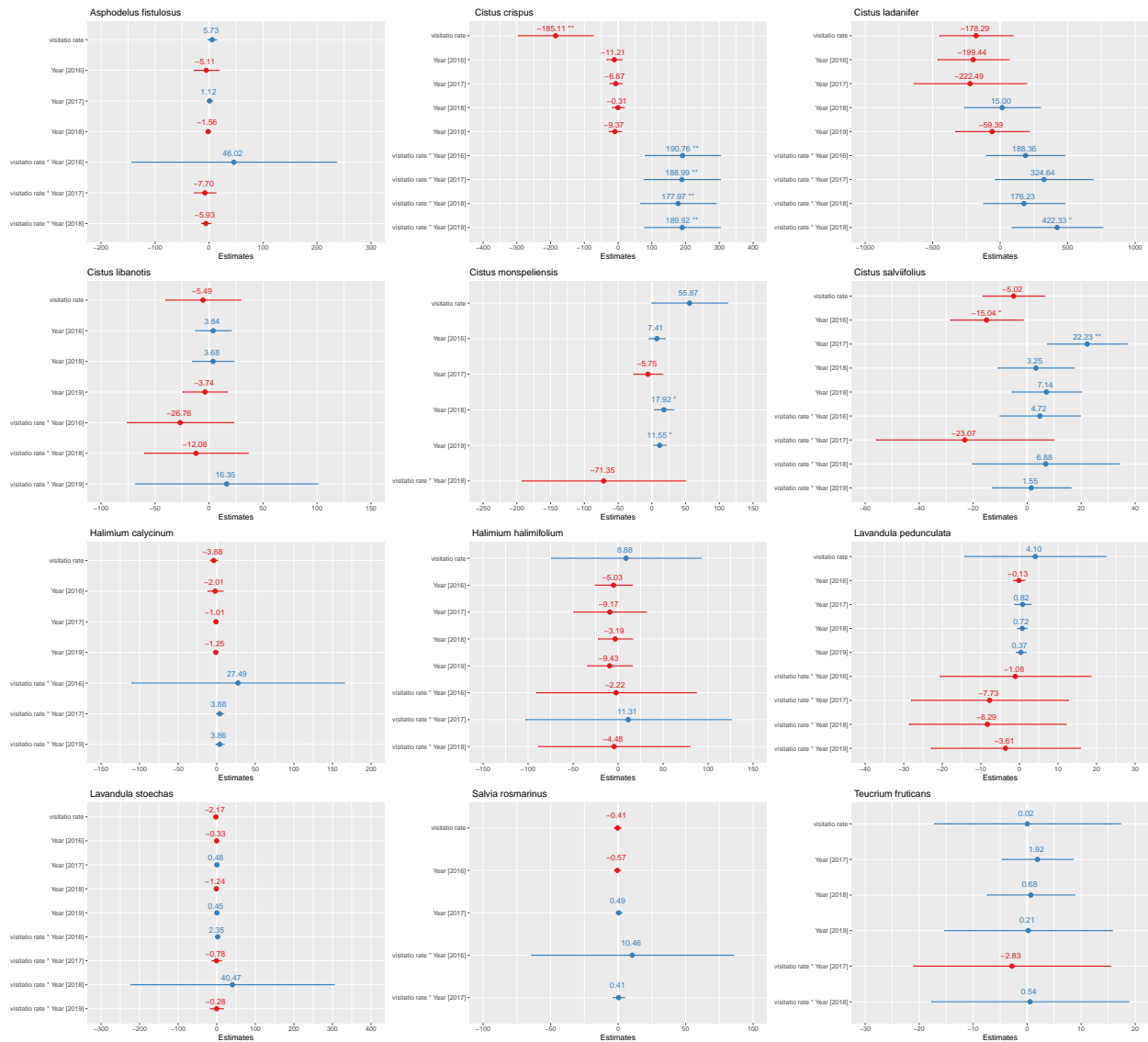
A- linear model: `lm(Seeds~visitatio_rate * Year)`

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Asphodelus fistulosus	(Intercept)	3.0260	0.8088	3.7411	0.0073
	visitatio_rate	5.7266	3.4085	1.6801	0.1368
	Year2016	-5.1093	9.7394	-0.5246	0.6161
	Year2017	1.1217	2.1216	0.5287	0.6133
	Year2018	-1.5567	1.3826	-1.1259	0.2973
	visitatio_rate:Year2016	46.0234	80.1800	0.5740	0.5839
	visitatio_rate:Year2017	-7.6997	8.3435	-0.9228	0.3868
	visitatio_rate:Year2018	-5.9262	3.6989	-1.6021	0.1532
Cistus crispus	(Intercept)	39.6667	8.4181	4.7121	0.0000
	visitatio_rate	-185.1111	55.5567	-3.3319	0.0015
	Year2016	-11.2113	11.2820	-0.9937	0.3243
	Year2017	-6.8728	9.1650	-0.7499	0.4563
	Year2018	-0.3055	8.8115	-0.0347	0.9725
	Year2019	-9.3712	9.0665	-1.0336	0.3055
	visitatio_rate:Year2016	190.7614	55.7606	3.4211	0.0011
	visitatio_rate:Year2017	188.9941	56.4155	3.3500	0.0014
	visitatio_rate:Year2018	177.9735	55.6309	3.1992	0.0022
	visitatio_rate:Year2019	189.9160	55.7932	3.4039	0.0012
Cistus ladanifer	(Intercept)	488.2839	97.7329	4.9961	0.0000
	visitatio_rate	-178.2900	134.3129	-1.3274	0.1914
	Year2016	-199.4426	131.2333	-1.5198	0.1359
	Year2017	-222.4937	206.3065	-1.0785	0.2868
	Year2018	14.9977	139.7125	0.1073	0.9150
	Year2019	-59.3937	135.8342	-0.4373	0.6641
	visitatio_rate:Year2016	188.3636	143.5834	1.3119	0.1965
	visitatio_rate:Year2017	324.6391	179.2934	1.8107	0.0772
	visitatio_rate:Year2018	176.2307	149.0566	1.1823	0.2436
	visitatio_rate:Year2019	422.3346	166.3031	2.5395	0.0148
Cistus libanotis	(Intercept)	17.4970	5.3569	3.2662	0.0114
	visitatio_rate	-5.4939	15.0639	-0.3647	0.7248
	Year2016	3.8364	7.1596	0.5358	0.6066
	Year2018	3.6808	8.3756	0.4395	0.6720
	Year2019	-3.7393	8.9443	-0.4181	0.6869
	visitatio_rate:Year2016	-26.7561	21.3396	-1.2538	0.2453

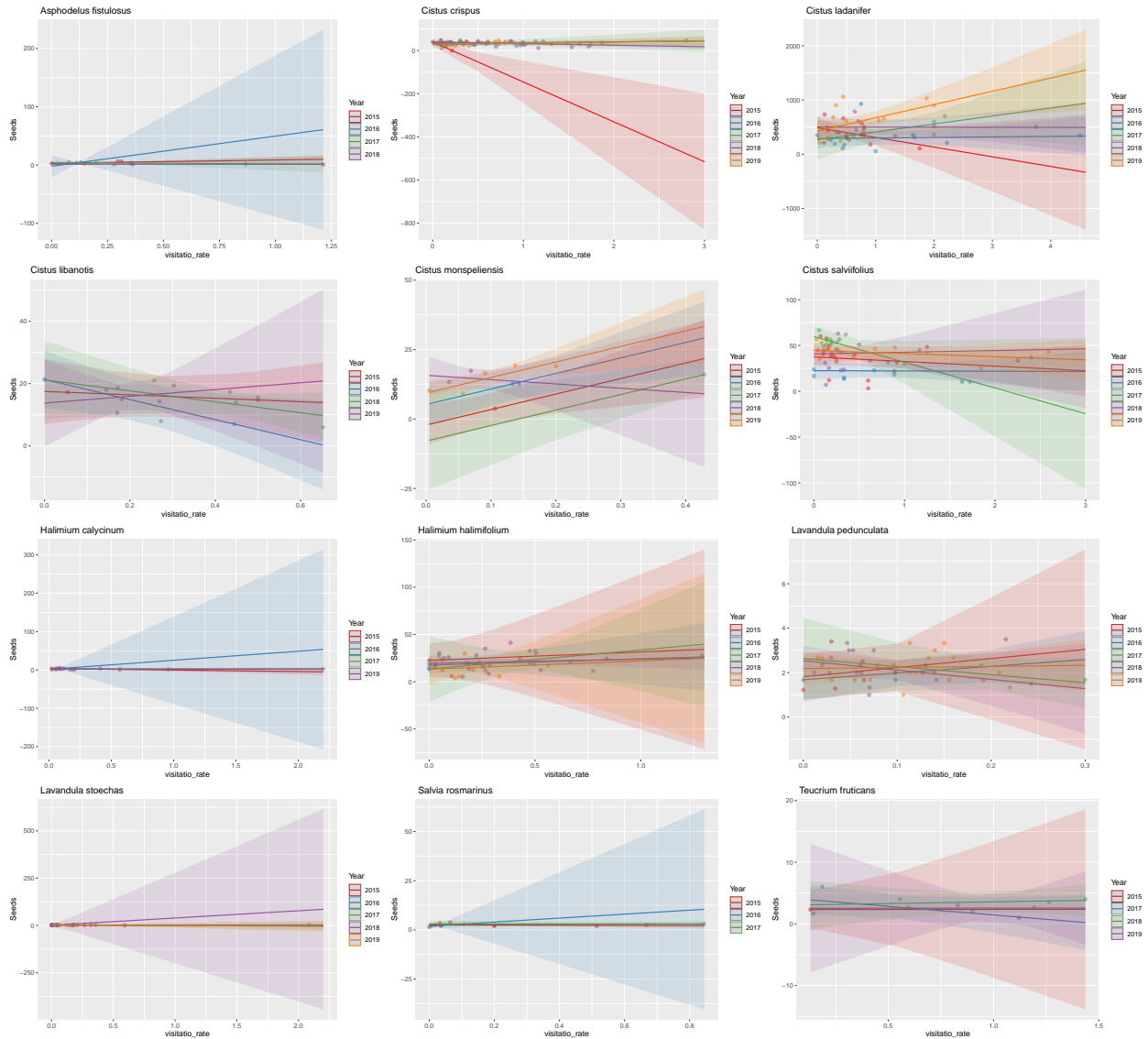
Cistus monspeliensis	visitatio_rate:Year2018	-12.0825	20.8164	-0.5804	0.5776
	visitatio_rate:Year2019	16.3481	36.6178	0.4465	0.6671
	(Intercept)	-2.1936	3.6982	-0.5932	0.5850
	visitatio_rate	55.8703	20.1663	2.7705	0.0503
	Year2016	7.4109	4.2947	1.7256	0.1595
	Year2017	-5.7508	7.7695	-0.7402	0.5003
	Year2018	17.9181	5.1863	3.4549	0.0259
	Year2019	11.5483	3.3042	3.4951	0.0250
	visitatio_rate:Year2016	NA	NA	NA	NA
	visitatio_rate:Year2017	NA	NA	NA	NA
Cistus salviifolius	visitatio_rate:Year2018	-71.3462	43.5548	-1.6381	0.1767
	visitatio_rate:Year2019	NA	NA	NA	NA
	(Intercept)	37.5365	4.6845	8.0130	0.0000
	visitatio_rate	-5.0199	5.7298	-0.8761	0.3847
	Year2016	-15.0376	6.7203	-2.2376	0.0292
	Year2017	22.2334	7.3821	3.0118	0.0039
	Year2018	3.2469	7.0129	0.4630	0.6452
	Year2019	7.1414	6.4051	1.1149	0.2696
	visitatio_rate:Year2016	4.7236	7.4177	0.6368	0.5268
	visitatio_rate:Year2017	-23.0746	16.4328	-1.4042	0.1658
Halimium calycinum	visitatio_rate:Year2018	6.8757	13.6064	0.5053	0.6153
	visitatio_rate:Year2019	1.5547	7.2712	0.2138	0.8315
	(Intercept)	3.6192	0.6195	5.8418	0.0001
	visitatio_rate	-3.8773	2.1328	-1.8180	0.0964
	Year2016	-2.0081	4.4315	-0.4531	0.6593
	Year2017	-1.0074	0.9338	-1.0788	0.3038
	Year2019	-1.2481	0.7373	-1.6928	0.1186
	visitatio_rate:Year2016	27.4884	62.5295	0.4396	0.6687
	visitatio_rate:Year2017	3.8764	2.2021	1.7603	0.1061
	visitatio_rate:Year2019	3.8587	2.4148	1.5979	0.1384
Halimium halimifolium	(Intercept)	22.6667	9.0536	2.5036	0.0170
	visitatio_rate	8.8803	40.9521	0.2168	0.8296
	Year2016	-5.0326	10.1786	-0.4944	0.6240
	Year2017	-9.1667	19.9041	-0.4605	0.6479
	Year2018	-3.1865	9.4552	-0.3370	0.7381
	Year2019	-9.4292	12.2528	-0.7696	0.4466
	visitatio_rate:Year2016	-2.2240	43.7919	-0.0508	0.9598
	visitatio_rate:Year2017	11.3102	56.3551	0.2007	0.8421
	visitatio_rate:Year2018	-4.4799	41.4147	-0.1082	0.9145
	visitatio_rate:Year2019	NA	NA	NA	NA
Lavandula pedunculata	(Intercept)	1.8146	0.5213	3.4811	0.0012
	visitatio_rate	4.0965	9.0590	0.4522	0.6536
	Year2016	-0.1336	0.7264	-0.1839	0.8551
	Year2017	0.8188	1.0654	0.7685	0.4468
	Year2018	0.7180	0.6237	1.1512	0.2566
	Year2019	0.3668	0.6423	0.5712	0.5712
	visitatio_rate:Year2016	-1.0835	9.6658	-0.1121	0.9113
	visitatio_rate:Year2017	-7.7336	10.0598	-0.7688	0.4467
	visitatio_rate:Year2018	-8.2855	10.0608	-0.8235	0.4152
	visitatio_rate:Year2019	-3.6094	9.5531	-0.3778	0.7076
Lavandula stoechas	(Intercept)	2.4225	0.4088	5.9264	0.0000
	visitatio_rate	-2.1661	1.5124	-1.4322	0.1740
	Year2016	-0.3318	0.5379	-0.6169	0.5472
	Year2017	0.4834	0.7556	0.6398	0.5327

Salvia rosmarinus	Year2018	-1.2410	1.0444	-1.1882	0.2545
	Year2019	0.4535	1.1763	0.3855	0.7056
	visitatio_rate:Year2016	2.3508	1.5737	1.4938	0.1574
	visitatio_rate:Year2017	-0.7832	5.6295	-0.1391	0.8913
	visitatio_rate:Year2018	40.4747	123.0223	0.3290	0.7470
	visitatio_rate:Year2019	-0.2801	7.8057	-0.0359	0.9719
	(Intercept)	2.5116	0.3234	7.7651	0.0001
	visitatio_rate	-0.4070	1.0878	-0.3741	0.7194
	Year2016	-0.5731	0.9439	-0.6071	0.5630
	Year2017	0.4884	0.9128	0.5351	0.6092
Teucrium fruticans	visitatio_rate:Year2016	10.4627	31.5853	0.3313	0.7501
	visitatio_rate:Year2017	0.4070	1.7866	0.2278	0.8263
	(Intercept)	2.3309	1.8735	1.2442	0.2814
	visitatio_rate	0.0184	6.2045	0.0030	0.9978
	Year2017	1.9173	2.3583	0.8130	0.4618
	Year2018	0.6776	2.9201	0.2320	0.8279
	Year2019	0.2067	5.5916	0.0370	0.9723
	visitatio_rate:Year2017	-2.8288	6.5718	-0.4304	0.6890
	visitatio_rate:Year2018	0.5354	6.5679	0.0815	0.9389
	visitatio_rate:Year2019	NA	NA	NA	NA

Plant_gen_sp	r.squared	adj.r.squared	sigma	statistic	p.value	df	logLik	AIC	BIC	deviance	df.residual	nobs
A.fistulosus	0.755	0.509	1.095	3.075	0.081	7	-16.924	51.847	58.220	8.387	7	15
C.crispus	0.298	0.193	8.418	2.833	0.008	9	-243.057	508.115	532.848	4251.877	60	70
C.ladanifer	0.370	0.238	208.694	2.804	0.011	9	-352.729	727.458	749.131	1872792.392	43	53
C.libanotis	0.472	0.011	4.750	1.023	0.481	7	-42.089	102.177	109.130	180.509	8	16
C.monspelienensis	0.836	0.589	3.012	3.389	0.129	6	-22.175	60.349	63.532	36.298	4	11
C.salviifolius	0.430	0.338	12.503	4.688	0.000	9	-254.941	531.882	555.968	8753.969	56	66
H.calycinum	0.329	-0.098	0.936	0.771	0.624	7	-20.506	59.013	67.513	9.632	11	19
H.halimifolium	0.116	-0.081	9.054	0.589	0.781	8	-157.974	335.947	354.014	2950.816	36	45
L.pedunculata	0.093	-0.116	0.694	0.445	0.902	9	-46.043	114.086	134.896	18.789	39	49
L.stoechas	0.347	-0.073	0.795	0.825	0.604	9	-22.069	66.138	79.096	8.840	14	24
S.rosmarinus	0.188	-0.392	0.740	0.325	0.883	5	-10.506	35.013	38.968	3.832	7	13
T.fruticans	0.388	-0.530	1.691	0.422	0.835	6	-15.826	47.651	50.834	11.443	4	11



Predicte values of seed number



Cistus monspeliensis - *Halimium halimifolium* - *Teucrium fruticans* Warning message: In predict.lm(model, newdata = fitfram, type = "response", se.fit = se,): prediction from a rank-deficient fit may be misleading

Importante: *Cistus crispus* en 2015 solo tiene dos valores, uno con 0 semillas y visitation rate 0.214; y otro con casi 40 semillas y visitation rate 0

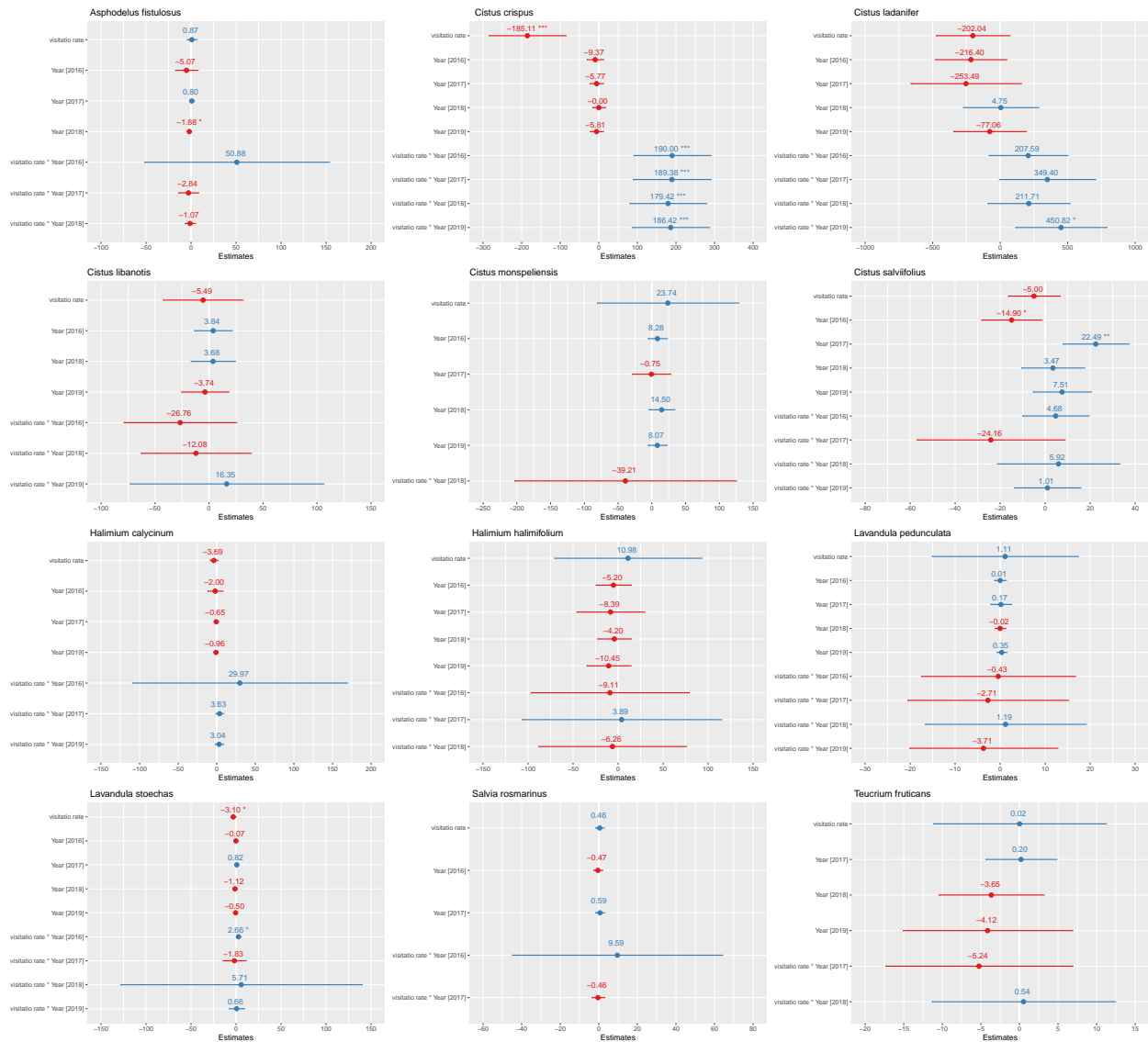
Predicted values of Seeds for *Cistus crispus*

```
## # Predicted values of Seeds
##
## # Year = 2015
##
## visitatio_rate | Predicted | group_col |          95% CI
## -----
##          0.00 |      39.67 |      2015 | [ 23.17,  56.17]
##          0.50 |     -52.89 |      2015 | [-97.23,  -8.55]
##          1.00 |    -145.44 |      2015 | [-243.36, -47.52]
##          2.00 |   -330.56 |      2015 | [-537.00, -124.11]
##          3.00 |   -515.67 |      2015 | [-830.88, -200.45]
##
## # Year = 2016
##
## visitatio_rate | Predicted | group_col |          95% CI
## -----
##          0.00 |      28.46 |      2016 | [13.73, 43.18]
##          0.50 |      31.28 |      2016 | [20.11, 42.45]
##          1.00 |      34.11 |      2016 | [25.38, 42.84]
##          2.00 |      39.76 |      2016 | [29.26, 50.25]
##          3.00 |      45.41 |      2016 | [27.56, 63.25]
##
## # Year = 2017
##
## visitatio_rate | Predicted | group_col |          95% CI
## -----
##          0.00 |      32.79 |      2017 | [25.69, 39.90]
##          0.50 |      34.74 |      2017 | [28.00, 41.47]
##          1.00 |      36.68 |      2017 | [21.68, 51.68]
##          2.00 |      40.56 |      2017 | [ 6.82, 74.30]
##          3.00 |      44.44 |      2017 | [-8.38, 97.27]
##
## # Year = 2018
##
## visitatio_rate | Predicted | group_col |          95% CI
## -----
##          0.00 |      39.36 |      2018 | [34.26, 44.46]
##          0.50 |      35.79 |      2018 | [32.65, 38.94]
##          1.00 |      32.22 |      2018 | [29.12, 35.32]
##          2.00 |      25.09 |      2018 | [17.57, 32.61]
##          3.00 |      17.95 |      2018 | [ 5.03, 30.87]
##
## # Year = 2019
##
## visitatio_rate | Predicted | group_col |          95% CI
## -----
##          0.00 |      30.30 |      2019 | [23.70, 36.89]
##          0.50 |      32.70 |      2019 | [28.80, 36.60]
##          1.00 |      35.10 |      2019 | [28.98, 41.22]
##          2.00 |      39.91 |      2019 | [24.62, 55.19]
##          3.00 |      44.71 |      2019 | [19.57, 69.85]
```

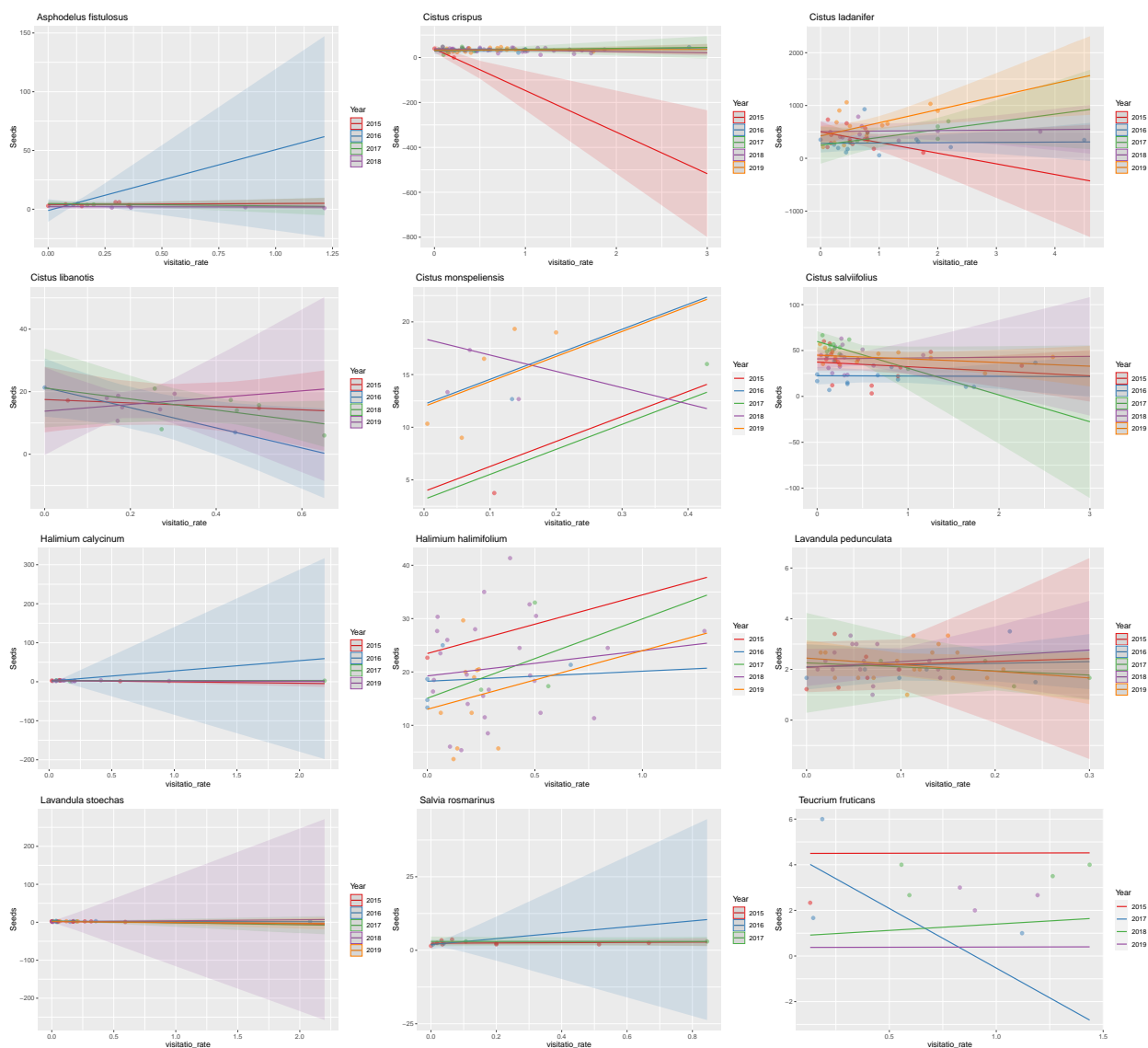
B- linear mixed model with site ID like random factor

Plant_gen_sp	term	estimate	std.error	statistic	df	p.value
Asphodelus fistulosus	(Intercept)	3.9867	0.9816	4.0613	2.7281	0.0322
	visitatio_rate	0.8699	2.1003	0.4142	5.3231	0.6949
	Year2016	-5.0681	4.8618	-1.0424	4.9587	0.3453
	Year2017	0.7983	1.0758	0.7421	4.9799	0.4915
	Year2018	-1.8801	0.7179	-2.6190	5.0113	0.0471
	visitatio_rate:Year2016	50.8801	39.9427	1.2738	4.9557	0.2592
	visitatio_rate:Year2017	-2.8430	4.3347	-0.6559	5.0408	0.5407
	visitatio_rate:Year2018	-1.0695	2.2188	-0.4820	5.2847	0.6491
Cistus crispus	(Intercept)	38.1260	7.9811	4.7771	58.6611	0.0000
	visitatio_rate	-185.1111	49.7756	-3.7189	51.4578	0.0005
	Year2016	-9.3655	10.7357	-0.8724	57.7596	0.3866
	Year2017	-5.7745	8.6907	-0.6645	56.9236	0.5091
	Year2018	-0.0037	8.4141	-0.0004	58.1708	0.9996
	Year2019	-5.8090	8.5338	-0.6807	56.5567	0.4988
	visitatio_rate:Year2016	189.9997	49.9770	3.8017	51.5015	0.0004
	visitatio_rate:Year2017	189.3804	50.6287	3.7406	51.6575	0.0005
Cistus ladanifer	visitatio_rate:Year2018	179.4184	49.8598	3.5985	51.5170	0.0007
	visitatio_rate:Year2019	186.4220	50.0279	3.7264	51.5717	0.0005
	(Intercept)	500.9859	100.3306	4.9934	35.4590	0.0000
	visitatio_rate	-202.0376	135.0967	-1.4955	42.5179	0.1422
	Year2016	-216.4031	131.0365	-1.6515	42.9605	0.1059
	Year2017	-253.4854	202.5414	-1.2515	41.1179	0.2178
	Year2018	4.7536	137.8730	0.0345	41.5590	0.9727
	Year2019	-77.0605	133.3194	-0.5780	41.0196	0.5664
Cistus libanotis	visitatio_rate:Year2016	207.5878	144.4254	1.4373	42.3271	0.1580
	visitatio_rate:Year2017	349.3974	176.9258	1.9748	42.1480	0.0549
	visitatio_rate:Year2018	211.7102	150.4242	1.4074	42.2256	0.1666
	visitatio_rate:Year2019	450.8164	167.5613	2.6905	42.2880	0.0102
	(Intercept)	17.4970	5.3569	3.2662	8.0000	0.0114
	visitatio_rate	-5.4939	15.0639	-0.3647	8.0000	0.7248
	Year2016	3.8364	7.1596	0.5358	8.0000	0.6066
	Year2018	3.6808	8.3756	0.4395	8.0000	0.6720
Cistus monspeliensis	Year2019	-3.7393	8.9443	-0.4181	8.0000	0.6869
	visitatio_rate:Year2016	-26.7561	21.3396	-1.2538	8.0000	0.2453
	visitatio_rate:Year2018	-12.0825	20.8164	-0.5804	8.0000	0.5776
	visitatio_rate:Year2019	16.3481	36.6178	0.4465	8.0000	0.6671
	(Intercept)	3.9006	5.5133	0.7075	2.5747	0.5379
	visitatio_rate	23.7371	24.3430	0.9751	3.9625	0.3852
	Year2016	8.2769	3.3104	2.5002	3.0490	0.0863
	Year2017	-0.7494	6.6075	-0.1134	3.4015	0.9161
Cistus salviifolius	Year2018	14.4997	4.4318	3.2718	3.4162	0.0387
	Year2019	8.0699	3.2423	2.4889	3.7463	0.0718
	visitatio_rate:Year2018	-39.2130	38.1729	-1.0272	3.4904	0.3701
	(Intercept)	37.3935	4.7400	7.8889	45.6349	0.0000
	visitatio_rate	-5.0033	5.7436	-0.8711	55.3932	0.3874
	Year2016	-14.8984	6.6957	-2.2251	55.1358	0.0302
	Year2017	22.4925	7.3352	3.0664	53.3544	0.0034
	Year2018	3.4665	6.9810	0.4966	54.5012	0.6215
	Year2019	7.5113	6.4240	1.1692	55.5450	0.2473
	visitatio_rate:Year2016	4.6832	7.3898	0.6337	54.8453	0.5289

Halimium calycinum	visitatio_rate:Year2017	-24.1576	16.3820	-1.4746	55.5882	0.1460
	visitatio_rate:Year2018	5.9201	13.5869	0.4357	55.8005	0.6647
	visitatio_rate:Year2019	1.0121	7.3564	0.1376	48.5485	0.8911
	(Intercept)	3.5096	0.6697	5.2408	6.8231	0.0013
	visitatio_rate	-3.6865	2.2255	-1.6565	7.9760	0.1363
	Year2016	-2.0030	4.3160	-0.4641	9.8673	0.6527
	Year2017	-0.6523	0.9554	-0.6828	10.6180	0.5094
	Year2019	-0.9632	0.7516	-1.2816	10.6255	0.2272
	visitatio_rate:Year2016	29.9670	61.6213	0.4863	10.4010	0.6368
	visitatio_rate:Year2017	3.6268	2.2814	1.5898	8.4840	0.1484
Halimium halimifolium	visitatio_rate:Year2019	3.0430	2.4682	1.2329	9.5829	0.2470
	(Intercept)	23.4587	8.8250	2.6582	35.2011	0.0117
	visitatio_rate	10.9833	40.2623	0.2728	35.5734	0.7866
	Year2016	-5.1993	9.5968	-0.5418	31.4553	0.5918
	Year2017	-8.3910	18.5774	-0.4517	30.2709	0.6547
	Year2018	-4.2039	9.2286	-0.4555	34.5916	0.6516
	Year2019	-10.4550	12.0344	-0.8688	35.3038	0.3908
	visitatio_rate:Year2016	-9.1057	43.1440	-0.2111	35.5849	0.8340
	visitatio_rate:Year2017	3.8883	54.5119	0.0713	34.4111	0.9435
	visitatio_rate:Year2018	-6.2640	40.3477	-0.1553	35.0814	0.8775
Lavandula pedunculata	(Intercept)	2.0942	0.5071	4.1299	37.8704	0.0002
	visitatio_rate	1.1067	8.0141	0.1381	35.7302	0.8909
	Year2016	0.0089	0.6442	0.0138	36.6696	0.9891
	Year2017	0.1653	1.1318	0.1460	24.9166	0.8851
	Year2018	-0.0177	0.5930	-0.0299	38.4429	0.9763
	Year2019	0.3519	0.5350	0.6577	33.8199	0.5152
	visitatio_rate:Year2016	-0.4266	8.4461	-0.0505	35.2980	0.9600
	visitatio_rate:Year2017	-2.7136	8.8203	-0.3077	37.9236	0.7600
	visitatio_rate:Year2018	1.1884	8.8207	0.1347	36.1363	0.8936
	visitatio_rate:Year2019	-3.7119	8.1187	-0.4572	34.3640	0.6504
Lavandula stoechas	(Intercept)	2.4287	0.4094	5.9325	10.6547	0.0001
	visitatio_rate	-3.1042	1.1943	-2.5992	12.5448	0.0226
	Year2016	-0.0703	0.3255	-0.2159	10.2574	0.8333
	Year2017	0.8170	0.6894	1.1851	13.4276	0.2565
	Year2018	-1.1179	0.7092	-1.5763	12.0351	0.1409
	Year2019	-0.4969	0.6929	-0.7171	10.1274	0.4895
	visitatio_rate:Year2016	2.6602	1.2177	2.1847	12.4890	0.0486
	visitatio_rate:Year2017	-1.8267	5.8655	-0.3114	9.8126	0.7620
	visitatio_rate:Year2018	5.7116	61.5963	0.0927	8.8272	0.9282
	visitatio_rate:Year2019	0.6580	3.9406	0.1670	9.0199	0.8711
Salvia rosmarinus	(Intercept)	2.4091	0.3598	6.6965	4.5470	0.0016
	visitatio_rate	0.4636	0.8756	0.5295	3.6504	0.6270
	Year2016	-0.4705	0.9380	-0.5016	5.6813	0.6348
	Year2017	0.5909	0.9240	0.6395	5.4384	0.5485
	visitatio_rate:Year2016	9.5921	21.2012	0.4524	2.6341	0.6856
	visitatio_rate:Year2017	-0.4636	1.2927	-0.3586	3.0544	0.7432
Teucrium fruticans	(Intercept)	4.4947	2.4094	1.8655	1.2354	0.2750
	visitatio_rate	0.0184	2.6085	0.0071	3.0000	0.9948
	Year2017	0.1986	1.0684	0.1858	3.0447	0.8643
	Year2018	-3.6500	1.5850	-2.3028	3.1286	0.1011
	Year2019	-4.1209	2.5557	-1.6125	3.0496	0.2038
	visitatio_rate:Year2017	-5.2403	2.8188	-1.8590	3.0127	0.1596
	visitatio_rate:Year2018	0.5354	2.7613	0.1939	3.0000	0.8587



Predicted values of Seeds



Cistus monspeliensis - *Halimium halimifolium* - *Teucrium fruticans* Could not compute variance-covariance matrix of predictions. No confidence intervals are returned.

se prueban modelos con year like random slope

Hay especies que dan problema porque hay menos observaciones que random effect. El error dice: the random-effects parameters and the residual variance (or scale parameter) are probably unidentifiable. Las especies que dan problema y habria que eliminar son: Halimium calycinum, Lavandula pedunculata, Lavandula stoechas, Salvia rosmarinus

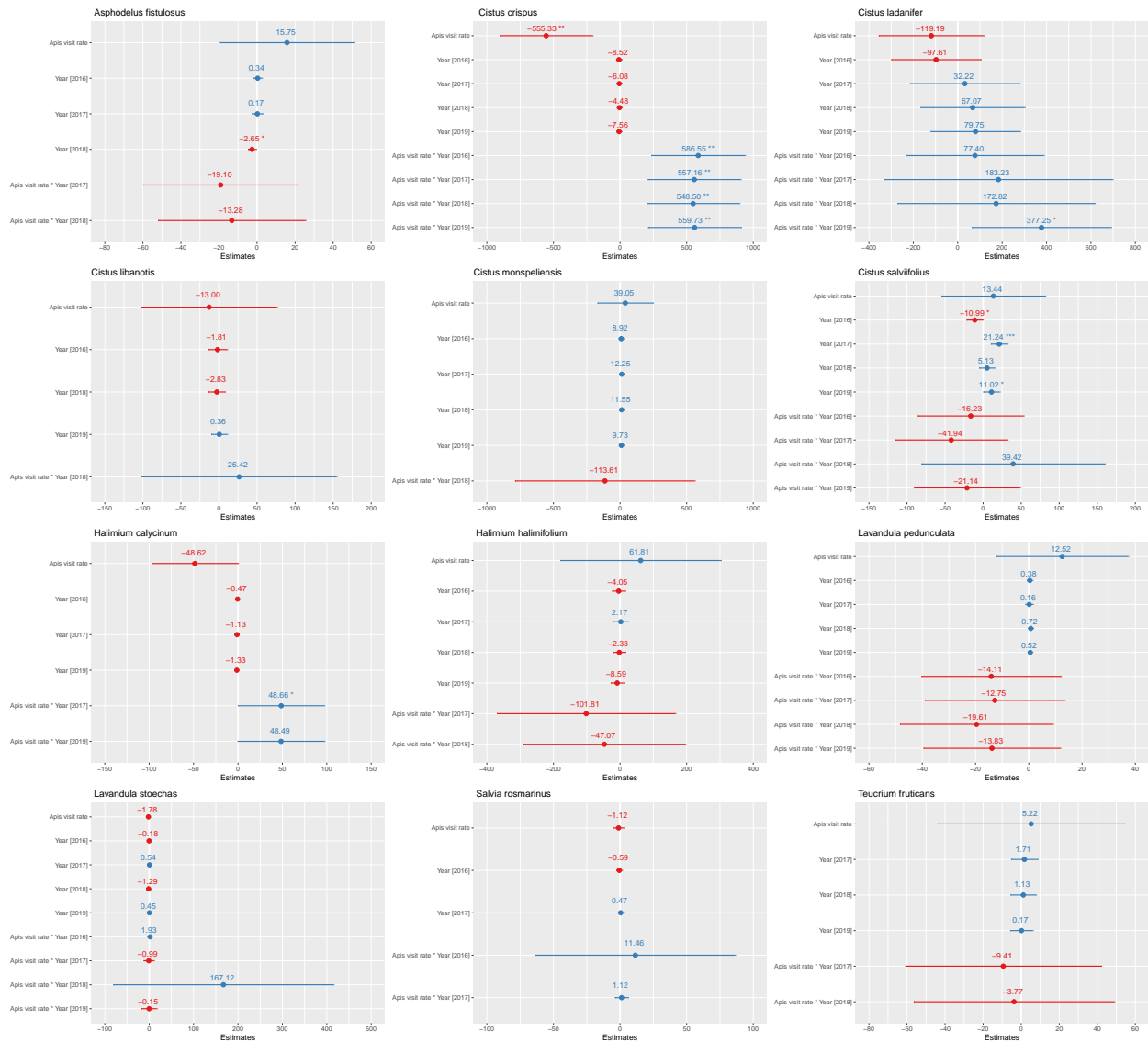
Visitation rate of *Apis mellifera*

A- linear model: $\text{lm}(\text{Seeds} \sim \text{Apis_visitation_rate} * \text{Year})$

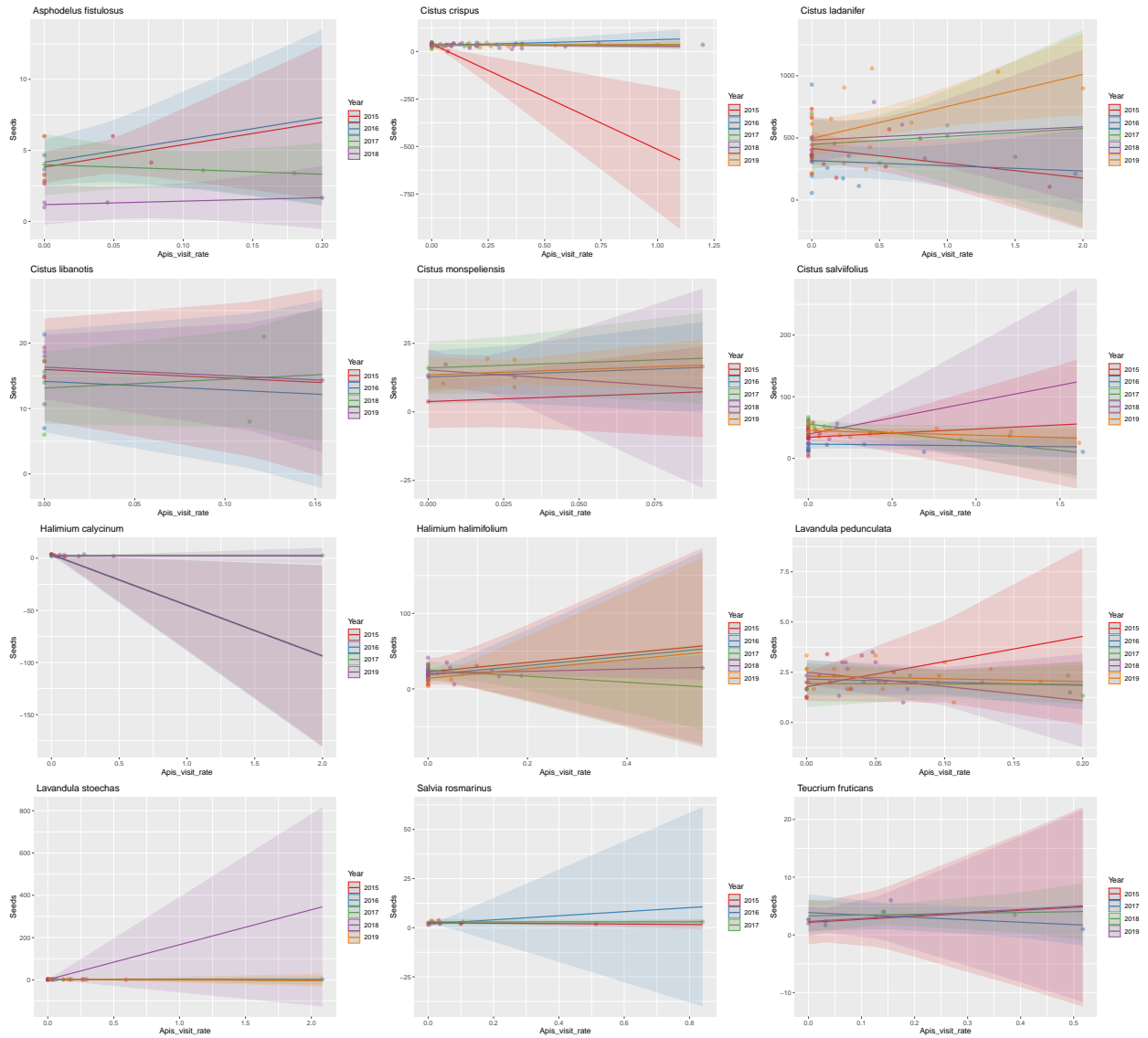
Plant_gen_sp	term	estimate	std.error	statistic	p.value
Asphodelus fistulosus	(Intercept)	3.8273	0.5694	6.7221	0.0001
	Apis_visit_rate	15.7463	15.2568	1.0321	0.3322
	Year2016	0.3394	0.9936	0.3416	0.7414
	Year2017	0.1682	1.2390	0.1358	0.8954
	Year2018	-2.6454	0.9168	-2.8854	0.0203
	Apis_visit_rate:Year2016	NA	NA	NA	NA
	Apis_visit_rate:Year2017	-19.0982	17.6830	-1.0800	0.3116
	Apis_visit_rate:Year2018	-13.2775	16.7892	-0.7908	0.4518
Cistus crispus	(Intercept)	39.6667	8.7961	4.5096	0.0000
	Apis_visit_rate	-555.3333	174.1544	-3.1887	0.0023
	Year2016	-8.5152	10.6085	-0.8027	0.4253
	Year2017	-6.0848	9.2676	-0.6566	0.5140
	Year2018	-4.4811	8.9873	-0.4986	0.6199
	Year2019	-7.5646	9.2756	-0.8155	0.4180
	Apis_visit_rate:Year2016	586.5455	176.1622	3.3296	0.0015
	Apis_visit_rate:Year2017	557.1637	174.4096	3.1946	0.0022
	Apis_visit_rate:Year2018	548.4972	174.2577	3.1476	0.0026
	Apis_visit_rate:Year2019	559.7335	174.5965	3.2059	0.0022
Cistus ladanifer	(Intercept)	415.2976	65.6378	6.3271	0.0000
	Apis_visit_rate	-119.1852	117.3575	-1.0156	0.3155
	Year2016	-97.6095	100.0209	-0.9759	0.3346
	Year2017	32.2183	122.6075	0.2628	0.7940
	Year2018	67.0749	116.2705	0.5769	0.5670
	Year2019	79.7496	99.9538	0.7979	0.4293
	Apis_visit_rate:Year2016	77.4003	154.0432	0.5025	0.6179
	Apis_visit_rate:Year2017	183.2328	255.4395	0.7173	0.4771
	Apis_visit_rate:Year2018	172.8179	220.5422	0.7836	0.4376
	Apis_visit_rate:Year2019	377.2498	155.4458	2.4269	0.0195
Cistus libanotis	(Intercept)	15.9750	3.9732	4.0207	0.0024
	Apis_visit_rate	-13.0000	40.0094	-0.3249	0.7519
	Year2016	-1.8083	5.6190	-0.3218	0.7542
	Year2018	-2.8344	4.8657	-0.5825	0.5731
	Year2019	0.3583	4.7012	0.0762	0.9407
	Apis_visit_rate:Year2016	NA	NA	NA	NA
	Apis_visit_rate:Year2018	26.4169	57.5255	0.4592	0.6559
	Apis_visit_rate:Year2019	NA	NA	NA	NA
Cistus monspeliensis	(Intercept)	3.7500	4.9555	0.7567	0.4913
	Apis_visit_rate	39.0469	75.1836	0.5194	0.6309
	Year2016	8.9167	7.0081	1.2723	0.2722
	Year2017	12.2500	7.0081	1.7480	0.1554
	Year2018	11.5506	6.3071	1.8314	0.1410
	Year2019	9.7350	6.0173	1.6178	0.1810
	Apis_visit_rate:Year2016	NA	NA	NA	NA
	Apis_visit_rate:Year2017	NA	NA	NA	NA
	Apis_visit_rate:Year2018	-113.6144	242.9740	-0.4676	0.6644
	Apis_visit_rate:Year2019	NA	NA	NA	NA
Cistus salviifolius	(Intercept)	34.1076	3.5748	9.5412	0.0000
	Apis_visit_rate	13.4376	34.0646	0.3945	0.6947
	Year2016	-10.9895	5.3082	-2.0703	0.0430

Halimium calycinum	Year2017	21.2372	5.5108	3.8537	0.0003
	Year2018	5.1267	5.1958	0.9867	0.3280
	Year2019	11.0185	5.3629	2.0546	0.0446
	Apis_visit_rate:Year2016	-16.2319	34.6835	-0.4680	0.6416
	Apis_visit_rate:Year2017	-41.9374	37.0162	-1.1329	0.2621
	Apis_visit_rate:Year2018	39.4151	60.1279	0.6555	0.5148
	Apis_visit_rate:Year2019	-21.1435	34.7113	-0.6091	0.5449
	(Intercept)	3.7172	0.5798	6.4118	0.0000
	Apis_visit_rate	-48.6195	22.3167	-2.1786	0.0500
	Year2016	-0.4672	0.8448	-0.5531	0.5904
	Year2017	-1.1339	0.8448	-1.3423	0.2044
	Year2019	-1.3338	0.7018	-1.9005	0.0816
	Apis_visit_rate:Year2016	NA	NA	NA	NA
	Apis_visit_rate:Year2017	48.6612	22.3231	2.1799	0.0499
Halimium halimifolium	Apis_visit_rate:Year2019	48.4935	22.4183	2.1631	0.0514
	(Intercept)	22.6667	8.8637	2.5573	0.0148
	Apis_visit_rate	61.8125	118.8963	0.5199	0.6062
	Year2016	-4.0500	9.7097	-0.4171	0.6790
	Year2017	2.1667	10.8557	0.1996	0.8429
	Year2018	-2.3280	9.0568	-0.2570	0.7986
	Year2019	-8.5919	9.4363	-0.9105	0.3684
	Apis_visit_rate:Year2016	NA	NA	NA	NA
	Apis_visit_rate:Year2017	-101.8125	132.2438	-0.7699	0.4463
	Apis_visit_rate:Year2018	-47.0671	119.9468	-0.3924	0.6970
	Apis_visit_rate:Year2019	NA	NA	NA	NA
	(Intercept)	1.7822	0.3630	4.9094	0.0000
	Apis_visit_rate	12.5191	12.2698	1.0203	0.3139
	Year2016	0.3815	0.5384	0.7086	0.4828
Lavandula pedunculata	Year2017	0.1617	0.7002	0.2309	0.8186
	Year2018	0.7230	0.4780	1.5126	0.1384
	Year2019	0.5233	0.4367	1.1984	0.2380
	Apis_visit_rate:Year2016	-14.1129	12.9348	-1.0911	0.2819
	Apis_visit_rate:Year2017	-12.7535	12.9666	-0.9836	0.3314
	Apis_visit_rate:Year2018	-19.6093	14.2045	-1.3805	0.1753
	Apis_visit_rate:Year2019	-13.8328	12.6951	-1.0896	0.2826
	(Intercept)	2.2920	0.3528	6.4959	0.0000
	Apis_visit_rate	-1.7841	1.3790	-1.2938	0.2167
	Year2016	-0.1817	0.4821	-0.3769	0.7119
	Year2017	0.5413	0.6441	0.8405	0.4148
	Year2018	-1.2920	0.6441	-2.0061	0.0646
	Year2019	0.4487	0.9404	0.4772	0.6406
	Apis_visit_rate:Year2016	1.9310	1.4392	1.3417	0.2011
Lavandula stoechas	Apis_visit_rate:Year2017	-0.9937	5.3649	-0.1852	0.8557
	Apis_visit_rate:Year2018	167.1174	115.7284	1.4440	0.1707
	Apis_visit_rate:Year2019	-0.1534	7.9938	-0.0192	0.9850
	(Intercept)	2.5343	0.2784	9.1041	0.0000
	Apis_visit_rate	-1.1206	1.5582	-0.7191	0.4954
	Year2016	-0.5904	0.8956	-0.6592	0.5308
	Year2017	0.4657	0.8779	0.5305	0.6122
	Apis_visit_rate:Year2016	11.4610	31.6739	0.3618	0.7281
	Apis_visit_rate:Year2017	1.1206	2.0885	0.5365	0.6082
	(Intercept)	2.1638	1.9421	1.1142	0.3276
	Apis_visit_rate	5.2222	17.7888	0.2936	0.7837
	Year2017	1.7090	2.5314	0.6751	0.5366
	Year2018				
	Year2019				
Salvia rosmarinus	Year2016				
	Year2017				
	Year2018				
	Year2019				
	Apis_visit_rate:Year2016				
	Apis_visit_rate:Year2017				
	Apis_visit_rate:Year2018				
	Apis_visit_rate:Year2019				
	(Intercept)				
	Apis_visit_rate				
	Year2016				
	Year2017				
	Year2018				
	Year2019				
Teucrium fruticans	Apis_visit_rate:Year2016				
	Apis_visit_rate:Year2017				
	Apis_visit_rate:Year2018				
	Apis_visit_rate:Year2019				
	(Intercept)				
	Apis_visit_rate				
	Year2016				
	Year2017				
	Year2018				
	Year2019				
	Apis_visit_rate:Year2016				
	Apis_visit_rate:Year2017				
	Apis_visit_rate:Year2018				
	Apis_visit_rate:Year2019				

Year2018	1.1339	2.4229	0.4680	0.6641
Year2019	0.1696	2.1485	0.0789	0.9409
Apis_visit_rate:Year2017	-9.4119	18.5328	-0.5079	0.6383
Apis_visit_rate:Year2018	-3.7711	18.9815	-0.1987	0.8522
Apis_visit_rate:Year2019	NA	NA	NA	NA



Predicted values of Seeds



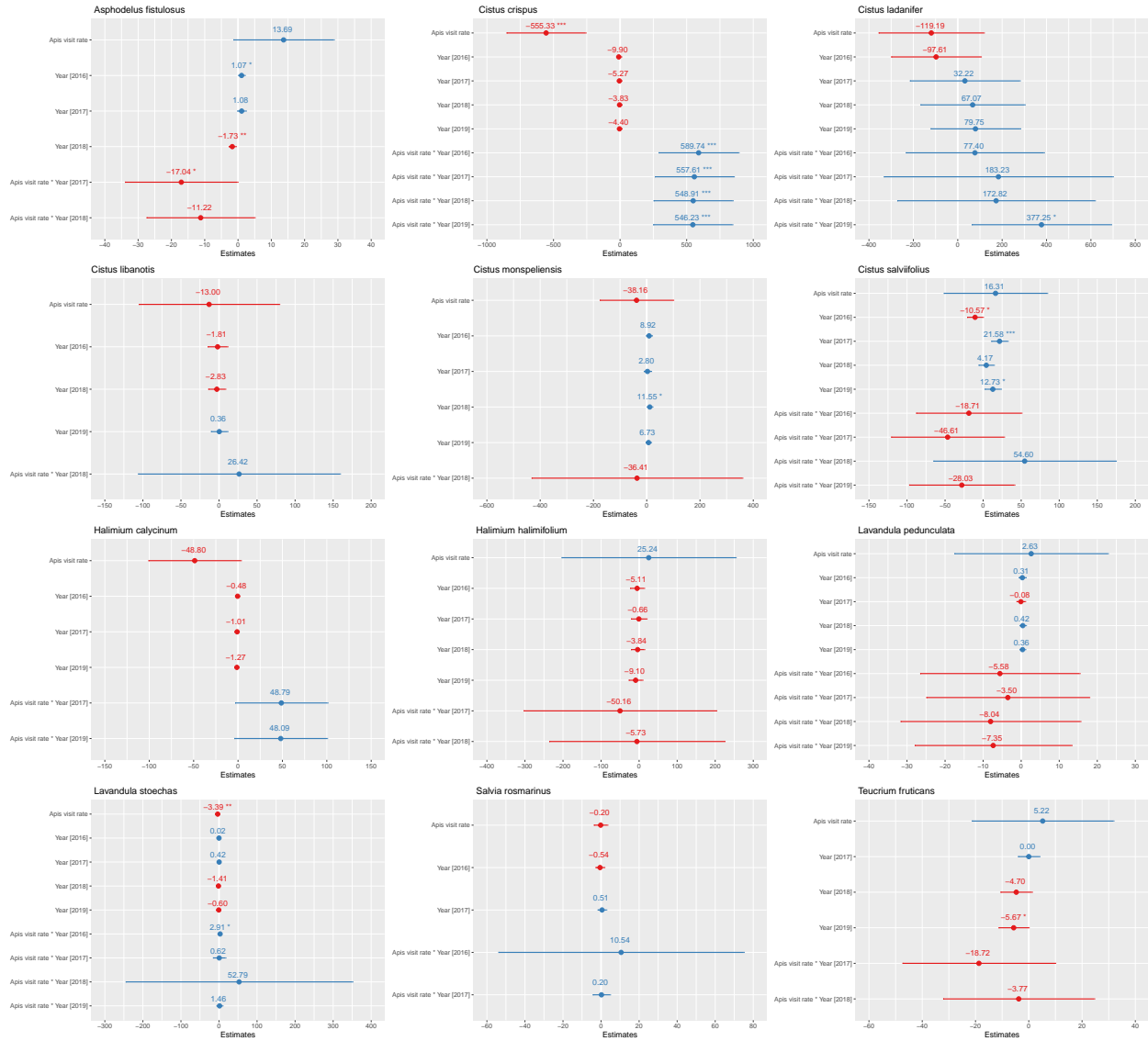
Asphodelus fistulosus - *Cistus libanotis*- *Cistus monspeliensis* - *Halimium calycinum* - *Halimium halimifolium*
- *Teucrium fruticans*

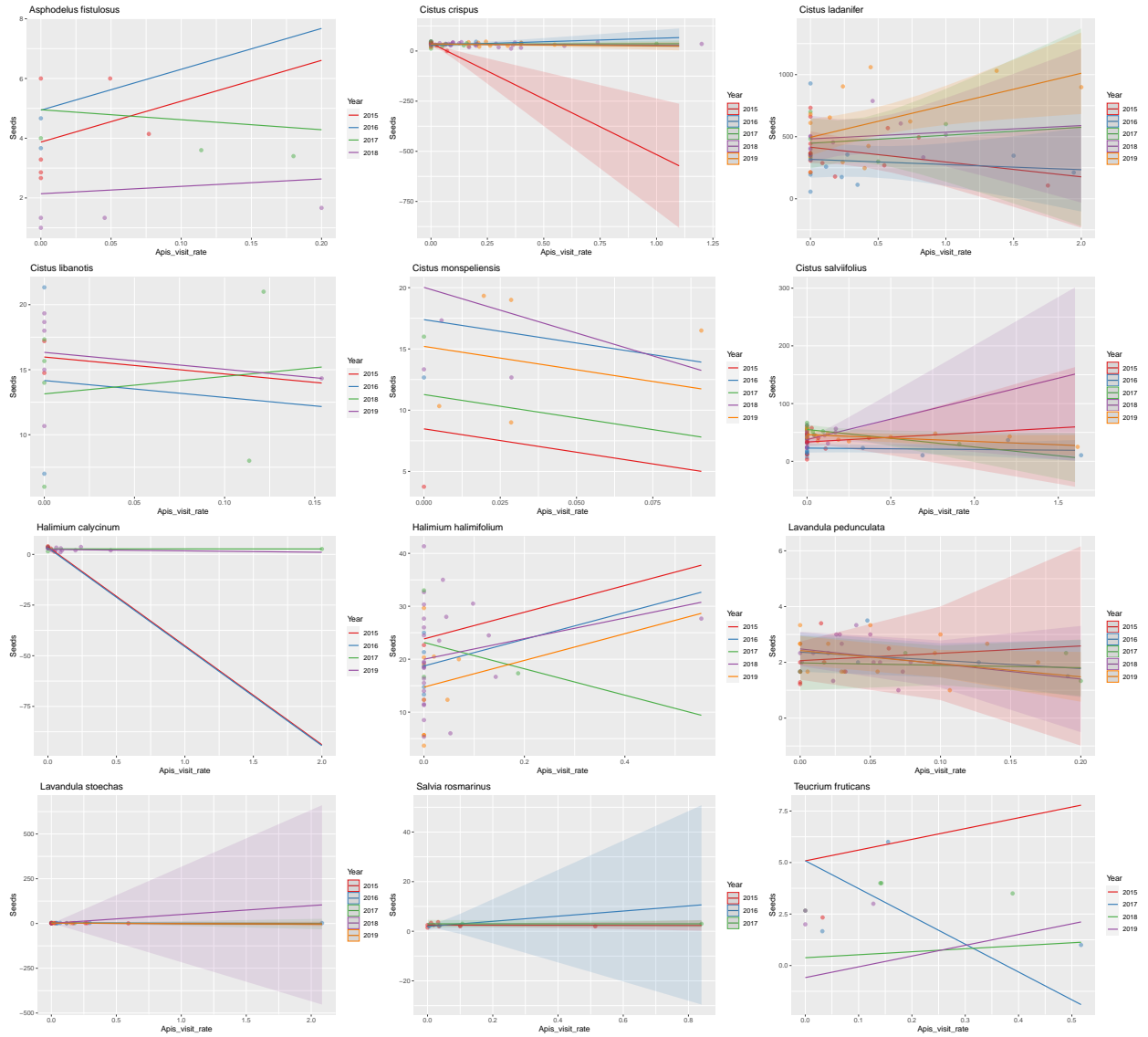
Warning message: In predict.lm(model, newdata = fitfram, type = "response", se.fit = se,; prediction from a rank-deficient fit may be misleading

B- linear mixed model with site ID like random factor

Plant_gen_sp	term	estimate	std.error	statistic	df	p.value
Asphodelus fistulosus	(Intercept)	3.8706	0.9095	4.2560	2.0820	0.0475
	Apis_visit_rate	13.6859	6.1702	2.2181	6.1655	0.0672
	Year2016	1.0688	0.3990	2.6785	6.1539	0.0357
	Year2017	1.0842	0.5295	2.0477	6.1976	0.0850
	Year2018	-1.7294	0.4428	-3.9059	6.2724	0.0073
	Apis_visit_rate:Year2017	-17.0378	6.9117	-2.4651	6.1366	0.0479
Cistus crispus	Apis_visit_rate:Year2018	-11.2172	6.6356	-1.6904	6.1462	0.1407
	(Intercept)	38.8586	8.0001	4.8573	58.2516	0.0000
	Apis_visit_rate	-555.3333	148.1665	-3.7480	51.3009	0.0005
	Year2016	-9.9043	9.6621	-1.0251	55.6819	0.3098
	Year2017	-5.2727	8.2762	-0.6371	54.4434	0.5267
	Year2018	-3.8330	7.9840	-0.4801	54.2420	0.6331
	Year2019	-4.3982	8.3436	-0.5271	54.9361	0.6002
	Apis_visit_rate:Year2016	589.7431	150.1557	3.9275	51.4465	0.0003
	Apis_visit_rate:Year2017	557.6061	148.4019	3.7574	51.3096	0.0004
	Apis_visit_rate:Year2018	548.9069	148.2735	3.7020	51.3122	0.0005
Cistus ladanifer	Apis_visit_rate:Year2019	546.2252	148.6102	3.6756	51.3362	0.0006
	(Intercept)	415.2976	65.6378	6.3271	43.0000	0.0000
	Apis_visit_rate	-119.1852	117.3575	-1.0156	43.0000	0.3155
	Year2016	-97.6095	100.0209	-0.9759	43.0000	0.3346
	Year2017	32.2183	122.6075	0.2628	43.0000	0.7940
	Year2018	67.0749	116.2705	0.5769	43.0000	0.5670
	Year2019	79.7496	99.9538	0.7979	43.0000	0.4293
	Apis_visit_rate:Year2016	77.4003	154.0432	0.5025	43.0000	0.6179
	Apis_visit_rate:Year2017	183.2328	255.4395	0.7173	43.0000	0.4771
	Apis_visit_rate:Year2018	172.8179	220.5422	0.7836	43.0000	0.4376
Cistus libanotis	Apis_visit_rate:Year2019	377.2498	155.4458	2.4269	43.0000	0.0195
	(Intercept)	15.9750	3.9732	4.0207	10.0000	0.0024
	Apis_visit_rate	-13.0000	40.0094	-0.3249	10.0000	0.7519
	Year2016	-1.8083	5.6190	-0.3218	10.0000	0.7542
	Year2018	-2.8344	4.8657	-0.5825	10.0000	0.5731
	Year2019	0.3583	4.7012	0.0762	10.0000	0.9407
	Apis_visit_rate:Year2018	26.4169	57.5255	0.4592	10.0000	0.6559
Cistus monspeliensis	(Intercept)	8.4750	5.2487	1.6147	1.2873	0.3100
	Apis_visit_rate	-38.1589	32.0586	-1.1903	3.0568	0.3181
	Year2016	8.9167	2.6146	3.4103	3.0000	0.0421
	Year2017	2.8000	3.2321	0.8663	3.0838	0.4485
	Year2018	11.5506	2.3531	4.9087	3.0000	0.0162
	Year2019	6.7310	2.3248	2.8953	3.0164	0.0623
Cistus salviifolius	Apis_visit_rate:Year2018	-36.4086	91.9691	-0.3959	3.0069	0.7186
	(Intercept)	33.4495	3.7216	8.9879	40.7337	0.0000
	Apis_visit_rate	16.3109	33.8802	0.4814	55.9618	0.6321
	Year2016	-10.5737	5.2049	-2.0315	55.3668	0.0470
	Year2017	21.5794	5.4086	3.9898	55.2789	0.0002
	Year2018	4.1731	5.0165	0.8319	51.4967	0.4093
	Year2019	12.7334	5.2856	2.4091	55.0825	0.0194
	Apis_visit_rate:Year2016	-18.7108	34.5330	-0.5418	55.9134	0.5901
	Apis_visit_rate:Year2017	-46.6144	37.0075	-1.2596	55.6563	0.2131
	Apis_visit_rate:Year2018	54.5988	59.7932	0.9131	55.8146	0.3651
	Apis_visit_rate:Year2019	-28.0345	34.5054	-0.8125	55.9899	0.4200

Halimium calycinum	(Intercept)	3.7219	0.6261	5.9448	5.4100	0.0015
	Apis_visit_rate	-48.8003	23.3665	-2.0885	7.5280	0.0724
	Year2016	-0.4790	0.8670	-0.5525	10.0793	0.5927
	Year2017	-1.0116	0.8774	-1.1530	9.1460	0.2781
	Year2019	-1.2721	0.7390	-1.7213	7.6775	0.1251
	Apis_visit_rate:Year2017	48.7881	23.3721	2.0875	7.5323	0.0724
	Apis_visit_rate:Year2019	48.0913	23.4776	2.0484	7.5516	0.0768
Halimium halimifolium	(Intercept)	23.8296	8.5606	2.7836	35.9897	0.0085
	Apis_visit_rate	25.2359	112.7090	0.2239	33.6974	0.8242
	Year2016	-5.1095	9.0852	-0.5624	32.3298	0.5777
	Year2017	-0.6604	10.1335	-0.0652	32.4353	0.9484
	Year2018	-3.8427	8.6600	-0.4437	34.2068	0.6600
	Year2019	-9.1034	8.8955	-1.0234	33.1109	0.3135
	Apis_visit_rate:Year2017	-50.1580	124.7605	-0.4020	33.2592	0.6902
	Apis_visit_rate:Year2018	-5.7279	113.4950	-0.0505	33.4586	0.9600
Lavandula pedunculata	(Intercept)	2.0606	0.3494	5.8976	33.3164	0.0000
	Apis_visit_rate	2.6327	9.9567	0.2644	34.4743	0.7930
	Year2016	0.3052	0.4538	0.6726	36.1260	0.5055
	Year2017	-0.0795	0.5610	-0.1418	35.5665	0.8881
	Year2018	0.4216	0.4197	1.0046	37.3479	0.3215
	Year2019	0.3637	0.3624	1.0035	35.6377	0.3224
	Apis_visit_rate:Year2016	-5.5819	10.3430	-0.5397	34.0668	0.5929
	Apis_visit_rate:Year2017	-3.5003	10.5677	-0.3312	35.6355	0.7424
	Apis_visit_rate:Year2018	-8.0384	11.6638	-0.6892	34.9308	0.4953
	Apis_visit_rate:Year2019	-7.3529	10.1747	-0.7227	34.1885	0.4748
Lavandula stoechas	(Intercept)	2.4091	0.4230	5.6958	6.5791	0.0009
	Apis_visit_rate	-3.3946	1.0290	-3.2989	11.8141	0.0065
	Year2016	0.0225	0.2653	0.0847	10.0656	0.9342
	Year2017	0.4242	1.0282	0.4126	4.9017	0.6973
	Year2018	-1.4091	1.0282	-1.3704	4.9017	0.2300
	Year2019	-0.6034	0.5525	-1.0921	10.2408	0.2998
	Apis_visit_rate:Year2016	2.9084	1.0508	2.7679	11.7702	0.0173
	Apis_visit_rate:Year2017	0.6168	7.5531	0.0817	5.0938	0.9380
	Apis_visit_rate:Year2018	52.7852	136.7640	0.3860	6.2951	0.7122
	Apis_visit_rate:Year2019	1.4570	3.6482	0.3994	9.3266	0.6986
Salvia rosmarinus	(Intercept)	2.4879	0.3227	7.7094	3.3726	0.0030
	Apis_visit_rate	-0.2045	1.3845	-0.1477	3.5449	0.8906
	Year2016	-0.5441	0.8992	-0.6050	6.1096	0.5669
	Year2017	0.5121	0.8882	0.5765	5.9103	0.5855
	Apis_visit_rate:Year2016	10.5449	25.0810	0.4204	2.1025	0.7133
	Apis_visit_rate:Year2017	0.2045	1.7688	0.1156	2.8783	0.9155
Teucrium fruticans	(Intercept)	5.0818	3.0910	1.6441	1.0969	0.3314
	Apis_visit_rate	5.2222	6.1795	0.8451	3.0000	0.4601
	Year2017	0.0034	0.9344	0.0037	3.0235	0.9973
	Year2018	-4.7021	1.3700	-3.4322	3.1279	0.0389
	Year2019	-5.6665	1.3136	-4.3137	3.1391	0.0209
	Apis_visit_rate:Year2017	-18.7166	6.6647	-2.8083	3.0138	0.0670
	Apis_visit_rate:Year2018	-3.7711	6.5938	-0.5719	3.0000	0.6074





Asphodelus fistulosus - *Cistus libanotis*- *Cistus monspeliensis* - *Halimium calycinum* - *Halimium halimifolium*
- *Teucrium fruticans*

Could not compute variance-covariance matrix of predictions. No confidence intervals are returned

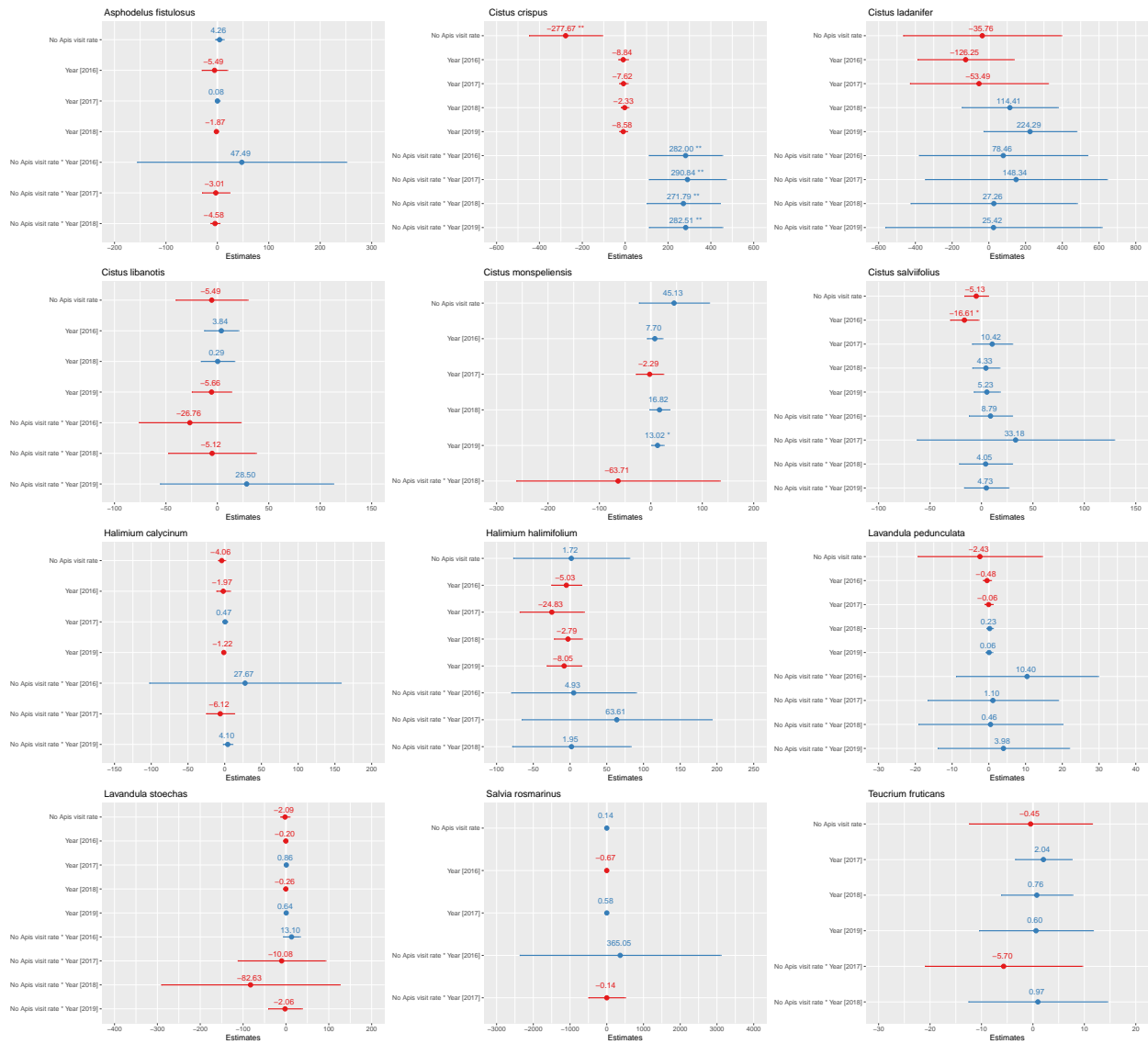
Visitation rate of pollinator without *Apis mellifera*

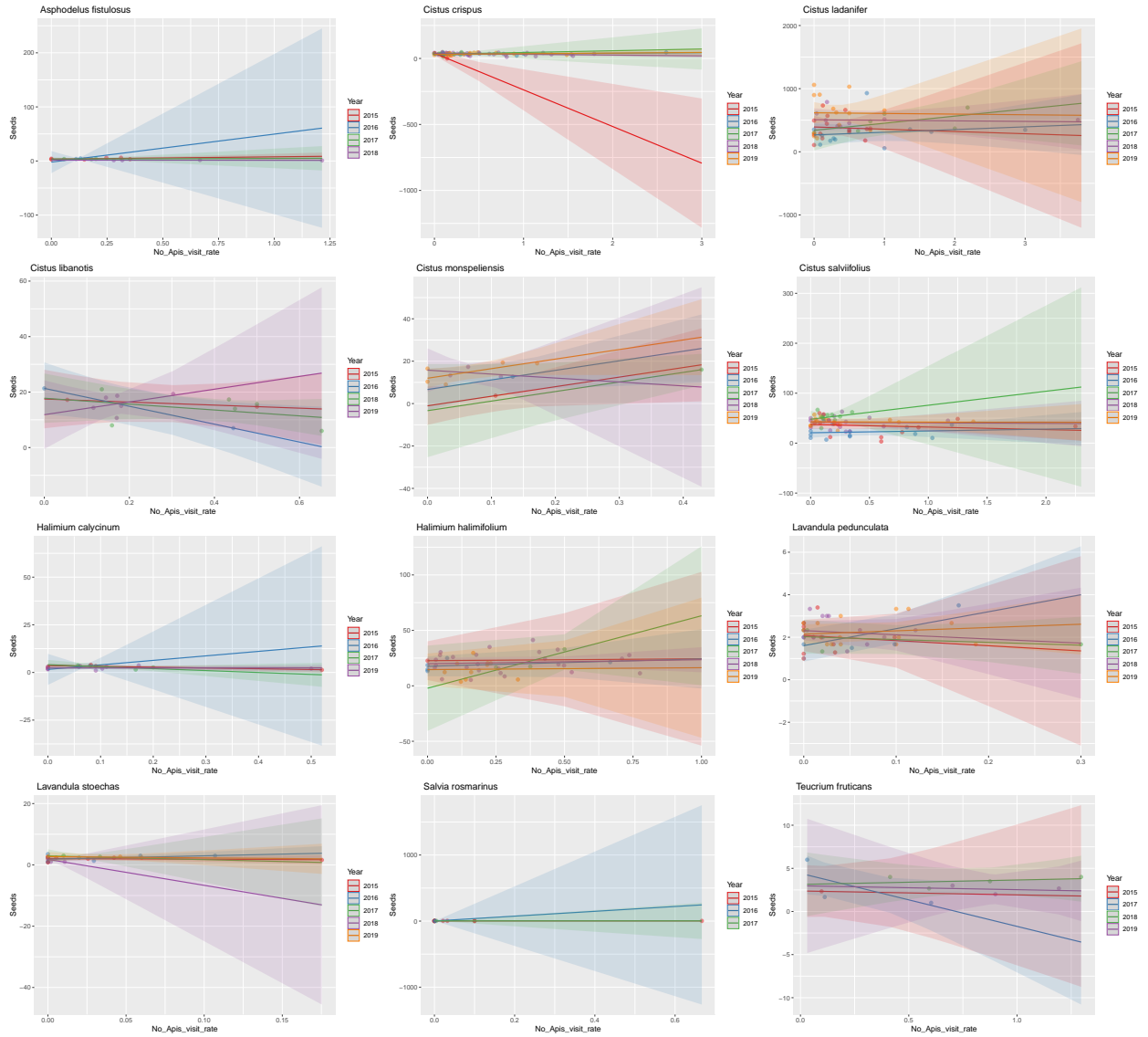
A- linear model: $\text{lm}(\text{Seeds} \sim \text{No_Apis_visitatio_rate} * \text{Year})$

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Asphodelus fistulosus	(Intercept)	3.4065	0.7723	4.4107	0.0031
	No_Apis_visit_rate	4.2556	3.4248	1.2426	0.2540
	Year2016	-5.4899	10.4467	-0.5255	0.6155
	Year2017	0.0792	1.8724	0.0423	0.9674
	Year2018	-1.8719	1.3730	-1.3634	0.2150
	No_Apis_visit_rate:Year2016	47.4944	86.0551	0.5519	0.5982
	No_Apis_visit_rate:Year2017	-3.0142	11.2729	-0.2674	0.7969
	No_Apis_visit_rate:Year2018	-4.5804	3.7663	-1.2162	0.2633
Cistus crispus	(Intercept)	39.6667	8.6201	4.6016	0.0000
	No_Apis_visit_rate	-277.6667	85.3347	-3.2539	0.0019
	Year2016	-8.8410	11.0975	-0.7967	0.4288
	Year2017	-7.6224	9.7491	-0.7819	0.4374
	Year2018	-2.3327	8.9190	-0.2615	0.7946
	Year2019	-8.5775	9.1011	-0.9425	0.3497
	No_Apis_visit_rate:Year2016	281.9994	85.4673	3.2995	0.0016
	No_Apis_visit_rate:Year2017	290.8369	89.7370	3.2410	0.0019
	No_Apis_visit_rate:Year2018	271.7929	85.3895	3.1830	0.0023
	No_Apis_visit_rate:Year2019	282.5128	85.5312	3.3030	0.0016
Cistus ladanifer	(Intercept)	393.0555	90.7845	4.3295	0.0001
	No_Apis_visit_rate	-35.7620	213.3241	-0.1676	0.8677
	Year2016	-126.2500	129.8955	-0.9719	0.3365
	Year2017	-53.4909	186.3032	-0.2871	0.7754
	Year2018	114.4141	129.6012	0.8828	0.3822
	Year2019	224.2908	125.5068	1.7871	0.0810
	No_Apis_visit_rate:Year2016	78.4626	227.2791	0.3452	0.7316
	No_Apis_visit_rate:Year2017	148.3396	245.4046	0.6045	0.5487
	No_Apis_visit_rate:Year2018	27.2566	224.4023	0.1215	0.9039
	No_Apis_visit_rate:Year2019	25.4234	292.1605	0.0870	0.9311
Cistus libanotis	(Intercept)	17.4970	5.3892	3.2467	0.0118
	No_Apis_visit_rate	-5.4939	15.1547	-0.3625	0.7264
	Year2016	3.8364	7.2028	0.5326	0.6088
	Year2018	0.2884	7.0482	0.0409	0.9684
	Year2019	-5.6591	8.3043	-0.6815	0.5148
	No_Apis_visit_rate:Year2016	-26.7561	21.4682	-1.2463	0.2479
	No_Apis_visit_rate:Year2018	-5.1178	18.4762	-0.2770	0.7888
	No_Apis_visit_rate:Year2019	28.4953	36.5041	0.7806	0.4575
Cistus monspeliensis	(Intercept)	-1.0511	4.6110	-0.2280	0.8309
	No_Apis_visit_rate	45.1302	24.5827	1.8359	0.1403
	Year2016	7.7004	5.4113	1.4230	0.2278
	Year2017	-2.2904	9.5694	-0.2393	0.8226
	Year2018	16.8190	6.9824	2.4088	0.0737
	Year2019	13.0173	4.2914	3.0334	0.0387
	No_Apis_visit_rate:Year2016	NA	NA	NA	NA
	No_Apis_visit_rate:Year2017	NA	NA	NA	NA
	No_Apis_visit_rate:Year2018	-63.7098	71.2423	-0.8943	0.4217
	No_Apis_visit_rate:Year2019	NA	NA	NA	NA
Cistus salviifolius	(Intercept)	37.3889	4.6036	8.1217	0.0000
	No_Apis_visit_rate	-5.1306	5.7543	-0.8916	0.3764
	Year2016	-16.6129	6.8632	-2.4206	0.0188

Halimium calycinum	Year2017	10.4164	9.7425	1.0692	0.2896
	Year2018	4.3263	6.5915	0.6563	0.5143
	Year2019	5.2261	6.3158	0.8275	0.4115
	No_Apis_visit_rate:Year2016	8.7896	10.4987	0.8372	0.4060
	No_Apis_visit_rate:Year2017	33.1780	47.8802	0.6929	0.4912
	No_Apis_visit_rate:Year2018	4.0486	12.8569	0.3149	0.7540
	No_Apis_visit_rate:Year2019	4.7310	10.7752	0.4391	0.6623
	(Intercept)	3.5845	0.5818	6.1613	0.0001
	No_Apis_visit_rate	-4.0619	2.1772	-1.8656	0.0890
	Year2016	-1.9734	4.1952	-0.4704	0.6473
Halimium halimifolium	Year2017	0.4651	1.4151	0.3287	0.7486
	Year2019	-1.2220	0.6767	-1.8057	0.0984
	No_Apis_visit_rate:Year2016	27.6730	59.2112	0.4674	0.6494
	No_Apis_visit_rate:Year2017	-6.1208	8.6610	-0.7067	0.4944
	No_Apis_visit_rate:Year2019	4.1019	2.9217	1.4039	0.1879
	(Intercept)	22.6667	8.9244	2.5398	0.0156
	No_Apis_visit_rate	1.7249	38.9628	0.0443	0.9649
	Year2016	-5.0326	10.0335	-0.5016	0.6190
	Year2017	-24.8333	21.5546	-1.1521	0.2569
	Year2018	-2.7901	9.3759	-0.2976	0.7677
Lavandula pedunculata	Year2019	-8.0527	11.5912	-0.6947	0.4917
	No_Apis_visit_rate:Year2016	4.9314	41.8562	0.1178	0.9069
	No_Apis_visit_rate:Year2017	63.6084	63.7712	0.9974	0.3252
	No_Apis_visit_rate:Year2018	1.9514	39.7303	0.0491	0.9611
	No_Apis_visit_rate:Year2019	NA	NA	NA	NA
	(Intercept)	2.0850	0.3752	5.5576	0.0000
	No_Apis_visit_rate	-2.4256	8.3585	-0.2902	0.7732
	Year2016	-0.4796	0.5363	-0.8943	0.3767
	Year2017	-0.0610	0.5532	-0.1103	0.9127
	Year2018	0.2270	0.4405	0.5153	0.6092
Lavandula stoechas	Year2019	0.0617	0.4429	0.1392	0.8900
	No_Apis_visit_rate:Year2016	10.4012	9.5603	1.0880	0.2833
	No_Apis_visit_rate:Year2017	1.1002	8.7850	0.1252	0.9010
	No_Apis_visit_rate:Year2018	0.4556	9.6996	0.0470	0.9628
	No_Apis_visit_rate:Year2019	3.9780	8.8535	0.4493	0.6557
	(Intercept)	2.0621	0.3172	6.5006	0.0000
	No_Apis_visit_rate	-2.0870	4.9229	-0.4239	0.6780
	Year2016	-0.2032	0.4853	-0.4187	0.6818
	Year2017	0.8613	1.1450	0.7522	0.4644
	Year2018	-0.2637	0.6859	-0.3845	0.7064
Salvia rosmarinus	Year2019	0.6403	0.8359	0.7661	0.4564
	No_Apis_visit_rate:Year2016	13.1009	9.1614	1.4300	0.1747
	No_Apis_visit_rate:Year2017	-10.0751	47.7303	-0.2111	0.8359
	No_Apis_visit_rate:Year2018	-82.6308	97.0567	-0.8514	0.4089
	No_Apis_visit_rate:Year2019	-2.0599	18.3536	-0.1122	0.9122
	(Intercept)	2.4191	0.2786	8.6835	0.0001
	No_Apis_visit_rate	0.1390	1.2244	0.1135	0.9128
	Year2016	-0.6670	1.4423	-0.4624	0.6578
	Year2017	0.5809	0.7969	0.7290	0.4897
	No_Apis_visit_rate:Year2016	365.0462	1156.7188	0.3156	0.7615
Teucrium fruticans	No_Apis_visit_rate:Year2017	-0.1390	211.1691	-0.0007	0.9995
	(Intercept)	2.3775	1.5613	1.5228	0.2025
	No_Apis_visit_rate	-0.4535	4.3044	-0.1054	0.9212
	Year2017	2.0416	1.9803	1.0310	0.3608

Year2018	0.7559	2.4954	0.3029	0.7771
Year2019	0.6006	3.9893	0.1506	0.8876
No_Apis_visit_rate:Year2017	-5.6960	5.5058	-1.0345	0.3593
No_Apis_visit_rate:Year2018	0.9674	4.8615	0.1990	0.8520
No_Apis_visit_rate:Year2019	NA	NA	NA	NA





Cistus monspeliensis - *Halimium halimifolium* - *Teucrium fruticans* Warning message: In predict.lm(model, newdata = fitfram, type = "response", se.fit = se, : prediction from a rank-deficient fit may be misleading

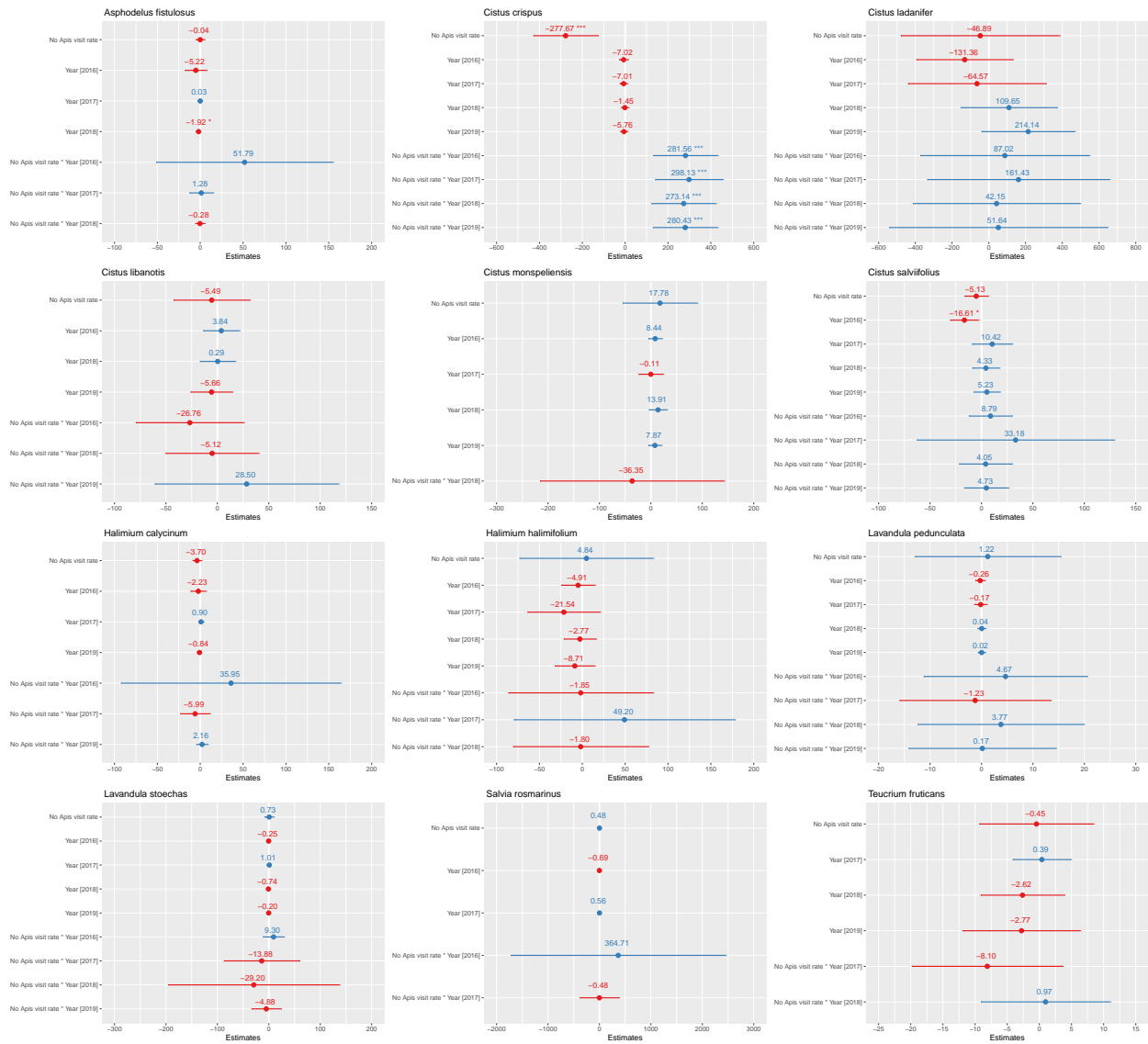
B- linear mixed model with site ID like random factor

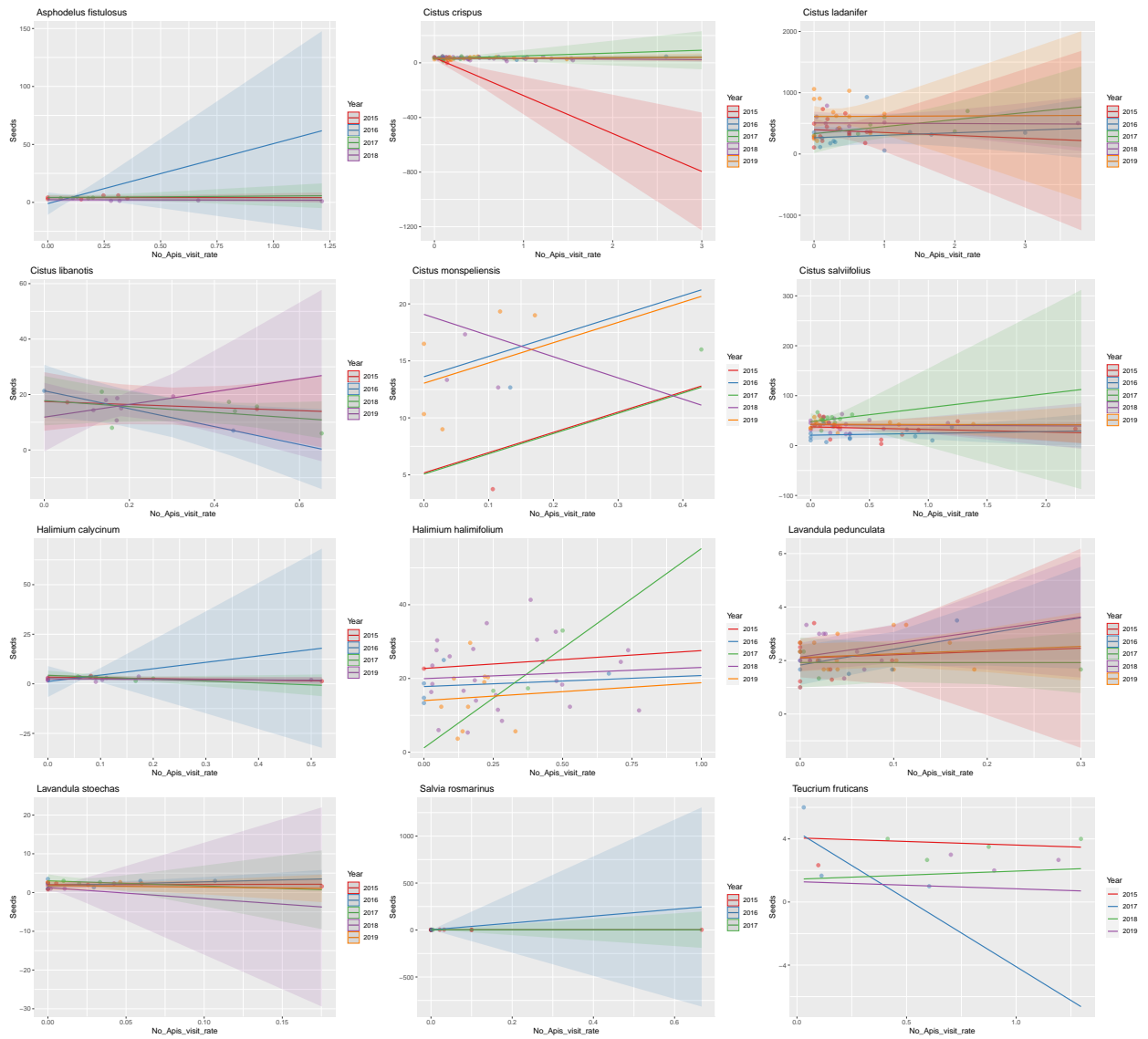
Warning messages:Some predictor variables are on very different scales: consider rescaling. The warning occurred in *Salvia rosmarinus*

Plant_gen_sp	term	estimate	std.error	statistic	df	p.value
<i>Asphodelus fistulosus</i>	(Intercept)	4.1658	0.9972	4.1774	2.4518	0.0367
	No_Apis_visit_rate	-0.0401	1.9637	-0.0204	5.2988	0.9845
	Year2016	-5.2241	4.8849	-1.0694	4.9833	0.3339
	Year2017	0.0346	0.8953	0.0387	5.0158	0.9706
	Year2018	-1.9165	0.6702	-2.8597	5.0446	0.0351
	No_Apis_visit_rate:Year2016	51.7901	40.1421	1.2902	4.9800	0.2536
	No_Apis_visit_rate:Year2017	1.2816	5.3792	0.2382	5.0216	0.8211
	No_Apis_visit_rate:Year2018	-0.2847	2.0953	-0.1359	5.2598	0.8970
<i>Cistus crispus</i>	(Intercept)	37.8390	8.0430	4.7046	58.4167	0.0000
	No_Apis_visit_rate	-277.6667	75.1335	-3.6956	51.6214	0.0005
	Year2016	-7.0197	10.3699	-0.6769	57.0931	0.5012
	Year2017	-7.0138	8.8877	-0.7892	54.7069	0.4334
	Year2018	-1.4484	8.3497	-0.1735	57.2102	0.8629
	Year2019	-5.7641	8.3690	-0.6887	55.4143	0.4939
	No_Apis_visit_rate:Year2016	281.5621	75.2621	3.7411	51.6366	0.0005
	No_Apis_visit_rate:Year2017	298.1328	79.1415	3.7671	51.8116	0.0004
	No_Apis_visit_rate:Year2018	273.1426	75.1962	3.6324	51.6496	0.0006
	No_Apis_visit_rate:Year2019	280.4338	75.3447	3.7220	51.6837	0.0005
<i>Cistus ladanifer</i>	(Intercept)	397.0391	91.5676	4.3360	37.4518	0.0001
	No_Apis_visit_rate	-46.8937	213.9252	-0.2192	42.4626	0.8275
	Year2016	-131.3644	129.9522	-1.0109	42.9655	0.3177
	Year2017	-64.5690	185.8381	-0.3474	42.6044	0.7300
	Year2018	109.6493	129.7100	0.8453	42.9618	0.4026
	Year2019	214.1432	125.5693	1.7054	42.9599	0.0953
	No_Apis_visit_rate:Year2016	87.0160	227.9782	0.3817	42.3616	0.7046
	No_Apis_visit_rate:Year2017	161.4350	246.0506	0.6561	42.5187	0.5153
	No_Apis_visit_rate:Year2018	42.1495	225.7647	0.1867	40.7446	0.8528
	No_Apis_visit_rate:Year2019	51.6448	294.3838	0.1754	39.4346	0.8616
<i>Cistus libanotis</i>	(Intercept)	17.4970	5.3892	3.2467	8.0000	0.0118
	No_Apis_visit_rate	-5.4939	15.1547	-0.3625	8.0000	0.7264
	Year2016	3.8364	7.2028	0.5326	8.0000	0.6088
	Year2018	0.2884	7.0482	0.0409	8.0000	0.9684
	Year2019	-5.6591	8.3043	-0.6815	8.0000	0.5148
	No_Apis_visit_rate:Year2016	-26.7561	21.4682	-1.2463	8.0000	0.2479
	No_Apis_visit_rate:Year2018	-5.1178	18.4762	-0.2770	8.0000	0.7888
	No_Apis_visit_rate:Year2019	28.4953	36.5041	0.7806	8.0000	0.4575
<i>Cistus monspeliensis</i>	(Intercept)	5.1733	4.8786	1.0604	2.4106	0.3835
	No_Apis_visit_rate	17.7753	16.8769	1.0532	3.2237	0.3647
	Year2016	8.4376	3.0878	2.7326	3.0049	0.0717
	Year2017	-0.1055	5.4940	-0.0192	3.0135	0.9859
	Year2018	13.9089	4.0961	3.3957	3.0432	0.0417
	Year2019	7.8680	3.0205	2.6048	3.2471	0.0738
	No_Apis_visit_rate:Year2018	-36.3549	41.6018	-0.8739	3.0370	0.4458
	(Intercept)	37.3889	4.6036	8.1217	56.0000	0.0000
<i>Cistus salviifolius</i>	No_Apis_visit_rate	-5.1306	5.7543	-0.8916	56.0000	0.3764
	Year2016	-16.6129	6.8632	-2.4206	56.0000	0.0188
	Year2017	10.4164	9.7425	1.0692	56.0000	0.2896
	Year2018	4.3263	6.5915	0.6563	56.0000	0.5143

Halimium calycinum	Year2019	5.2261	6.3158	0.8275	56.0000	0.4115
	No_Apis_visit_rate:Year2016	8.7896	10.4987	0.8372	56.0000	0.4060
	No_Apis_visit_rate:Year2017	33.1780	47.8802	0.6929	56.0000	0.4912
	No_Apis_visit_rate:Year2018	4.0486	12.8569	0.3149	56.0000	0.7540
	No_Apis_visit_rate:Year2019	4.7310	10.7752	0.4391	56.0000	0.6623
	(Intercept)	3.3956	0.6430	5.2812	7.3605	0.0010
	No_Apis_visit_rate	-3.7028	2.3163	-1.5986	7.3553	0.1519
	Year2016	-2.2293	3.9514	-0.5642	8.5339	0.5871
	Year2017	0.9030	1.3379	0.6749	9.7342	0.5154
	Year2019	-0.8393	0.6892	-1.2177	10.9569	0.2489
Halimium halimifolium	No_Apis_visit_rate:Year2016	35.9536	56.7016	0.6341	9.1775	0.5415
	No_Apis_visit_rate:Year2017	-5.9882	7.6525	-0.7825	7.3428	0.4584
	No_Apis_visit_rate:Year2019	2.1560	2.9576	0.7290	10.4747	0.4820
	(Intercept)	22.7178	8.7949	2.5831	35.3831	0.0141
	No_Apis_visit_rate	4.8385	38.3693	0.1261	35.2746	0.9004
	Year2016	-4.9087	9.6189	-0.5103	31.5665	0.6134
	Year2017	-21.5404	20.8342	-1.0339	32.9598	0.3087
	Year2018	-2.7675	9.2364	-0.2996	34.9235	0.7662
	Year2019	-8.7104	11.4375	-0.7616	35.1539	0.4514
	No_Apis_visit_rate:Year2016	-1.8511	41.4638	-0.0446	35.5566	0.9646
Lavandula pedunculata	No_Apis_visit_rate:Year2017	49.2048	63.4438	0.7756	35.7646	0.4431
	No_Apis_visit_rate:Year2018	-1.7998	38.7997	-0.0464	34.4775	0.9633
	(Intercept)	2.0936	0.3683	5.6845	33.3879	0.0000
	No_Apis_visit_rate	1.2230	6.9893	0.1750	34.2573	0.8621
	Year2016	-0.2611	0.4708	-0.5547	38.0464	0.5824
	Year2017	-0.1667	0.6053	-0.2754	18.7336	0.7860
	Year2018	0.0364	0.3974	0.0915	37.4902	0.9276
	Year2019	0.0198	0.3540	0.0559	33.2049	0.9557
	No_Apis_visit_rate:Year2016	4.6726	7.8449	0.5956	33.7622	0.5554
	No_Apis_visit_rate:Year2017	-1.2328	7.2453	-0.1702	35.8528	0.8658
Lavandula stoechas	No_Apis_visit_rate:Year2018	3.7699	7.9748	0.4727	33.9858	0.6394
	No_Apis_visit_rate:Year2019	0.1651	7.0692	0.0233	32.7239	0.9815
	(Intercept)	2.0038	0.3869	5.1793	8.5102	0.0007
	No_Apis_visit_rate	0.7347	4.1372	0.1776	11.5298	0.8621
	Year2016	-0.2514	0.5454	-0.4609	12.1777	0.6530
	Year2017	1.0118	0.9500	1.0650	13.7987	0.3052
	Year2018	-0.7445	0.6590	-1.1299	13.7063	0.2779
	Year2019	-0.1957	0.7730	-0.2532	13.9557	0.8038
	No_Apis_visit_rate:Year2016	9.2971	9.4967	0.9790	13.9120	0.3443
	No_Apis_visit_rate:Year2017	-13.8756	33.6983	-0.4118	9.0229	0.6901
Salvia rosmarinus	No_Apis_visit_rate:Year2018	-29.1991	76.4757	-0.3818	11.2951	0.7097
	No_Apis_visit_rate:Year2019	-4.8816	13.1015	-0.3726	9.2043	0.7179
	(Intercept)	2.4411	0.3257	7.4940	4.1242	0.0015
	No_Apis_visit_rate	0.4790	1.0414	0.4600	4.5014	0.6669
	Year2016	-0.6890	1.1927	-0.5777	6.6006	0.5827
	Year2017	0.5589	0.8416	0.6640	5.0610	0.5357
	No_Apis_visit_rate:Year2016	364.7062	813.1264	0.4485	3.1552	0.6828
	No_Apis_visit_rate:Year2017	-0.4790	148.4445	-0.0032	3.1552	0.9976
	(Intercept)	4.0643	1.9579	2.0759	1.3351	0.2332
	No_Apis_visit_rate	-0.4535	2.0665	-0.2195	3.0000	0.8404
Teucrium fruticans	Year2017	0.3911	1.0525	0.3716	3.0827	0.7343
	Year2018	-2.6178	1.5125	-1.7308	3.1668	0.1771
	Year2019	-2.7730	2.1261	-1.3043	3.0846	0.2809
	No_Apis_visit_rate:Year2017	-8.1016	2.7240	-2.9742	3.0262	0.0582

No_Apis_visit_rate:Year2018	0.9674	2.3339	0.4145	3.0000	0.7064
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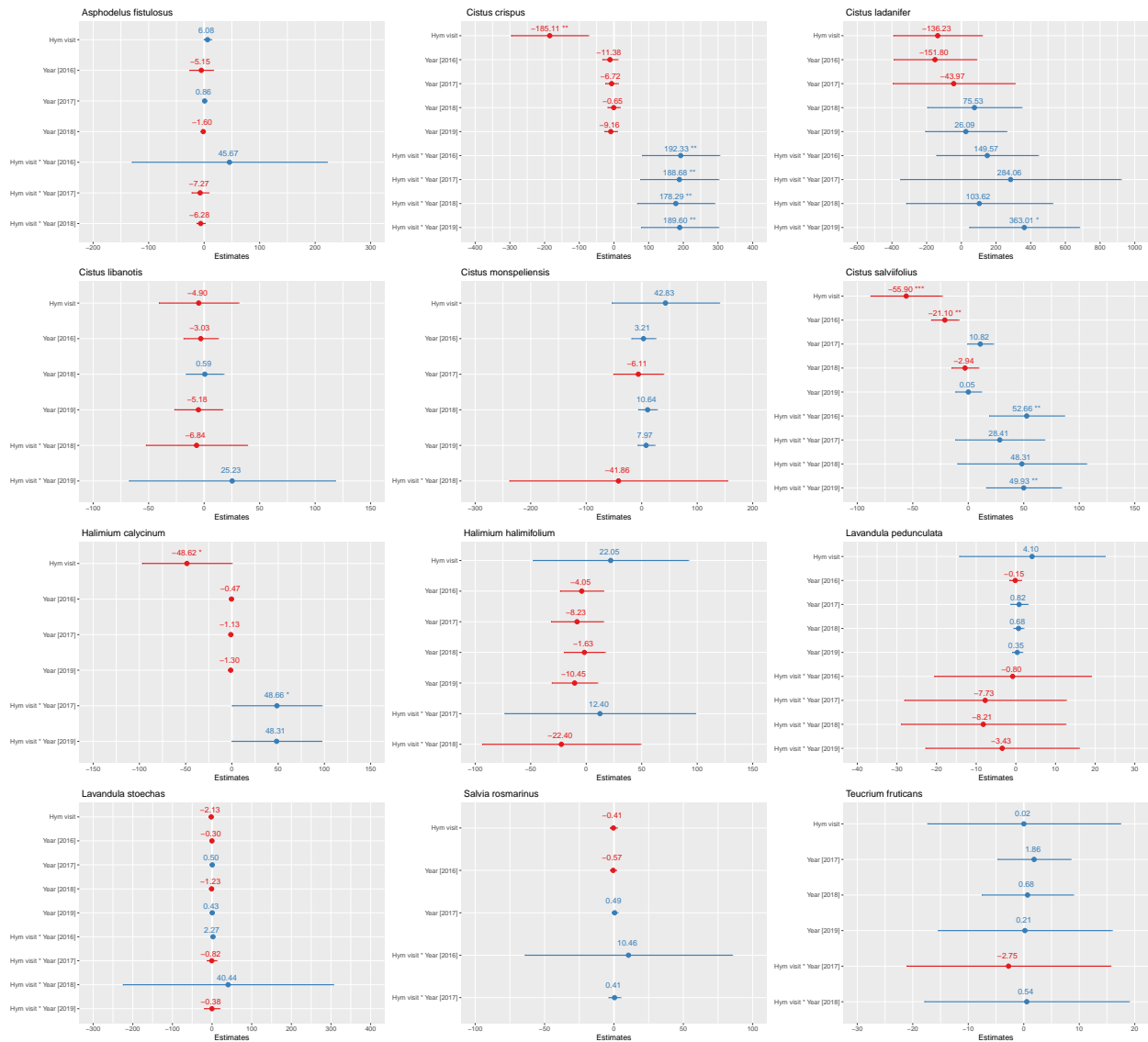
Visitation rate of hymenoptera

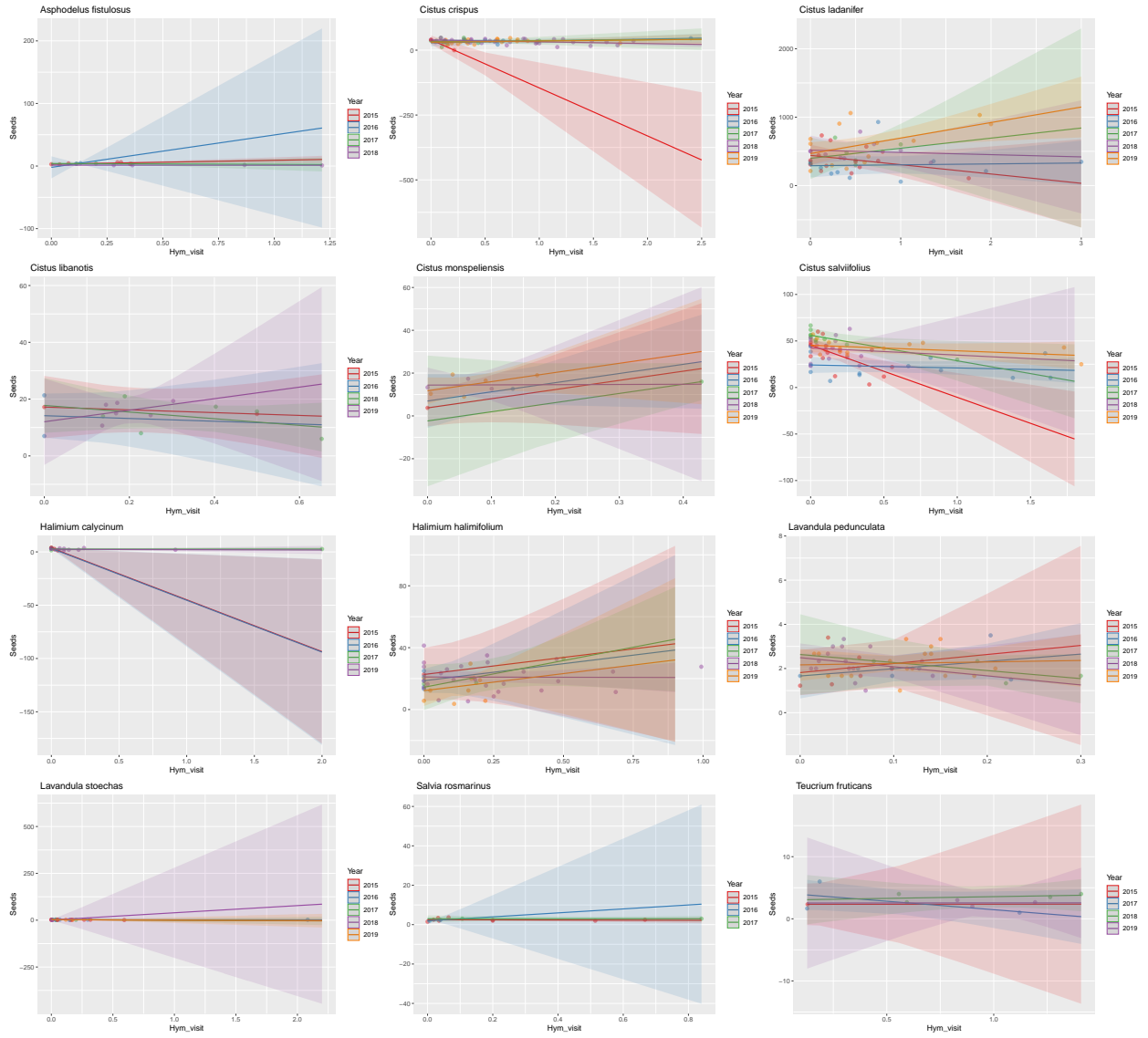
A- linear model: $\text{lm}(\text{Seeds} \sim \text{No_Apis_visitatio_rate} * \text{Year})$

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Asphodelus fistulosus	(Intercept)	3.0691	0.6615	4.6396	0.0024
	Hym_visit	6.0776	2.8766	2.1128	0.0725
	Year2016	-5.1525	9.0224	-0.5711	0.5858
	Year2017	0.8645	1.5663	0.5520	0.5981
	Year2018	-1.5998	1.2322	-1.2984	0.2353
	Hym_visit:Year2016	45.6724	74.3228	0.6145	0.5583
	Hym_visit:Year2017	-7.2655	6.4326	-1.1295	0.2959
	Hym_visit:Year2018	-6.2772	3.1700	-1.9802	0.0882
Cistus crispus	(Intercept)	39.6667	8.4189	4.7116	0.0000
	Hym_visit	-185.1111	55.5622	-3.3316	0.0015
	Year2016	-11.3814	10.9583	-1.0386	0.3032
	Year2017	-6.7215	9.0907	-0.7394	0.4626
	Year2018	-0.6480	8.7908	-0.0737	0.9415
	Year2019	-9.1615	9.0549	-1.0118	0.3157
	Hym_visit:Year2016	192.3306	55.8208	3.4455	0.0010
	Hym_visit:Year2017	188.6802	56.3566	3.3480	0.0014
	Hym_visit:Year2018	178.2879	55.6333	3.2047	0.0022
	Hym_visit:Year2019	189.5972	55.7995	3.3978	0.0012
Cistus ladanifer	(Intercept)	441.6417	79.6355	5.5458	0.0000
	Hym_visit	-136.2288	126.6794	-1.0754	0.2882
	Year2016	-151.7979	118.1623	-1.2847	0.2058
	Year2017	-43.9660	174.5155	-0.2519	0.8023
	Year2018	75.5293	134.8053	0.5603	0.5782
	Year2019	26.0926	115.9964	0.2249	0.8231
	Hym_visit:Year2016	149.5747	145.3036	1.0294	0.3090
	Hym_visit:Year2017	284.0601	315.3860	0.9007	0.3728
	Hym_visit:Year2018	103.6191	208.9495	0.4959	0.6225
	Hym_visit:Year2019	363.0065	157.2479	2.3085	0.0258
Cistus libanotis	(Intercept)	17.2000	5.6020	3.0703	0.0133
	Hym_visit	-4.9000	15.8448	-0.3092	0.7642
	Year2016	-3.0333	6.8610	-0.4421	0.6688
	Year2018	0.5929	7.4680	0.0794	0.9385
	Year2019	-5.1796	9.5642	-0.5416	0.6013
	Hym_visit:Year2016	NA	NA	NA	NA
	Hym_visit:Year2018	-6.8352	20.1501	-0.3392	0.7422
	Hym_visit:Year2019	25.2345	41.0296	0.6150	0.5538
Cistus monspeliensis	(Intercept)	3.7500	4.4159	0.8492	0.4436
	Hym_visit	42.8344	34.8828	1.2280	0.2868
	Year2016	3.2054	7.7866	0.4117	0.7017
	Year2017	-6.1076	16.2017	-0.3770	0.7253
	Year2018	10.6414	6.1062	1.7427	0.1563
	Year2019	7.9676	5.4624	1.4586	0.2184
	Hym_visit:Year2016	NA	NA	NA	NA
	Hym_visit:Year2017	NA	NA	NA	NA
	Hym_visit:Year2018	-41.8630	70.7121	-0.5920	0.5857
	Hym_visit:Year2019	NA	NA	NA	NA
Cistus salviifolius	(Intercept)	45.3340	4.2905	10.5661	0.0000
	Hym_visit	-55.9033	16.0472	-3.4837	0.0010
	Year2016	-21.1006	6.1599	-3.4255	0.0012

Halimium calycinum	Year2017	10.8185	5.8247	1.8574	0.0685
	Year2018	-2.9419	6.0628	-0.4852	0.6294
	Year2019	0.0530	5.8116	0.0091	0.9928
	Hym_visit:Year2016	52.6573	16.8780	3.1199	0.0029
	Hym_visit:Year2017	28.4084	20.0541	1.4166	0.1621
	Hym_visit:Year2018	48.3084	28.9729	1.6674	0.1010
	Hym_visit:Year2019	49.9319	16.8719	2.9595	0.0045
	(Intercept)	3.7172	0.5779	6.4324	0.0000
	Hym_visit	-48.6195	22.2452	-2.1856	0.0494
	Year2016	-0.4672	0.8421	-0.5549	0.5892
	Year2017	-1.1339	0.8421	-1.3466	0.2030
	Year2019	-1.2950	0.6687	-1.9366	0.0767
	Hym_visit:Year2016	NA	NA	NA	NA
	Hym_visit:Year2017	48.6612	22.2515	2.1869	0.0493
Halimium halimifolium	Hym_visit:Year2019	48.3141	22.2712	2.1694	0.0509
	(Intercept)	22.6667	8.7776	2.5823	0.0139
	Hym_visit	22.0461	34.5408	0.6383	0.5272
	Year2016	-4.0500	9.6153	-0.4212	0.6760
	Year2017	-8.2279	11.5947	-0.7096	0.4824
	Year2018	-1.6258	9.1052	-0.1786	0.8593
	Year2019	-10.4542	10.1341	-1.0316	0.3090
	Hym_visit:Year2016	NA	NA	NA	NA
	Hym_visit:Year2017	12.4029	42.3893	0.2926	0.7715
	Hym_visit:Year2018	-22.3966	35.2338	-0.6357	0.5289
	Hym_visit:Year2019	NA	NA	NA	NA
	(Intercept)	1.8146	0.5221	3.4756	0.0013
	Hym_visit	4.0965	9.0733	0.4515	0.6541
	Year2016	-0.1529	0.7365	-0.2076	0.8366
Lavandula pedunculata	Year2017	0.8188	1.0671	0.7673	0.4475
	Year2018	0.6762	0.6170	1.0960	0.2798
	Year2019	0.3491	0.6381	0.5470	0.5875
	Hym_visit:Year2016	-0.7980	9.7776	-0.0816	0.9354
	Hym_visit:Year2017	-7.7336	10.0757	-0.7675	0.4474
	Hym_visit:Year2018	-8.2124	10.2511	-0.8011	0.4279
	Hym_visit:Year2019	-3.4301	9.5659	-0.3586	0.7218
	(Intercept)	2.4100	0.4079	5.9080	0.0000
	Hym_visit	-2.1292	1.5177	-1.4029	0.1824
	Year2016	-0.2978	0.5346	-0.5570	0.5863
	Year2017	0.4959	0.7582	0.6540	0.5237
	Year2018	-1.2286	1.0491	-1.1711	0.2611
	Year2019	0.4267	1.1757	0.3629	0.7221
	Hym_visit:Year2016	2.2695	1.5783	1.4380	0.1724
Lavandula stoechas	Hym_visit:Year2017	-0.8201	5.6602	-0.1449	0.8869
	Hym_visit:Year2018	40.4378	123.7121	0.3269	0.7486
	Hym_visit:Year2019	-0.3761	9.0517	-0.0416	0.9674
	(Intercept)	2.5116	0.3234	7.7651	0.0001
	Hym_visit	-0.4070	1.0878	-0.3741	0.7194
	Year2016	-0.5731	0.9439	-0.6071	0.5630
	Year2017	0.4884	0.9135	0.5346	0.6095
	Hym_visit:Year2016	10.4627	31.5853	0.3313	0.7501
	Hym_visit:Year2017	0.4070	1.7943	0.2268	0.8270
	(Intercept)	2.3309	1.8898	1.2335	0.2849
	Hym_visit	0.0184	6.2583	0.0029	0.9978
	Year2017	1.8633	2.3695	0.7864	0.4756
	Year2018				
	Year2019				
Salvia rosmarinus	Year2017				
	Year2018				
	Year2019				
	Hym_visit:Year2016				
	Hym_visit:Year2017				
	Hym_visit:Year2018				
	Hym_visit:Year2019				
	(Intercept)				
	Hym_visit				
	Year2016				
	Year2017				
	Year2018				
	Year2019				
	Hym_visit:Year2016				
Teucrium fruticans	Hym_visit:Year2017				
	Hym_visit:Year2018				
	Hym_visit:Year2019				
	(Intercept)				
	Hym_visit				
	Year2016				
	Year2017				
	Year2018				
	Year2019				
	Hym_visit:Year2016				
	Hym_visit:Year2017				
	Hym_visit:Year2018				
	Hym_visit:Year2019				
	(Intercept)				

Year2018	0.6790	2.9669	0.2289	0.8302
Year2019	0.2067	5.6401	0.0366	0.9725
Hym_visit:Year2017	-2.7473	6.6224	-0.4149	0.6995
Hym_visit:Year2018	0.5380	6.6406	0.0810	0.9393
Hym_visit:Year2019	NA	NA	NA	NA

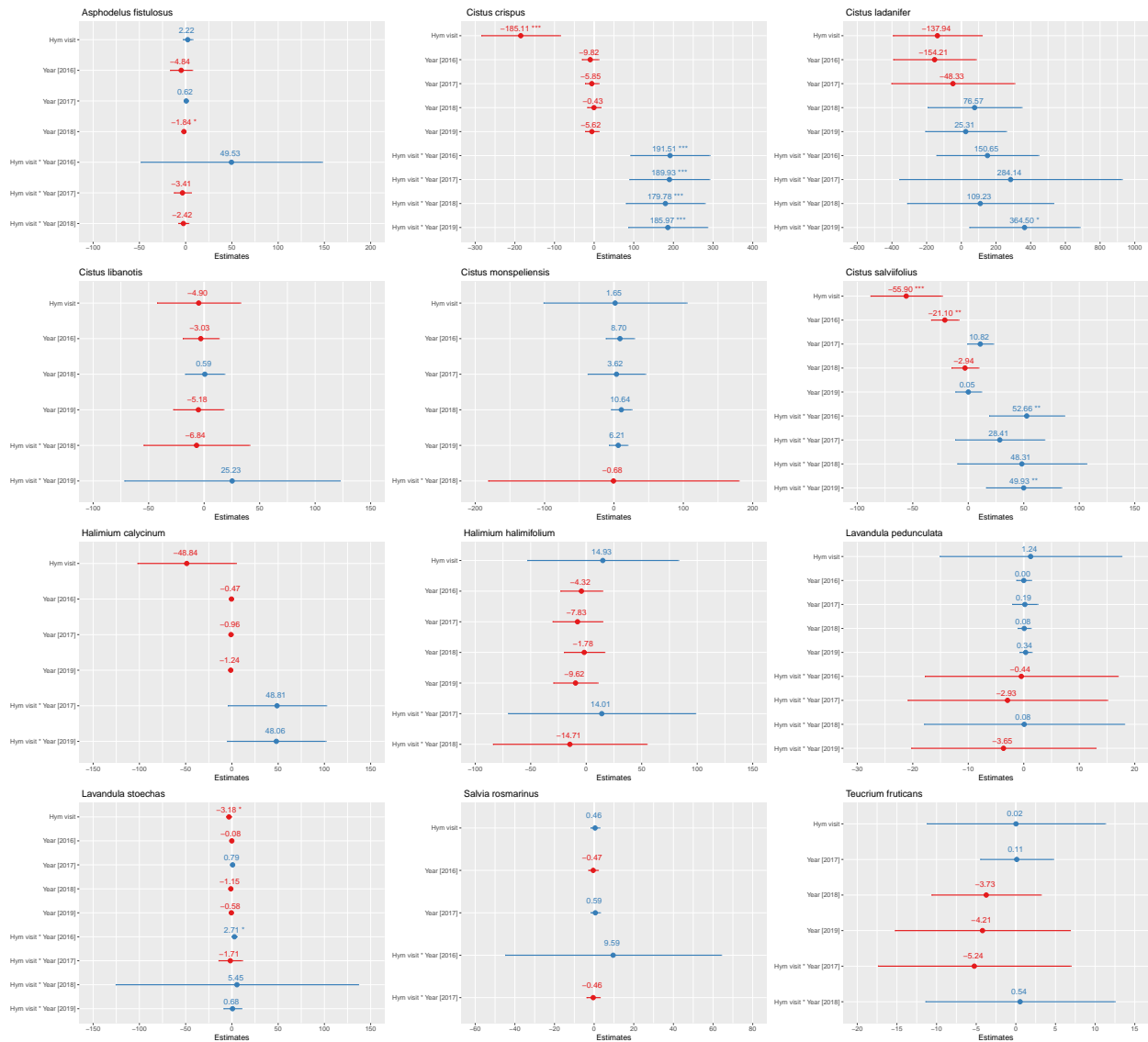


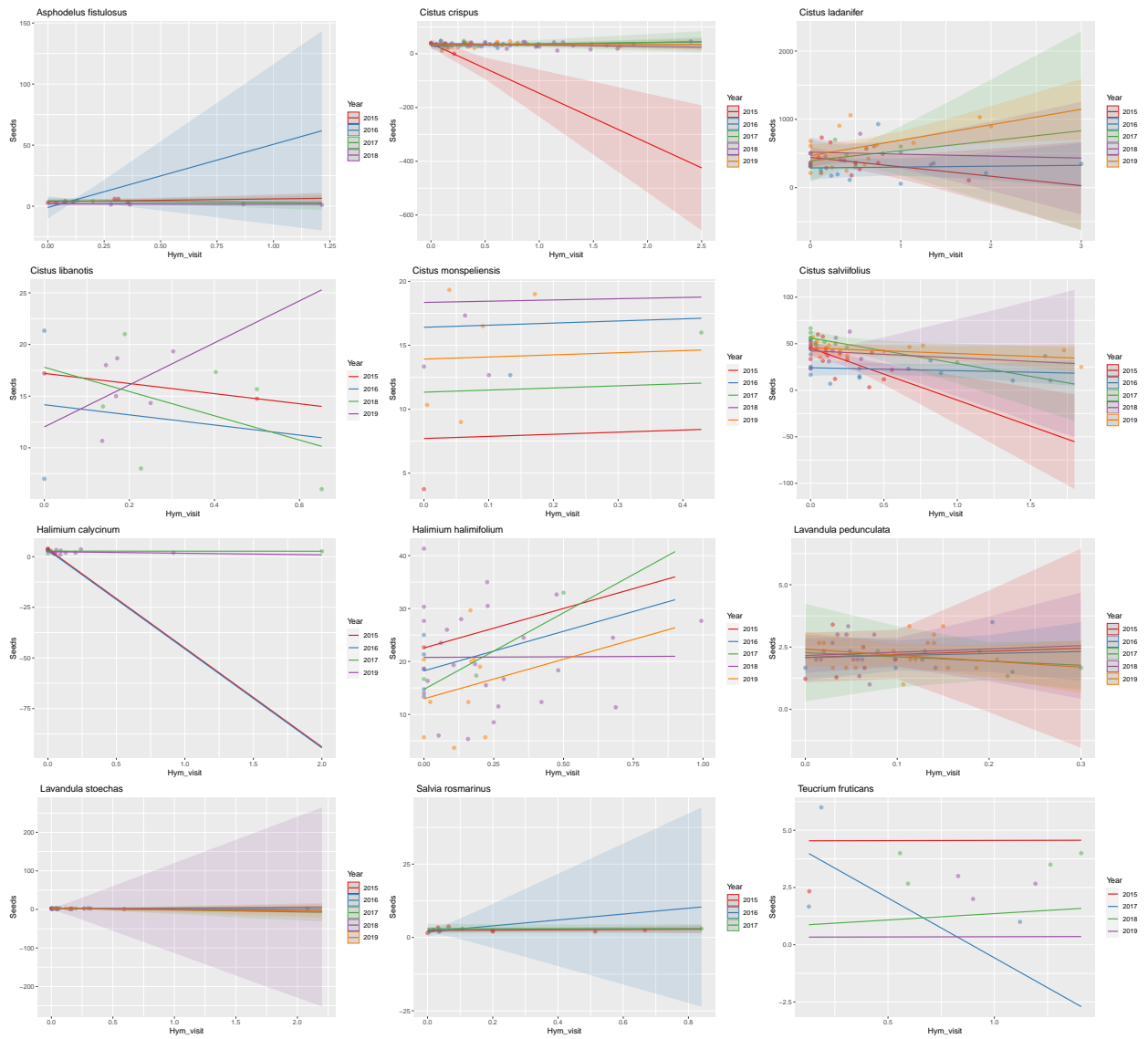


B- linear mixed model with site ID like random factor

Plant_gen_sp	term	estimate	std.error	statistic	df	p.value
Asphodelus fistulosus	(Intercept)	3.7612	0.8892	4.2300	2.5752	0.0325
	Hym_visit	2.2174	2.0028	1.1071	5.6255	0.3133
	Year2016	-4.8371	4.6373	-1.0431	4.9880	0.3448
	Year2017	0.6224	0.8217	0.7575	5.0250	0.4828
	Year2018	-1.8420	0.6555	-2.8098	5.0499	0.0371
	Hym_visit:Year2016	49.5326	38.1004	1.3001	4.9832	0.2505
	Hym_visit:Year2017	-3.4053	3.5637	-0.9556	5.1851	0.3817
	Hym_visit:Year2018	-2.4170	2.1159	-1.1423	5.5591	0.3001
Cistus crispus	(Intercept)	38.1872	7.9570	4.7992	58.6481	0.0000
	Hym_visit	-185.1111	49.5456	-3.7362	51.4041	0.0005
	Year2016	-9.8199	10.4192	-0.9425	57.8741	0.3499
	Year2017	-5.8478	8.5751	-0.6820	56.6534	0.4980
	Year2018	-0.4303	8.3605	-0.0515	57.9959	0.9591
	Year2019	-5.6180	8.4902	-0.6617	56.3835	0.5109
	Hym_visit:Year2016	191.5114	49.8023	3.8454	51.4642	0.0003
	Hym_visit:Year2017	189.9303	50.3385	3.7731	51.5990	0.0004
Cistus ladanifer	Hym_visit:Year2018	179.7844	49.6265	3.6228	51.4609	0.0007
	Hym_visit:Year2019	185.9677	49.7983	3.7344	51.5162	0.0005
	(Intercept)	442.0829	80.2686	5.5075	35.7131	0.0000
	Hym_visit	-137.9415	126.7957	-1.0879	42.8130	0.2827
	Year2016	-154.2078	117.9014	-1.3079	42.5922	0.1979
	Year2017	-48.3337	175.5632	-0.2753	38.8173	0.7845
	Year2018	76.5661	134.2744	0.5702	41.3385	0.5716
	Year2019	25.3085	115.2774	0.2195	39.2547	0.8274
Cistus libanotis	Hym_visit:Year2016	150.6523	145.4121	1.0360	42.8450	0.3060
	Hym_visit:Year2017	284.1378	317.5812	0.8947	37.8264	0.3766
	Hym_visit:Year2018	109.2322	208.6271	0.5236	42.7856	0.6033
	Hym_visit:Year2019	364.4984	157.3937	2.3158	42.8470	0.0254
	(Intercept)	17.2000	5.6020	3.0703	9.0000	0.0133
	Hym_visit	-4.9000	15.8448	-0.3092	9.0000	0.7642
	Year2016	-3.0333	6.8610	-0.4421	9.0000	0.6688
	Year2018	0.5929	7.4680	0.0794	9.0000	0.9385
Cistus monspeliensis	Year2019	-5.1796	9.5642	-0.5416	9.0000	0.6013
	Hym_visit:Year2018	-6.8352	20.1501	-0.3392	9.0000	0.7422
	Hym_visit:Year2019	25.2345	41.0296	0.6150	9.0000	0.5538
	(Intercept)	7.7097	5.0363	1.5308	1.6186	0.2927
	Hym_visit	1.6517	23.9710	0.0689	3.2289	0.9491
	Year2016	8.6964	4.7363	1.8361	3.1048	0.1606
	Year2017	3.6227	9.6452	0.3756	3.0794	0.7316
	Year2018	10.6414	3.4177	3.1136	3.0000	0.0527
Cistus salviifolius	Year2019	6.2115	3.1143	1.9945	3.0248	0.1393
	Hym_visit:Year2018	-0.6803	41.9504	-0.0162	3.0752	0.9881
	(Intercept)	45.3340	4.2905	10.5661	56.0000	0.0000
	Hym_visit	-55.9033	16.0472	-3.4837	56.0000	0.0010
	Year2016	-21.1006	6.1599	-3.4255	56.0000	0.0012
	Year2017	10.8185	5.8247	1.8574	56.0000	0.0685
	Year2018	-2.9419	6.0628	-0.4852	56.0000	0.6294
	Year2019	0.0530	5.8116	0.0091	56.0000	0.9928
	Hym_visit:Year2016	52.6573	16.8780	3.1199	56.0000	0.0029
	Hym_visit:Year2017	28.4084	20.0541	1.4166	56.0000	0.1621

Halimium calycinum	Hym_visit:Year2018	48.3084	28.9729	1.6674	56.0000	0.1010
	Hym_visit:Year2019	49.9319	16.8719	2.9595	56.0000	0.0045
	(Intercept)	3.7304	0.6478	5.7588	5.0294	0.0022
	Hym_visit	-48.8413	23.8798	-2.0453	6.6559	0.0822
	Year2016	-0.4734	0.8724	-0.5426	9.8346	0.5995
	Year2017	-0.9628	0.8871	-1.0854	8.9994	0.3060
	Year2019	-1.2422	0.7283	-1.7056	6.6984	0.1338
Halimium halimifolium	Hym_visit:Year2017	48.8120	23.8850	2.0436	6.6599	0.0823
	Hym_visit:Year2019	48.0564	23.9086	2.0100	6.6696	0.0864
	(Intercept)	22.5575	8.6533	2.6068	36.3702	0.0132
	Hym_visit	14.9331	33.5039	0.4457	34.1327	0.6586
	Year2016	-4.3247	9.2724	-0.4664	32.9915	0.6440
	Year2017	-7.8308	11.0325	-0.7098	31.0441	0.4831
	Year2018	-1.7831	8.9687	-0.1988	35.8564	0.8435
Lavandula pedunculata	Year2019	-9.6153	9.8233	-0.9788	33.9164	0.3346
	Hym_visit:Year2017	14.0092	41.5414	0.3372	35.6985	0.7379
	Hym_visit:Year2018	-14.7084	34.1103	-0.4312	33.8395	0.6691
	(Intercept)	2.0805	0.5073	4.1011	37.9506	0.0002
	Hym_visit	1.2354	8.0791	0.1529	36.0631	0.8793
	Year2016	0.0002	0.6555	0.0003	36.9455	0.9997
	Year2017	0.1945	1.1252	0.1728	25.3226	0.8641
Lavandula stoechas	Year2018	0.0793	0.5828	0.1361	38.4465	0.8925
	Year2019	0.3363	0.5382	0.6249	34.2770	0.5362
	Hym_visit:Year2016	-0.4374	8.5832	-0.0510	35.5761	0.9596
	Hym_visit:Year2017	-2.9272	8.8689	-0.3300	37.9821	0.7432
	Hym_visit:Year2018	0.0783	8.8991	0.0088	36.0220	0.9930
	Hym_visit:Year2019	-3.6541	8.1993	-0.4457	34.7341	0.6586
	(Intercept)	2.4442	0.4078	5.9938	10.5067	0.0001
Salvia rosmarinus	Hym_visit	-3.1817	1.1837	-2.6881	12.4703	0.0192
	Year2016	-0.0833	0.3152	-0.2641	10.1896	0.7969
	Year2017	0.7884	0.6806	1.1584	13.3305	0.2670
	Year2018	-1.1472	0.6979	-1.6439	11.9504	0.1262
	Year2019	-0.5757	0.6781	-0.8489	10.1132	0.4156
	Hym_visit:Year2016	2.7136	1.2061	2.2499	12.4286	0.0433
	Hym_visit:Year2017	-1.7060	5.8575	-0.2912	9.7798	0.7769
Teucrium fruticans	Hym_visit:Year2018	5.4496	60.1847	0.0905	8.8003	0.9299
	Hym_visit:Year2019	0.6764	4.4124	0.1533	8.9189	0.8816
	(Intercept)	2.4091	0.3598	6.6965	4.5470	0.0016
	Hym_visit	0.4636	0.8756	0.5295	3.6504	0.6270
	Year2016	-0.4705	0.9380	-0.5016	5.6813	0.6348
	Year2017	0.5909	0.9243	0.6393	5.4445	0.5486
	Hym_visit:Year2016	9.5921	21.2012	0.4524	2.6341	0.6856
Teucrium fruticans	Hym_visit:Year2017	-0.4636	1.2975	-0.3573	3.0510	0.7441
	(Intercept)	4.5371	2.4504	1.8516	1.2275	0.2782
	Hym_visit	0.0184	2.6139	0.0071	3.0000	0.9948
	Year2017	0.1131	1.0683	0.1059	3.0449	0.9222
	Year2018	-3.7334	1.6013	-2.3316	3.1269	0.0985
	Year2019	-4.2058	2.5647	-1.6399	3.0495	0.1981
	Hym_visit:Year2017	-5.2381	2.8246	-1.8545	3.0130	0.1603
Teucrium fruticans	Hym_visit:Year2018	0.5380	2.7736	0.1940	3.0000	0.8586





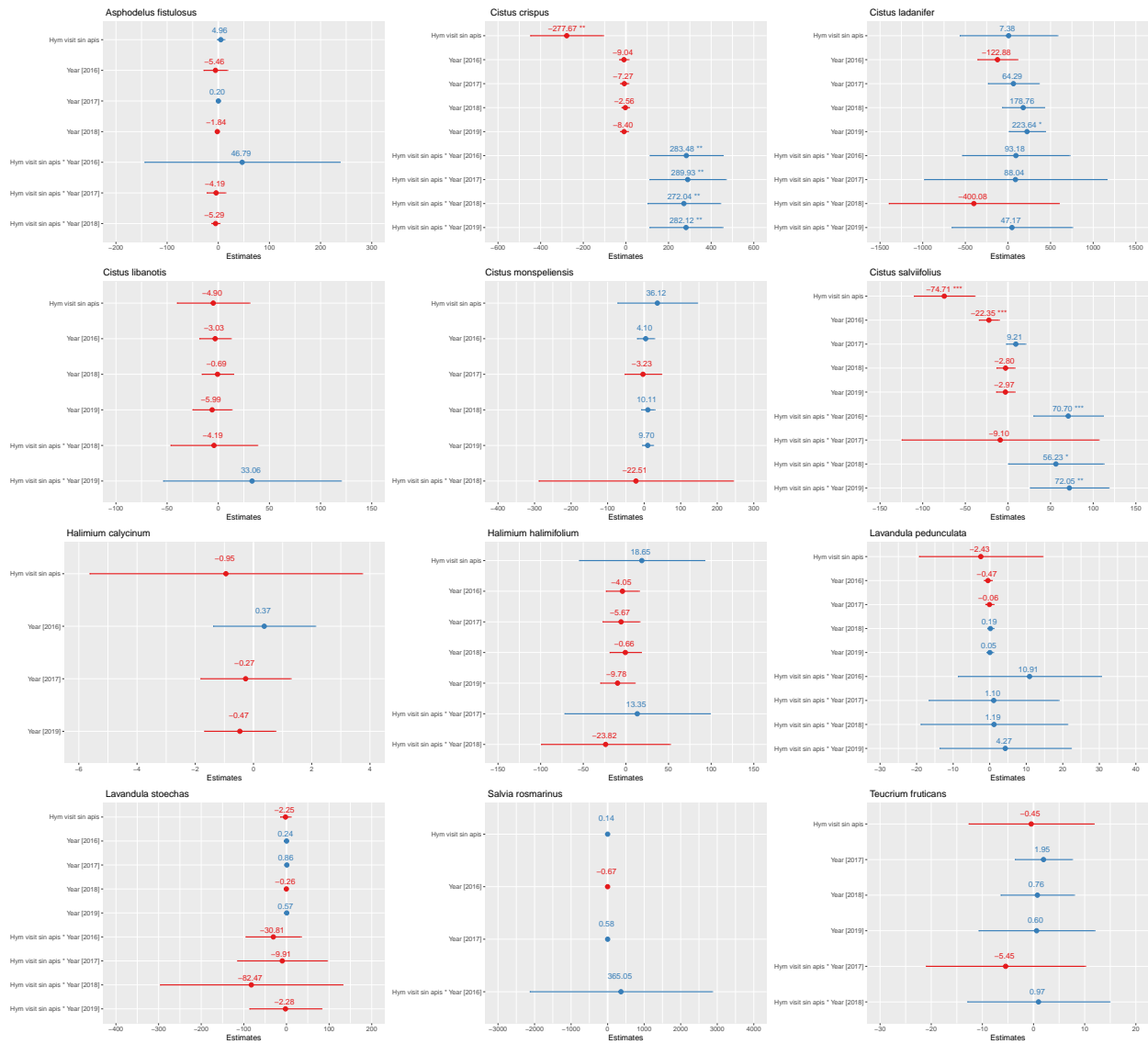
Visitation rate of hymenoptera without A.mellifera

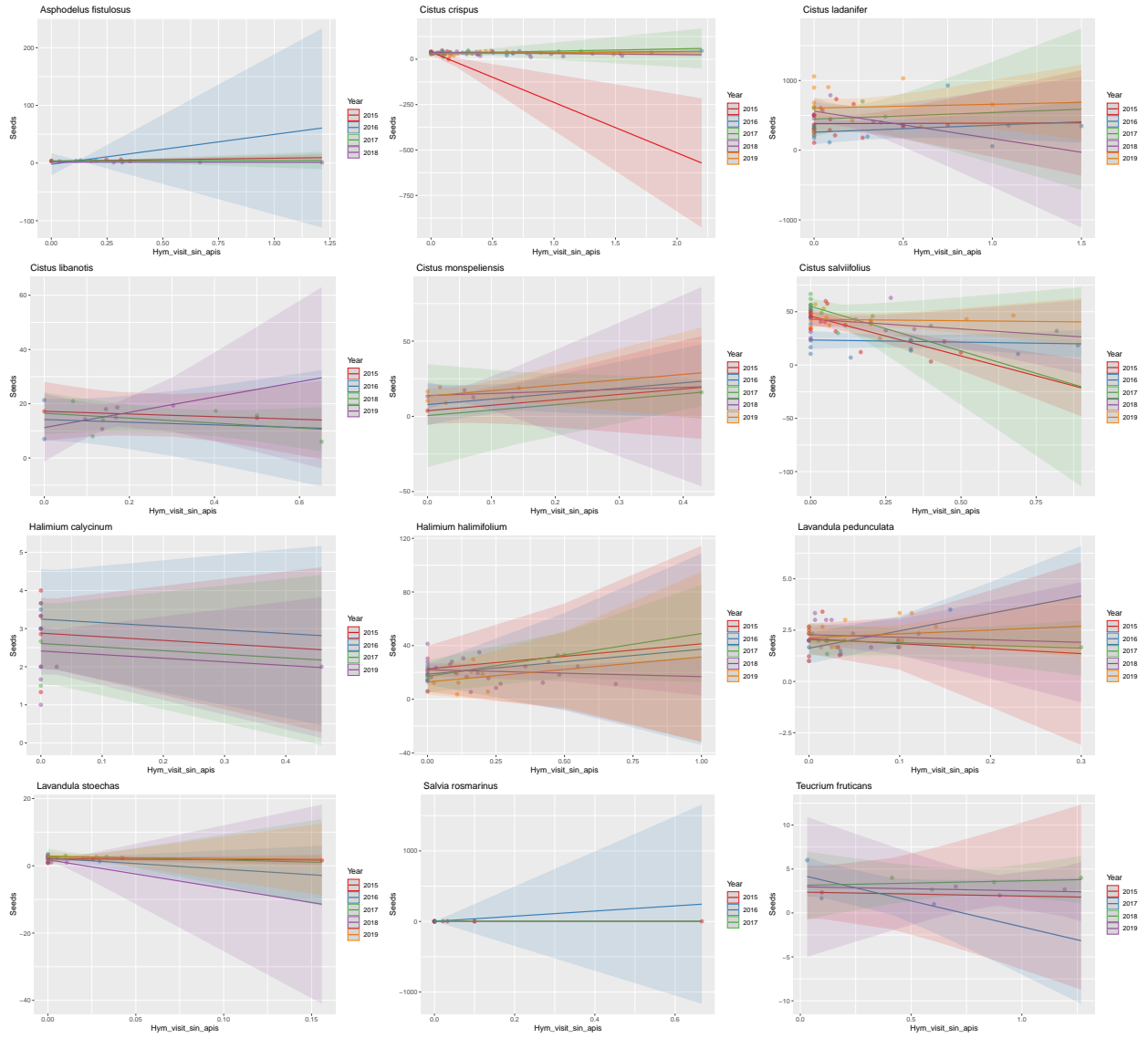
A- linear model: $\text{lm}(\text{Seeds} \sim \text{No_Apis_visitatio_rate} * \text{Year})$

Plant_gen_sp	term	estimate	std.error	statistic	p.value
Asphodelus fistulosus	(Intercept)	3.3735	0.6544	5.1553	0.0013
	Hym_visit_sin_apis	4.9625	3.0048	1.6515	0.1426
	Year2016	-5.4568	9.7874	-0.5575	0.5945
	Year2017	0.1957	1.2785	0.1531	0.8826
	Year2018	-1.8389	1.2492	-1.4721	0.1845
	Hym_visit_sin_apis:Year2016	46.7875	80.6569	0.5801	0.5800
	Hym_visit_sin_apis:Year2017	-4.1932	7.6819	-0.5459	0.6021
	Hym_visit_sin_apis:Year2018	-5.2872	3.3447	-1.5808	0.1579
Cistus crispus	(Intercept)	39.6667	8.6203	4.6015	0.0000
	Hym_visit_sin_apis	-277.6667	85.3371	-3.2538	0.0019
	Year2016	-9.0393	10.8194	-0.8355	0.4068
	Year2017	-7.2653	9.5271	-0.7626	0.4487
	Year2018	-2.5624	8.9036	-0.2878	0.7745
	Year2019	-8.3964	9.0904	-0.9237	0.3594
	Hym_visit_sin_apis:Year2016	283.4800	85.5135	3.3150	0.0016
	Hym_visit_sin_apis:Year2017	289.9336	89.4962	3.2396	0.0020
	Hym_visit_sin_apis:Year2018	272.0425	85.3897	3.1859	0.0023
	Hym_visit_sin_apis:Year2019	282.1239	85.5344	3.2984	0.0016
Cistus ladanifer	(Intercept)	380.5844	75.3580	5.0504	0.0000
	Hym_visit_sin_apis	7.3845	284.2402	0.0260	0.9794
	Year2016	-122.8771	115.8326	-1.0608	0.2947
	Year2017	64.2921	147.9180	0.4346	0.6660
	Year2018	178.7623	122.3993	1.4605	0.1514
	Year2019	223.6364	105.0712	2.1284	0.0391
	Hym_visit_sin_apis:Year2016	93.1831	312.2221	0.2985	0.7668
	Hym_visit_sin_apis:Year2017	88.0408	530.5400	0.1659	0.8690
	Hym_visit_sin_apis:Year2018	-400.0837	494.4333	-0.8092	0.4229
	Hym_visit_sin_apis:Year2019	47.1743	350.3124	0.1347	0.8935
Cistus libanotis	(Intercept)	17.2000	5.5354	3.1072	0.0126
	Hym_visit_sin_apis	-4.9000	15.6566	-0.3130	0.7614
	Year2016	-3.0333	6.7795	-0.4474	0.6651
	Year2018	-0.6940	6.7900	-0.1022	0.9208
	Year2019	-5.9889	8.4439	-0.7093	0.4961
	Hym_visit_sin_apis:Year2016	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2018	-4.1887	18.7415	-0.2235	0.8281
	Hym_visit_sin_apis:Year2019	33.0591	38.3974	0.8610	0.4116
Cistus monspeliensis	(Intercept)	3.7500	4.6960	0.7986	0.4693
	Hym_visit_sin_apis	36.1151	39.2559	0.9200	0.4096
	Year2016	4.1013	8.4558	0.4850	0.6530
	Year2017	-3.2279	18.0873	-0.1785	0.8670
	Year2018	10.1074	6.6036	1.5306	0.2006
	Year2019	9.7035	5.3584	1.8109	0.1444
	Hym_visit_sin_apis:Year2016	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2017	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2018	-22.5065	95.7894	-0.2350	0.8258
	Hym_visit_sin_apis:Year2019	NA	NA	NA	NA
Cistus salviifolius	(Intercept)	45.8526	3.9882	11.4970	0.0000
	Hym_visit_sin_apis	-74.7123	17.7773	-4.2027	0.0001
	Year2016	-22.3525	5.8617	-3.8133	0.0003

Halimium calycinum	Year2017	9.2070	5.6203	1.6382	0.1070
	Year2018	-2.7954	5.2789	-0.5296	0.5985
	Year2019	-2.9721	5.3897	-0.5514	0.5835
	Hym_visit_sin_apis:Year2016	70.7047	20.3495	3.4745	0.0010
	Hym_visit_sin_apis:Year2017	-9.0977	57.6807	-0.1577	0.8752
	Hym_visit_sin_apis:Year2018	56.2291	27.9405	2.0125	0.0490
	Hym_visit_sin_apis:Year2019	72.0465	22.9924	3.1335	0.0027
	(Intercept)	2.8810	0.4721	6.1019	0.0000
	Hym_visit_sin_apis	-0.9478	2.1819	-0.4344	0.6706
	Year2016	0.3690	0.8178	0.4513	0.6587
	Year2017	-0.2698	0.7212	-0.3742	0.7139
	Year2019	-0.4684	0.5685	-0.8239	0.4238
	Hym_visit_sin_apis:Year2016	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2017	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2019	NA	NA	NA	NA
Halimium halimifolium	(Intercept)	22.6667	8.7242	2.5981	0.0134
	Hym_visit_sin_apis	18.6528	36.2540	0.5145	0.6100
	Year2016	-4.0500	9.5569	-0.4238	0.6742
	Year2017	-5.6667	10.6849	-0.5303	0.5990
	Year2018	-0.6632	9.0646	-0.0732	0.9421
	Year2019	-9.7839	9.9675	-0.9816	0.3327
	Hym_visit_sin_apis:Year2016	NA	NA	NA	NA
	Hym_visit_sin_apis:Year2017	13.3472	42.0836	0.3172	0.7529
	Hym_visit_sin_apis:Year2018	-23.8200	37.2872	-0.6388	0.5269
	Hym_visit_sin_apis:Year2019	NA	NA	NA	NA
	(Intercept)	2.0850	0.3750	5.5600	0.0000
	Hym_visit_sin_apis	-2.4256	8.3548	-0.2903	0.7731
	Year2016	-0.4668	0.5315	-0.8784	0.3851
	Year2017	-0.0610	0.5530	-0.1104	0.9127
	Year2018	0.1928	0.4295	0.4490	0.6559
Lavandula pedunculata	Year2019	0.0505	0.4414	0.1145	0.9095
	Hym_visit_sin_apis:Year2016	10.9095	9.6823	1.1267	0.2667
	Hym_visit_sin_apis:Year2017	1.1002	8.7812	0.1253	0.9009
	Hym_visit_sin_apis:Year2018	1.1896	9.9227	0.1199	0.9052
	Hym_visit_sin_apis:Year2019	4.2720	8.8832	0.4809	0.6333
	(Intercept)	2.0617	0.3286	6.2743	0.0000
	Hym_visit_sin_apis	-2.2503	5.6809	-0.3961	0.6980
	Year2016	0.2439	0.4654	0.5240	0.6085
	Year2017	0.8617	1.1771	0.7321	0.4762
	Year2018	-0.2633	0.7059	-0.3730	0.7147
	Year2019	0.5694	0.8645	0.6587	0.5208
	Hym_visit_sin_apis:Year2016	-30.8053	30.1919	-1.0203	0.3249
	Hym_visit_sin_apis:Year2017	-9.9119	49.1025	-0.2019	0.8429
	Hym_visit_sin_apis:Year2018	-82.4676	99.7418	-0.8268	0.4222
	Hym_visit_sin_apis:Year2019	-2.2804	39.3879	-0.0579	0.9546
Salvia rosmarinus	(Intercept)	2.4191	0.2606	9.2831	0.0000
	Hym_visit_sin_apis	0.1390	1.1453	0.1214	0.9064
	Year2016	-0.6670	1.3492	-0.4944	0.6343
	Year2017	0.5809	0.5584	1.0403	0.3286
	Hym_visit_sin_apis:Year2016	365.0462	1082.0114	0.3374	0.7445
Teucrium fruticans	Hym_visit_sin_apis:Year2017	NA	NA	NA	NA
	(Intercept)	2.3775	1.5960	1.4896	0.2106
	Hym_visit_sin_apis	-0.4535	4.4001	-0.1031	0.9229
	Year2017	1.9499	2.0121	0.9691	0.3874

Year2018	0.7570	2.5823	0.2932	0.7840
Year2019	0.6006	4.0780	0.1473	0.8900
Hym_visit_sin_apis:Year2017	-5.4541	5.6029	-0.9734	0.3855
Hym_visit_sin_apis:Year2018	0.9705	5.0052	0.1939	0.8557
Hym_visit_sin_apis:Year2019	NA	NA	NA	NA





B- linear mixed model with site ID like random factor

Plant_gen_sp	term	estimate	std.error	statistic	df	p.value
Asphodelus fistulosus	(Intercept)	3.9577	0.9307	4.2524	2.3919	0.0369
	Hym_visit_sin_apis	1.2705	2.0620	0.6161	5.6742	0.5617
	Year2016	-5.0027	4.8522	-1.0310	5.0155	0.3497
	Year2017	0.1506	0.6627	0.2272	5.1138	0.8291
	Year2018	-1.8840	0.6489	-2.9033	5.1183	0.0327
	Hym_visit_sin_apis:Year2016	50.4795	39.8698	1.2661	5.0100	0.2612
	Hym_visit_sin_apis:Year2017	-0.5013	4.0558	-0.1236	5.1808	0.9063
	Hym_visit_sin_apis:Year2018	-1.5953	2.1860	-0.7298	5.6018	0.4949
	(Intercept)	37.9751	7.9873	4.7544	58.4205	0.0000
Cistus crispus	Hym_visit_sin_apis	-277.6667	74.3666	-3.7338	51.4676	0.0005
	Year2016	-7.4381	10.0534	-0.7399	57.0075	0.4624
	Year2017	-7.4198	8.6548	-0.8573	54.8434	0.3950
	Year2018	-1.8949	8.2661	-0.2292	56.9098	0.8195
	Year2019	-5.6976	8.2880	-0.6875	55.1174	0.4947
	Hym_visit_sin_apis:Year2016	282.8729	74.5372	3.7951	51.4882	0.0004
	Hym_visit_sin_apis:Year2017	304.2679	78.2329	3.8893	51.7977	0.0003
	Hym_visit_sin_apis:Year2018	273.5588	74.4272	3.6755	51.4950	0.0006
	Hym_visit_sin_apis:Year2019	279.8884	74.5785	3.7529	51.5287	0.0004
Cistus ladanifer	(Intercept)	381.9785	76.5474	4.9901	35.3898	0.0000
	Hym_visit_sin_apis	5.3764	285.2222	0.0188	42.7561	0.9850
	Year2016	-129.7839	114.9966	-1.1286	42.0527	0.2655
	Year2017	57.9464	147.0623	0.3940	42.3695	0.6955
	Year2018	184.9897	121.6589	1.5206	42.3123	0.1358
	Year2019	216.6848	104.2199	2.0791	41.7667	0.0438
	Hym_visit_sin_apis:Year2016	95.8393	312.1565	0.3070	42.9996	0.7603
	Hym_visit_sin_apis:Year2017	78.2592	524.9013	0.1491	40.7161	0.8822
	Hym_visit_sin_apis:Year2018	-419.1380	493.0794	-0.8500	42.8180	0.4000
Cistus libanotis	Hym_visit_sin_apis:Year2019	69.9642	351.5690	0.1990	42.7399	0.8432
	(Intercept)	17.2000	5.5354	3.1072	9.0000	0.0126
	Hym_visit_sin_apis	-4.9000	15.6566	-0.3130	9.0000	0.7614
	Year2016	-3.0333	6.7795	-0.4474	9.0000	0.6651
	Year2018	-0.6940	6.7900	-0.1022	9.0000	0.9208
	Year2019	-5.9889	8.4439	-0.7093	9.0000	0.4961
	Hym_visit_sin_apis:Year2018	-4.1887	18.7415	-0.2235	9.0000	0.8281
	Hym_visit_sin_apis:Year2019	33.0591	38.3974	0.8610	9.0000	0.4116
	(Intercept)	7.5577	4.7619	1.5871	1.6772	0.2761
Cistus monspeliensis	Hym_visit_sin_apis	10.6541	21.2646	0.5010	3.0643	0.6501
	Year2016	7.4961	4.4018	1.7030	3.0267	0.1863
	Year2017	0.0685	9.2213	0.0074	3.0057	0.9945
	Year2018	10.1074	3.3480	3.0189	3.0000	0.0568
	Year2019	6.1070	2.9153	2.0948	3.0683	0.1252
	Hym_visit_sin_apis:Year2018	2.9545	49.1387	0.0601	3.0121	0.9558
	(Intercept)	45.8526	3.9882	11.4970	56.0000	0.0000
	Hym_visit_sin_apis	-74.7123	17.7773	-4.2027	56.0000	0.0001
	Year2016	-22.3525	5.8617	-3.8133	56.0000	0.0003
Cistus salviifolius	Year2017	9.2070	5.6203	1.6382	56.0000	0.1070
	Year2018	-2.7954	5.2789	-0.5296	56.0000	0.5985
	Year2019	-2.9721	5.3897	-0.5514	56.0000	0.5835
	Hym_visit_sin_apis:Year2016	70.7047	20.3495	3.4745	56.0000	0.0010
	Hym_visit_sin_apis:Year2017	-9.0977	57.6807	-0.1577	56.0000	0.8752

Halimium calycinum	Hym_visit_sin_apis:Year2018	56.2291	27.9405	2.0125	56.0000	0.0490
	Hym_visit_sin_apis:Year2019	72.0465	22.9924	3.1335	56.0000	0.0027
	(Intercept)	2.7434	0.5364	5.1148	8.6273	0.0007
	Hym_visit_sin_apis	-2.4393	1.8985	-1.2848	10.5590	0.2263
	Year2016	0.5546	0.7684	0.7218	13.7465	0.4825
	Year2017	0.1224	0.7539	0.1624	13.7692	0.8734
Halimium halimifolium	Year2019	-0.3073	0.6031	-0.5096	12.9076	0.6190
	(Intercept)	22.3312	8.5899	2.5997	36.2959	0.0134
	Hym_visit_sin_apis	13.1879	34.8263	0.3787	32.9002	0.7074
	Year2016	-4.2410	9.2109	-0.4604	33.1138	0.6482
	Year2017	-5.6667	10.1535	-0.5581	31.0868	0.5808
	Year2018	-0.4652	8.8802	-0.0524	35.4276	0.9585
Lavandula pedunculata	Year2019	-9.1610	9.6371	-0.9506	33.6637	0.3486
	Hym_visit_sin_apis:Year2017	14.7551	40.8979	0.3608	34.8345	0.7204
	Hym_visit_sin_apis:Year2018	-18.3668	35.7847	-0.5133	32.8175	0.6112
	(Intercept)	2.0949	0.3665	5.7157	33.9755	0.0000
	Hym_visit_sin_apis	1.3396	7.0443	0.1902	34.6348	0.8503
	Year2016	-0.2973	0.4716	-0.6303	38.4894	0.5322
Lavandula stoechas	Year2017	-0.1644	0.5977	-0.2751	19.6450	0.7861
	Year2018	0.1012	0.3898	0.2596	37.7651	0.7966
	Year2019	0.0158	0.3563	0.0442	33.5538	0.9650
	Hym_visit_sin_apis:Year2016	5.3325	8.0318	0.6639	34.3254	0.5112
	Hym_visit_sin_apis:Year2017	-1.3184	7.2896	-0.1809	35.9396	0.8575
	Hym_visit_sin_apis:Year2018	3.0691	8.0715	0.3802	33.8106	0.7061
Salvia rosmarinus	Hym_visit_sin_apis:Year2019	0.2566	7.1434	0.0359	32.9887	0.9716
	(Intercept)	1.8062	0.3689	4.8967	10.2522	0.0006
	Hym_visit_sin_apis	0.2648	4.9549	0.0534	12.6089	0.9582
	Year2016	0.4363	0.4119	1.0594	13.2213	0.3084
	Year2017	1.2763	0.9462	1.3489	13.2329	0.2000
	Year2018	-0.3277	0.6199	-0.5286	13.3921	0.6057
Teucrium fruticans	Year2019	0.2408	0.7284	0.3305	11.8346	0.7468
	Hym_visit_sin_apis:Year2016	-30.4358	25.7485	-1.1820	12.9542	0.2584
	Hym_visit_sin_apis:Year2017	-13.2452	34.0649	-0.3888	8.6890	0.7068
	Hym_visit_sin_apis:Year2018	-43.1320	76.8098	-0.5615	10.7982	0.5859
	Hym_visit_sin_apis:Year2019	-4.7956	27.3296	-0.1755	8.6987	0.8647
	(Intercept)	2.4449	0.3245	7.5339	4.0811	0.0015
Teucrium fruticans	Hym_visit_sin_apis	0.5260	0.9258	0.5682	5.2904	0.5932
	Year2016	-0.6928	1.1070	-0.6258	7.9956	0.5489
	Year2017	0.5551	0.7620	0.7285	3.4830	0.5122
	Hym_visit_sin_apis:Year2016	364.6592	707.4712	0.5154	4.0788	0.6329
	(Intercept)	4.1355	2.0234	2.0439	1.3118	0.2402
	Hym_visit_sin_apis	-0.4535	2.0704	-0.2191	3.0000	0.8407
Teucrium fruticans	Year2017	0.2487	1.0498	0.2369	3.0796	0.8276
	Year2018	-2.7590	1.5347	-1.7978	3.1587	0.1654
	Year2019	-2.9154	2.1356	-1.3652	3.0821	0.2633
	Hym_visit_sin_apis:Year2017	-8.0941	2.7287	-2.9663	3.0284	0.0586
	Hym_visit_sin_apis:Year2018	0.9705	2.3551	0.4121	3.0000	0.7080

