

# Priorities for research on emerging species

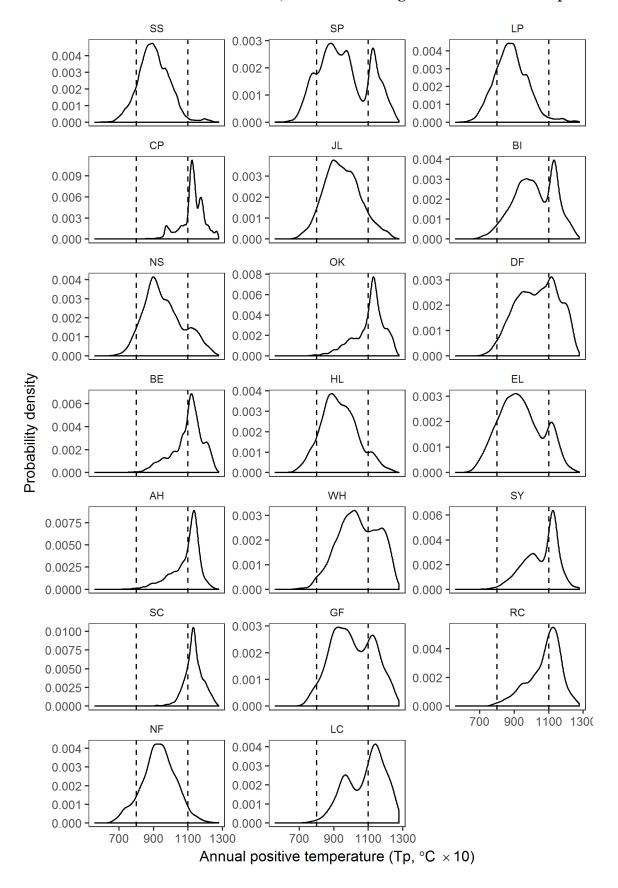
Appendices
Richard Jinks



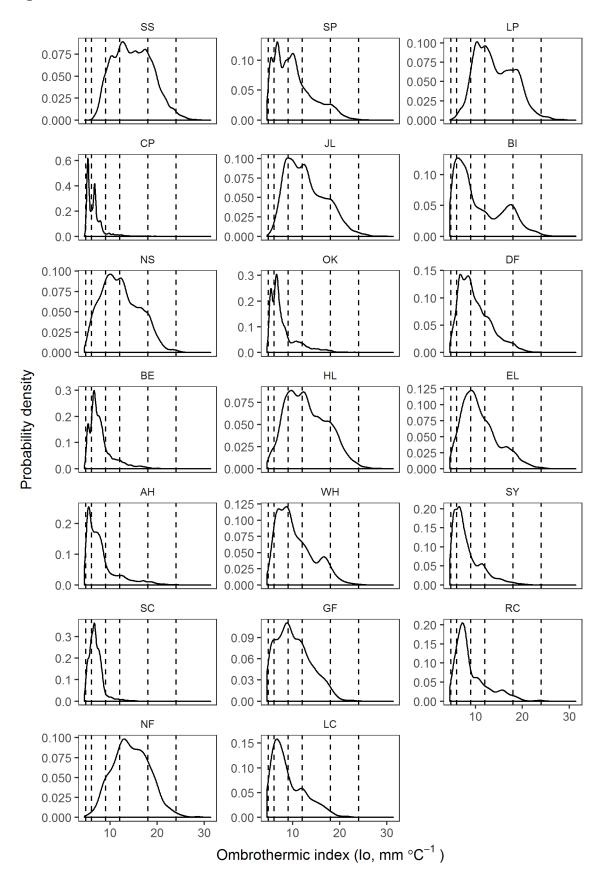
Forest Research is the Research Agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research. The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, technical support and consultancy services.



**Appendix 1.** Kernel density estimates for annual positive temperature (T<sub>p</sub>) for 20 species. Vertical lines show boundaries of warm zones; for labels see Figure 11a of the main report.



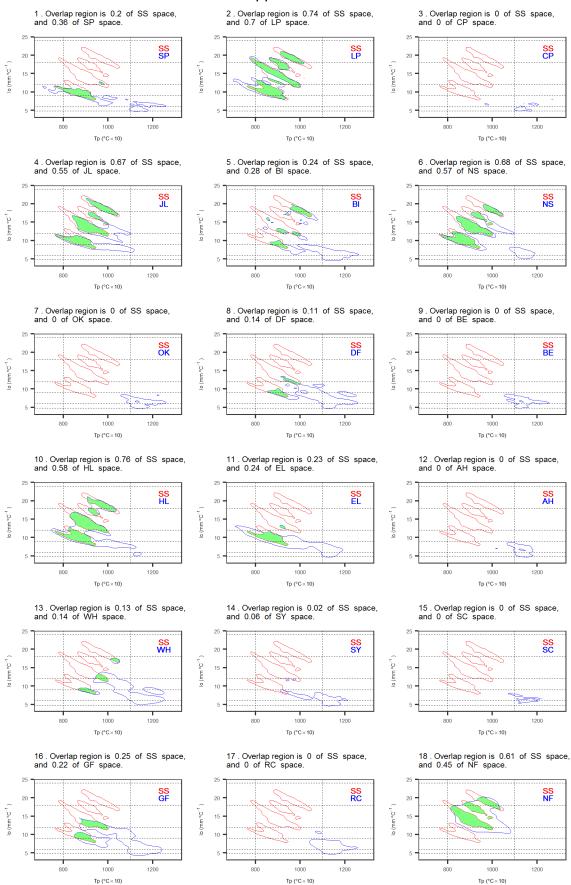
**Appendix 2.** . Kernel density estimates for ombrothermic index  $(I_o)$  for 20 species. Vertical lines show boundaries of wetness zones; for labels see Figure 11b of the main report.



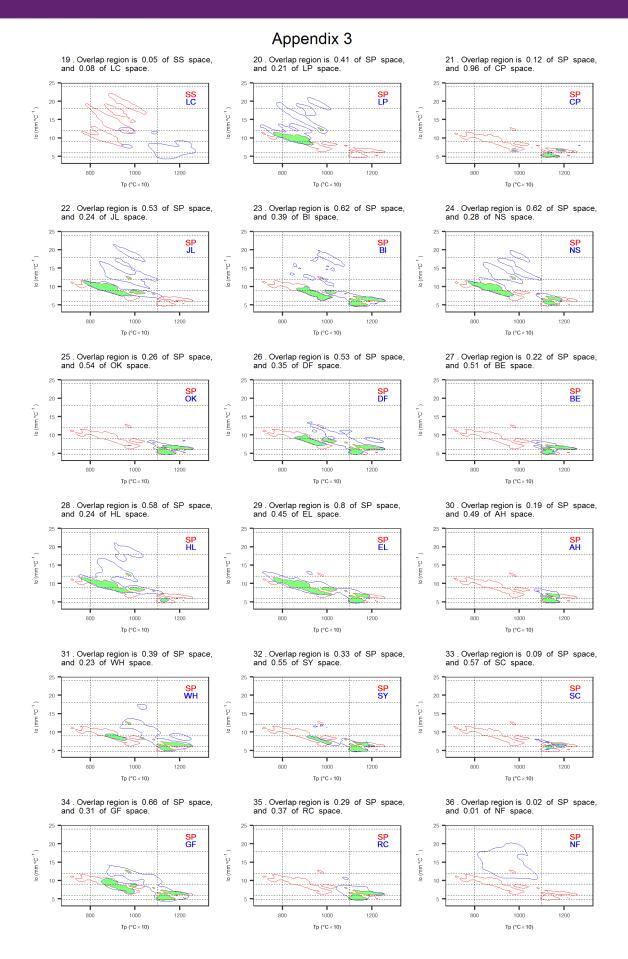


**Appendix 3.** Fifty-percent density contours and overlaps in climate space ( $T_p$  and  $I_o$ ) for pairwise combinations of 20 species. Overlap regions are filled with green, and overlap areas are calculated as proportions of the total climate space occupied by each species. Climate zones are separated by horizontal and vertical lines; labels for each division can be found in Figure 11c of the main report. The number of the graph for each pairwise combination is shown in the table.

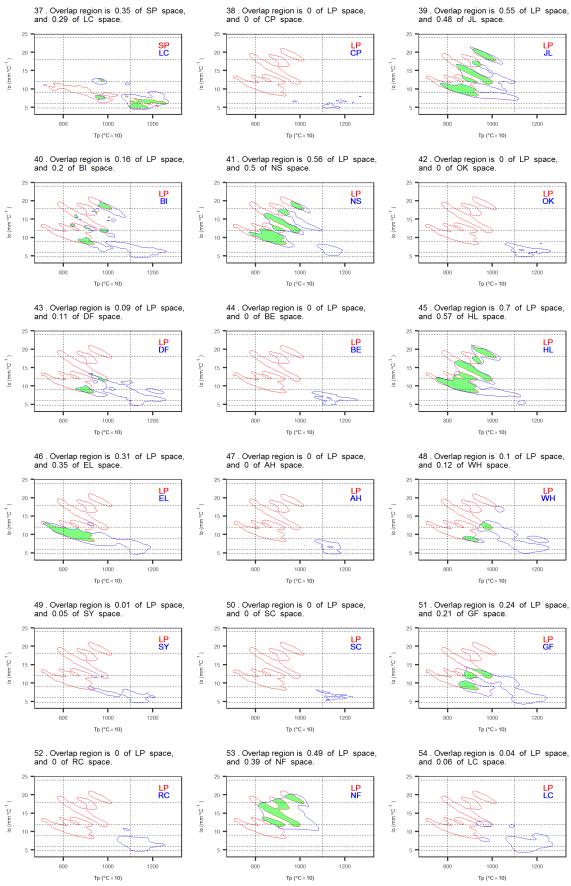
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SS																				
SP	1																			
LP	2	20																		
CP	3	21	38																	
JL	4	22	39	55																
BI	5	23	40	56	71															
NS	6	24	41	57	72	86														
OK	7	25	42	58	73	87	100													
DF	8	26	43	59	74	88	101	113												
BE	9	27	44	60	75	89	102	114	125											
HL	10	28	45	61	76	90	103	115	126	136										
EL	11	29	46	62	77	91	104	116	127	137	146									
AH	12	30	47	63	78	92	105	117	128	138	147	155								
WH	13	31	48	64	79	93	106	118	129	139	148	156	163							
SY	14	32	49	65	80	94	107	119	130	140	149	157	164	170						
SC	15	33	50	66	81	95	108	120	131	141	150	158	165	171	176					
GF	16	34	51	67	82	96	109	121	132	142	151	159	166	172	177	181				
RC	17	35	52	68	83	97	110	122	133	143	152	160	167	173	178	182	185			
NF	18	36	53	69	84	98	111	123	134	144	153	161	168	174	179	183	186	188		
LC	19	37	54	70	85	99	112	124	135	145	154	162	169	175	180	184	187	189	190	



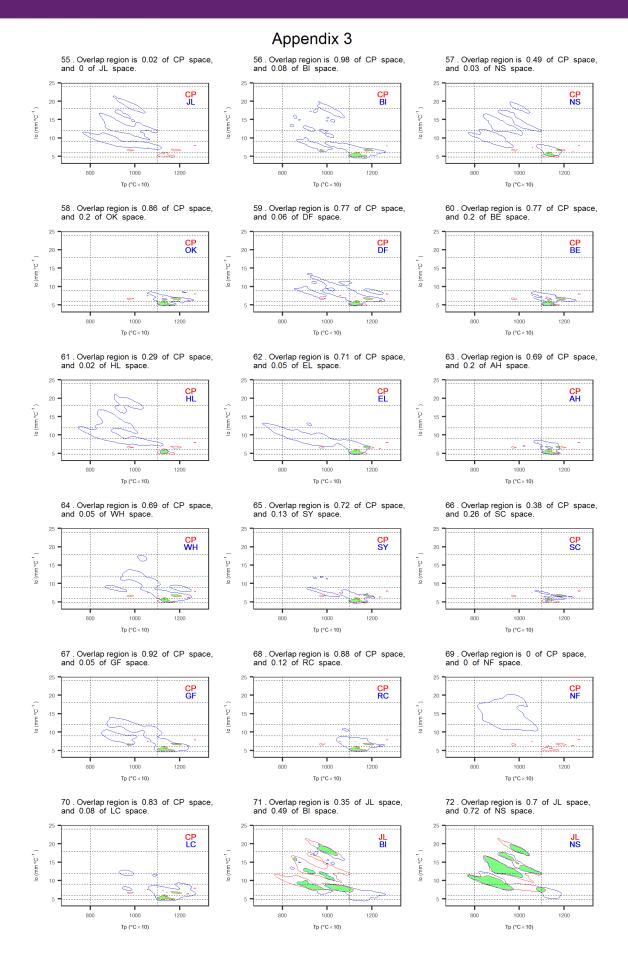


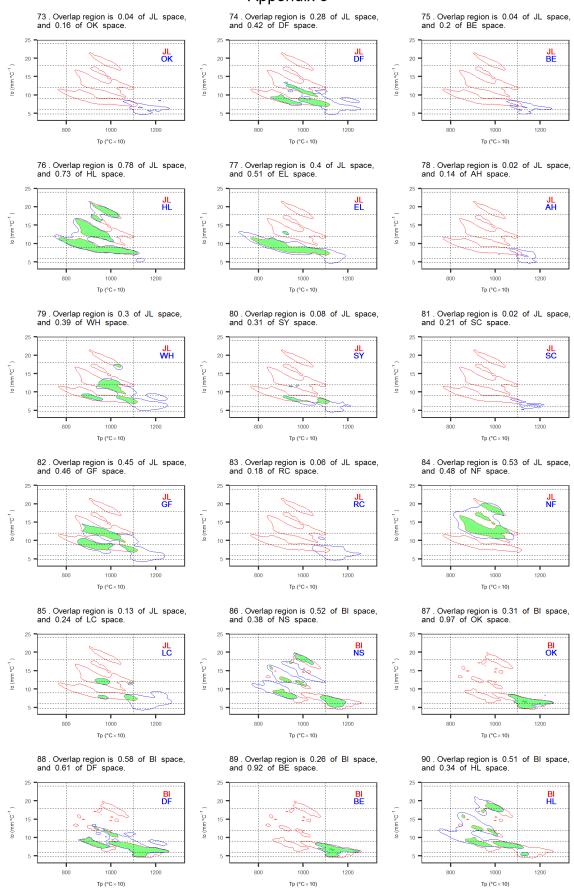




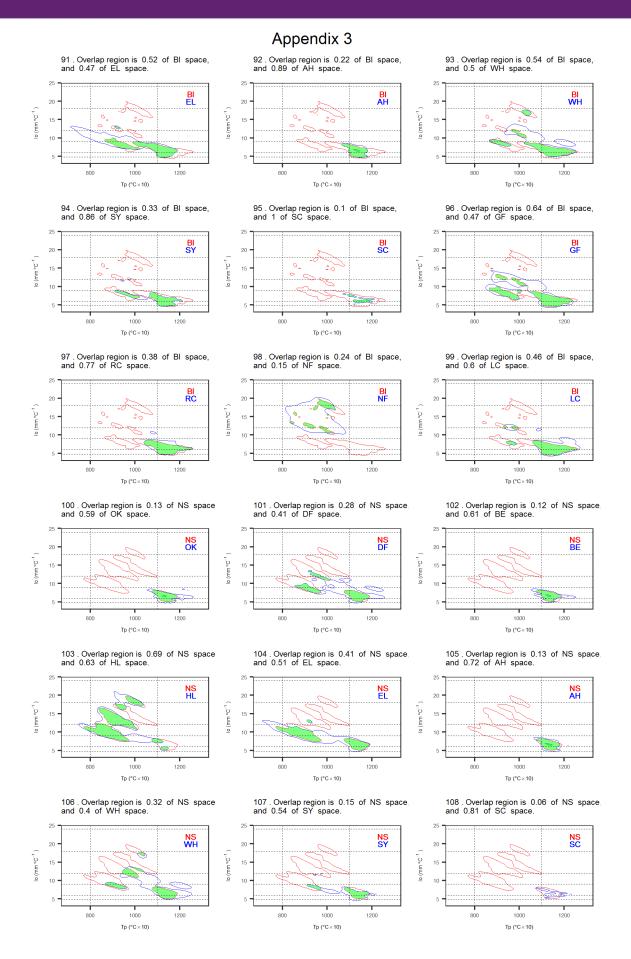




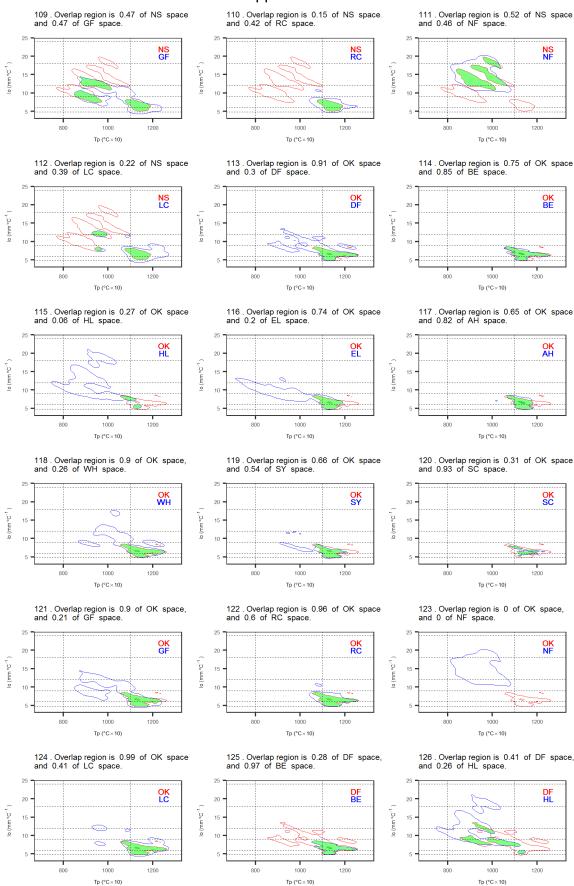




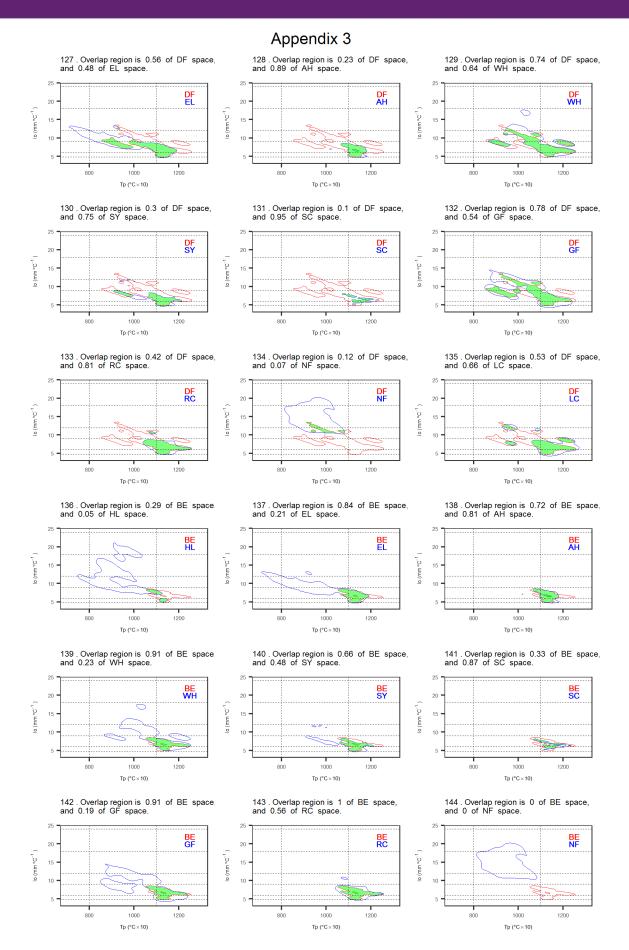




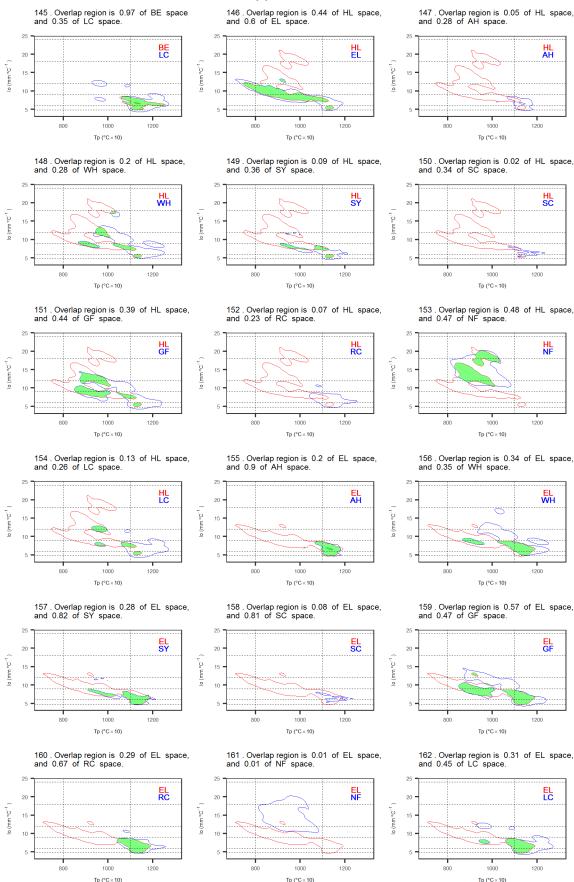




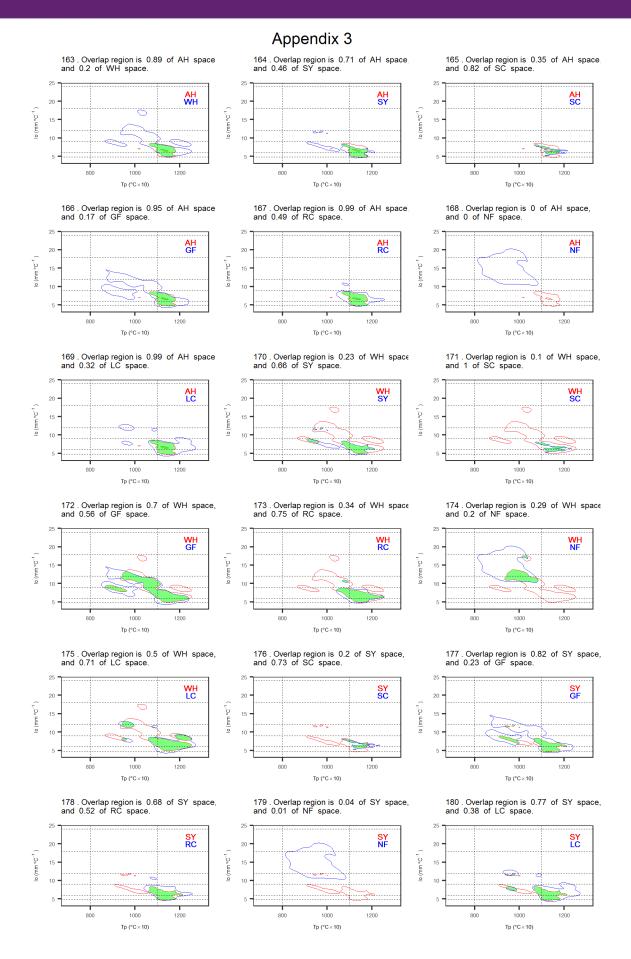


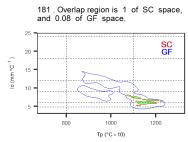


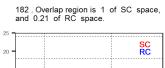


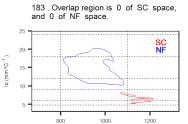


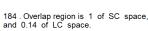


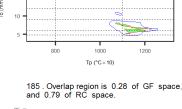




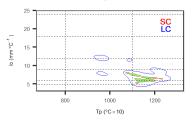


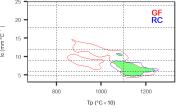


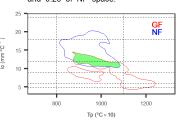




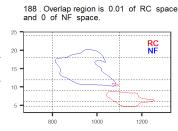
Tp (°C×10) 186 . Overlap region is 0.29 of GF space, and 0.25 of NF space.



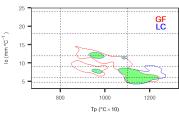


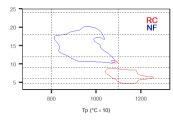


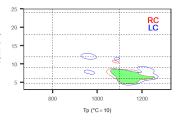
187 . Overlap region is 0.4 of GF space, and 0.72 of LC space.



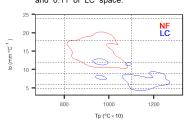
189 . Overlap region is 0.84 of RC space and 0.54 of LC space.







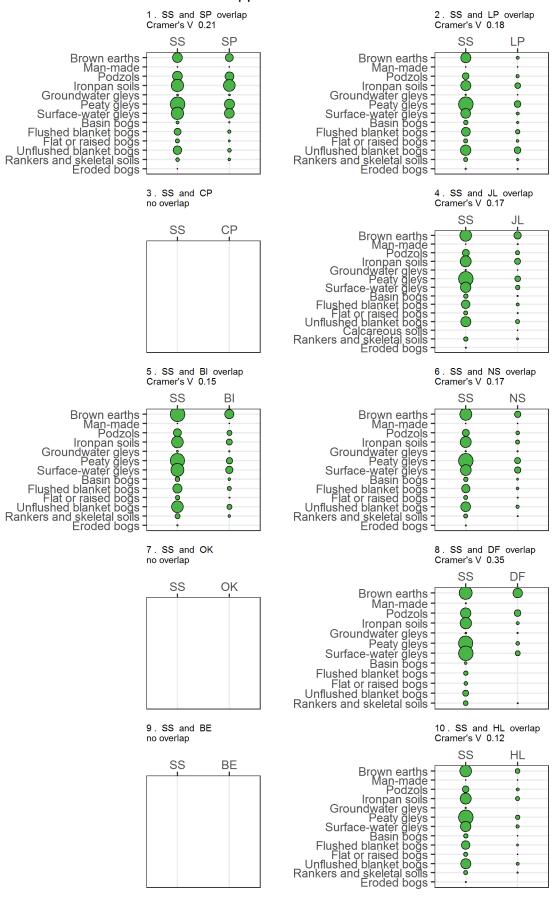
190 . Overlap region is  $\,0.05\,$  of NF space, and  $\,0.11\,$  of LC space.

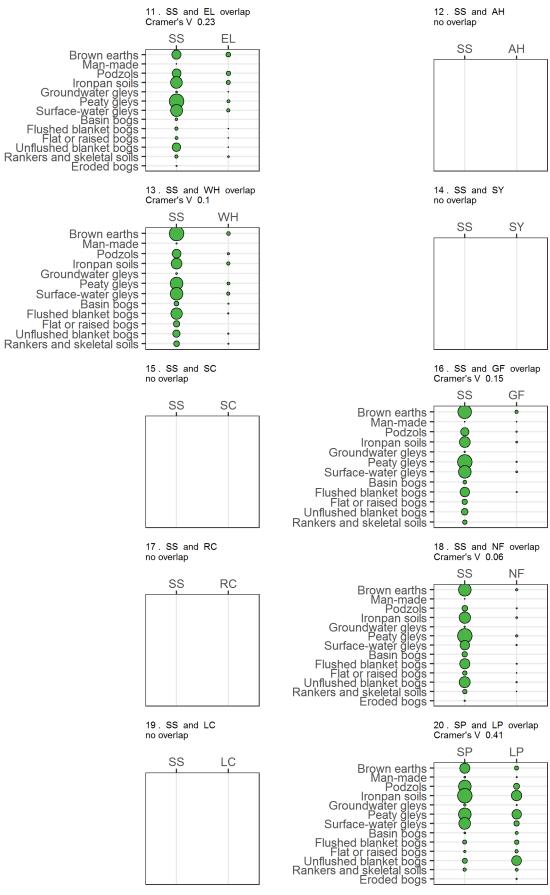


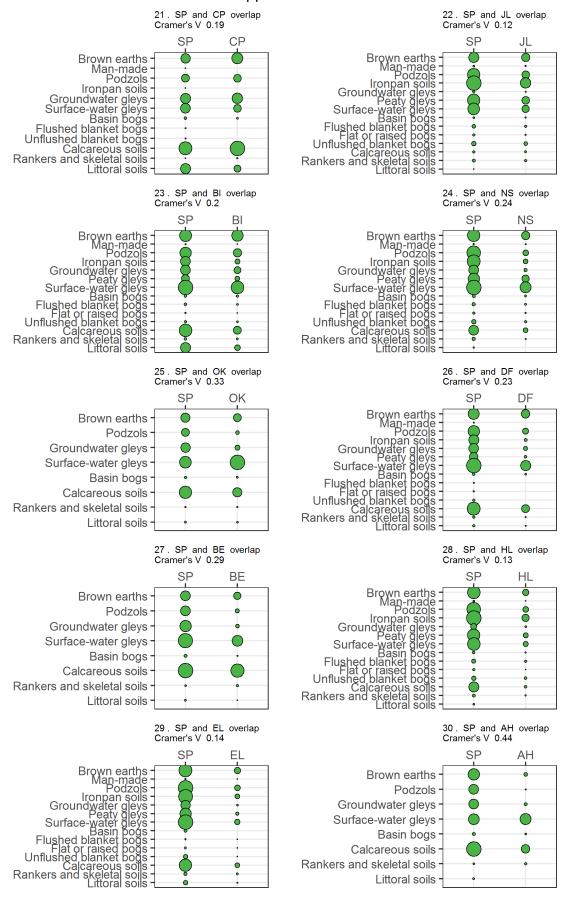


**Appendix 4**. The relationship between pairs of species categorised by soil groups within the overlap area in climate space. The strength of the association is calculated as Cramer's V, which ranges for 0 to 1; the smaller the value the stronger the association between the paired species. The number of the graph for each pairwise combination is shown in the table.

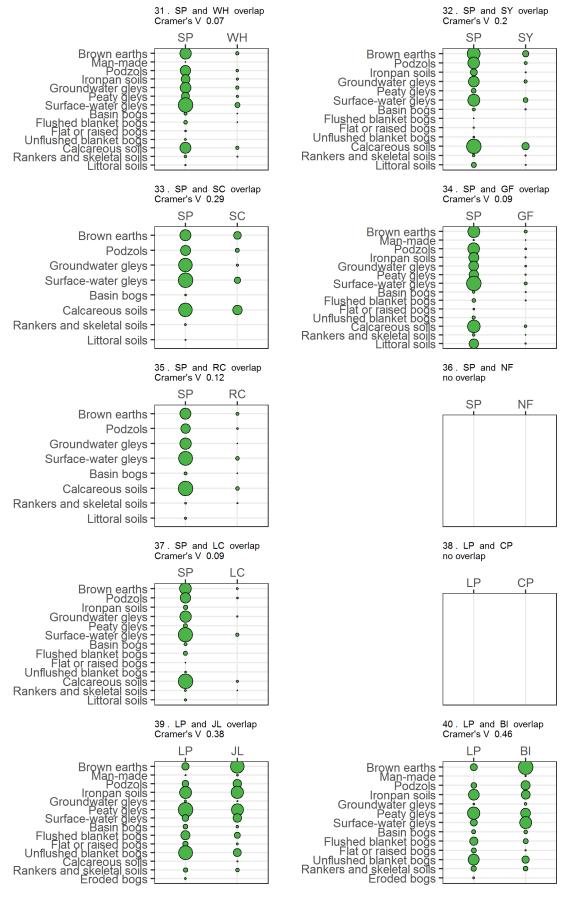
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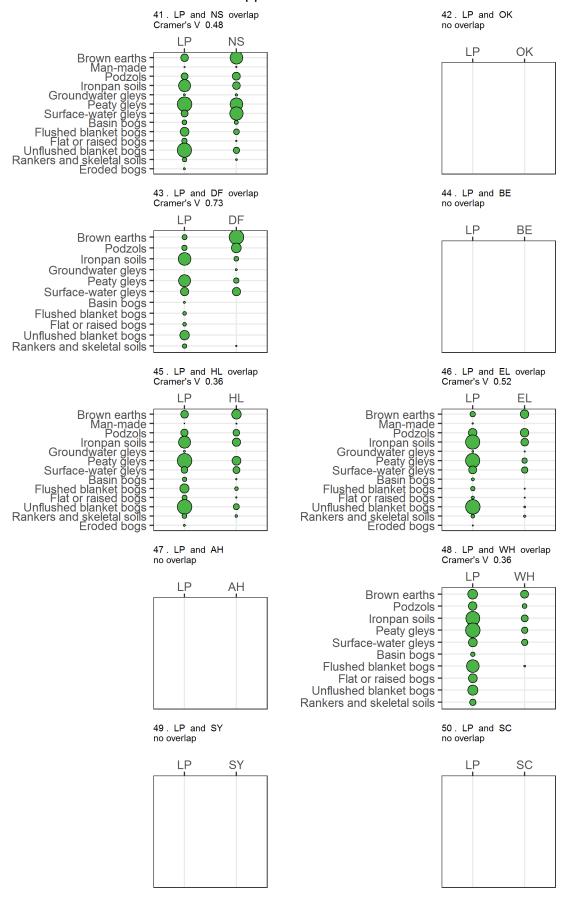




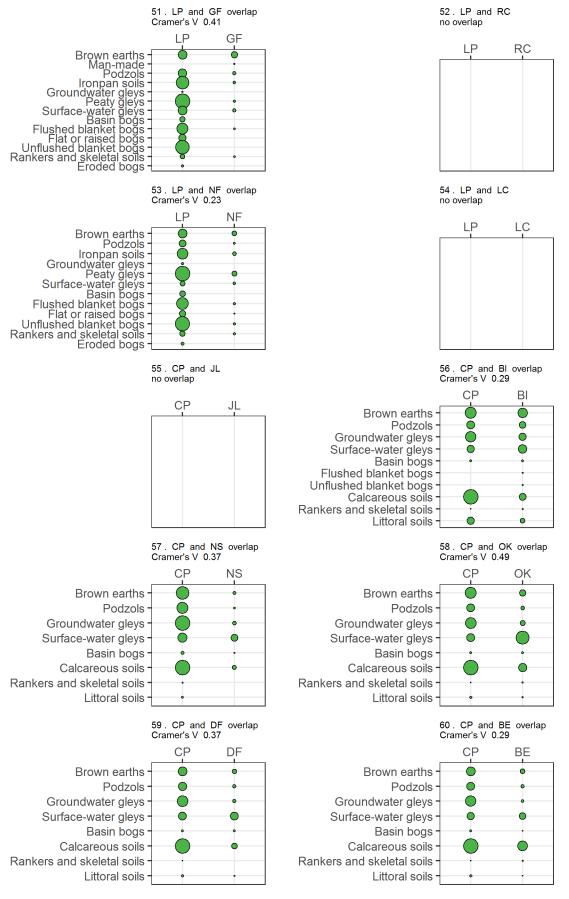


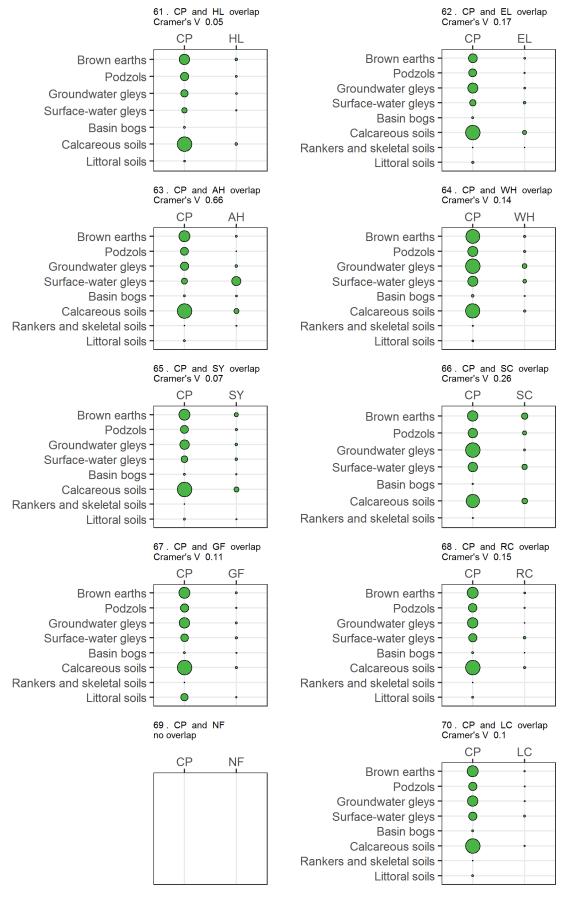


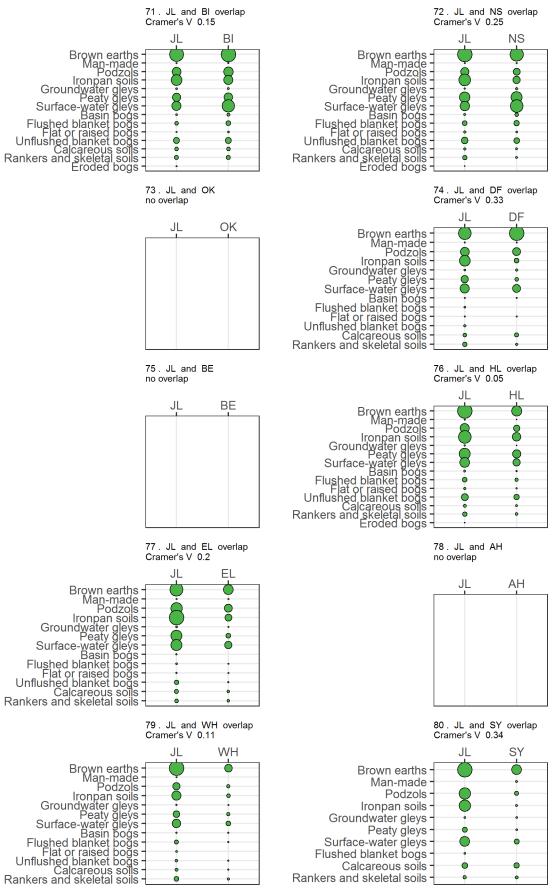


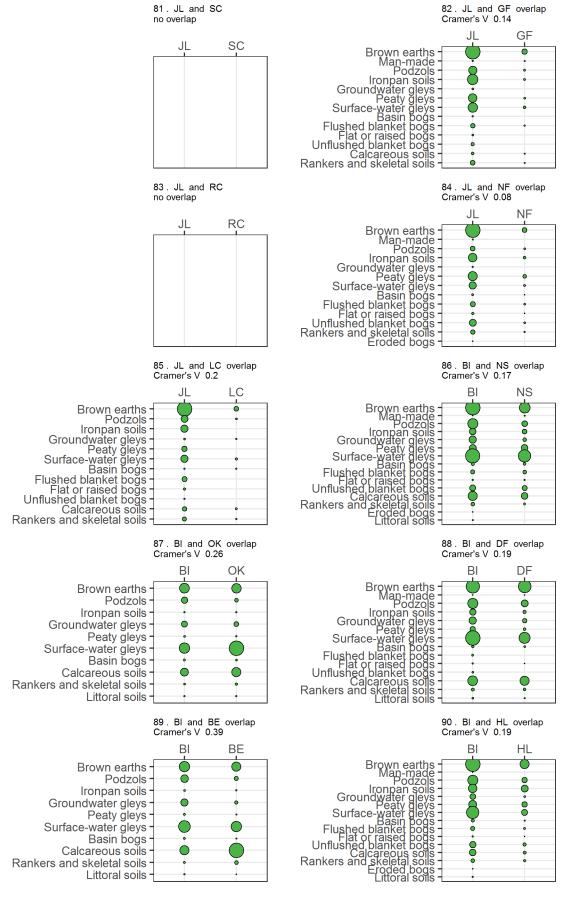




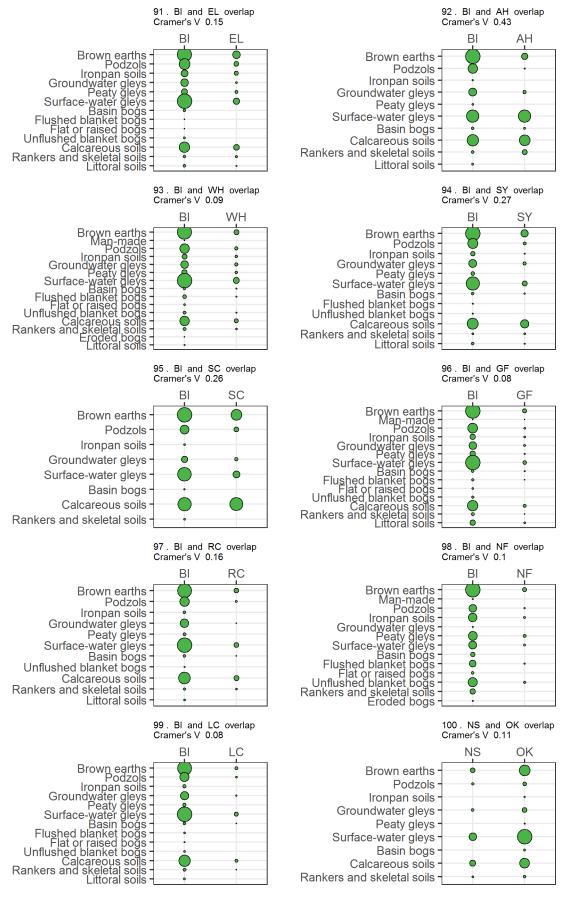


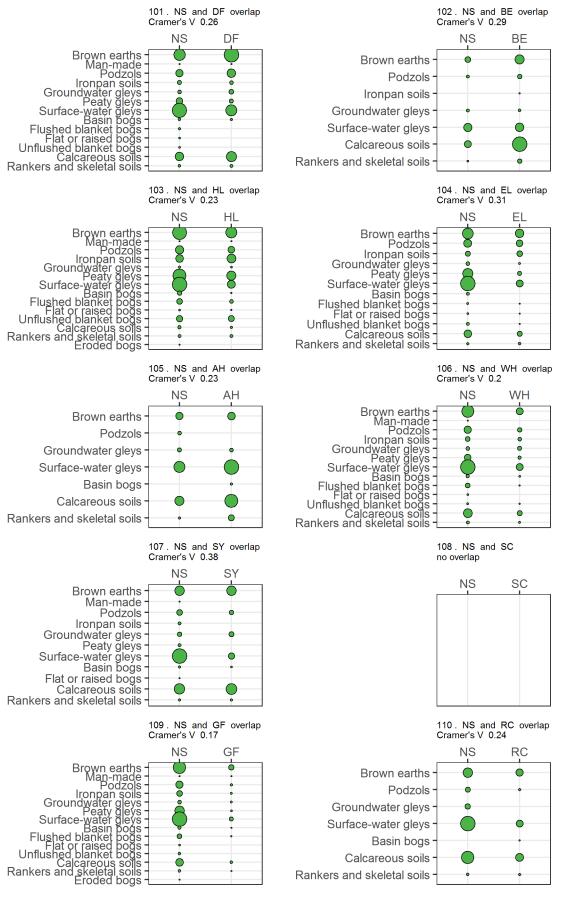






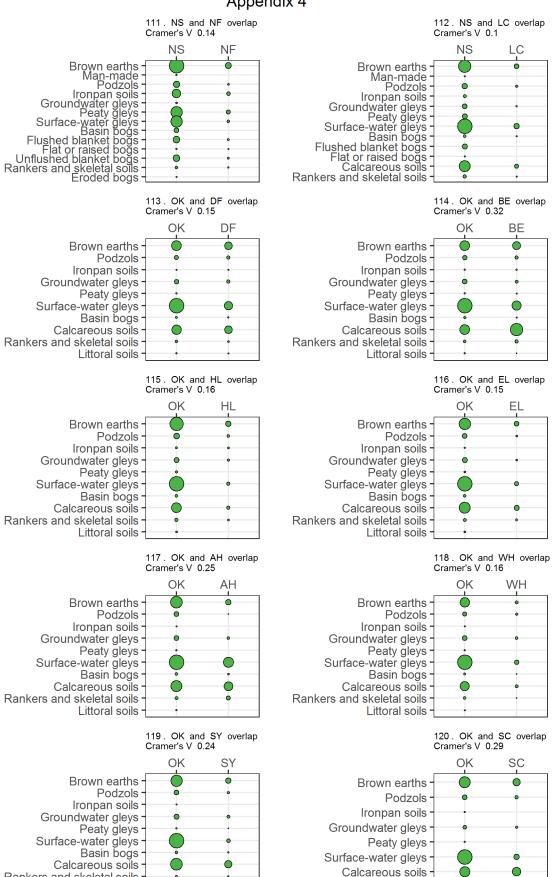








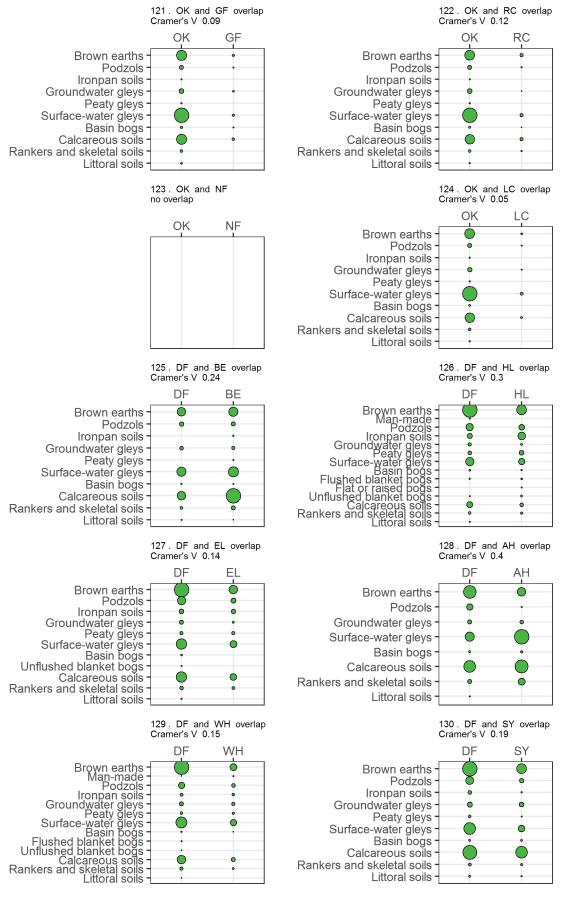
### Appendix 4



Rankers and skeletal soils

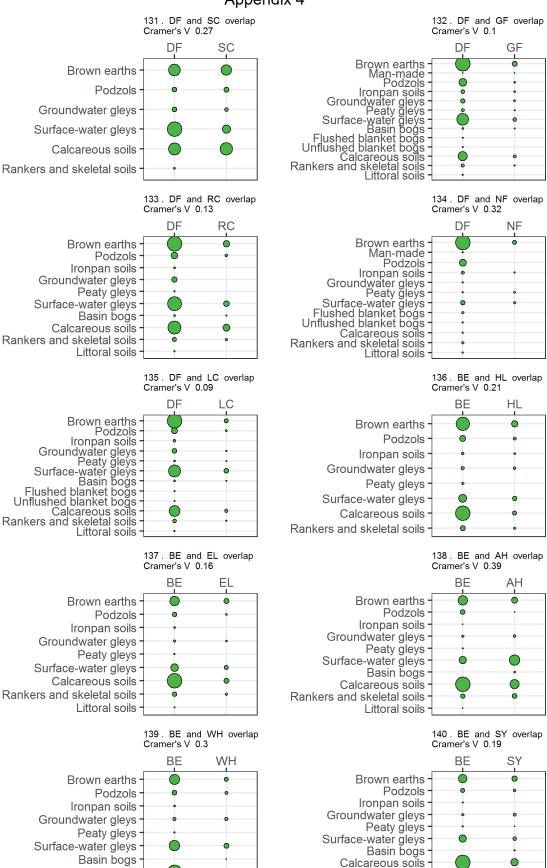
Littoral soils

Rankers and skeletal soils





### Appendix 4

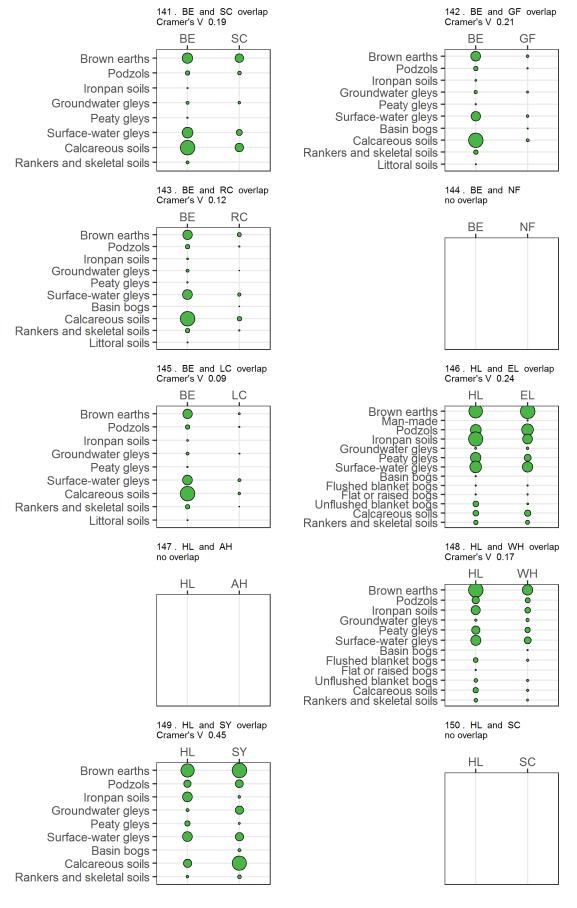


Calcareous soils

Rankers and skeletal soils

Rankers and skeletal soils

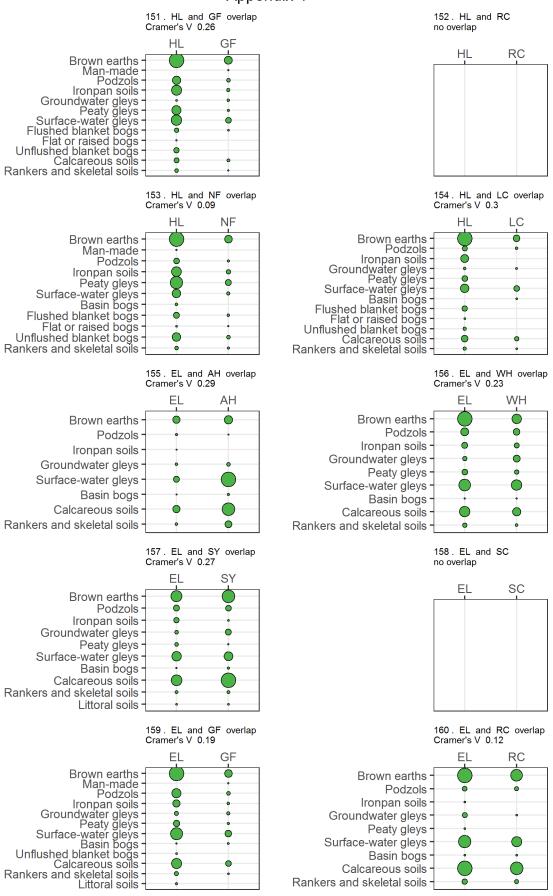
Littoral soils



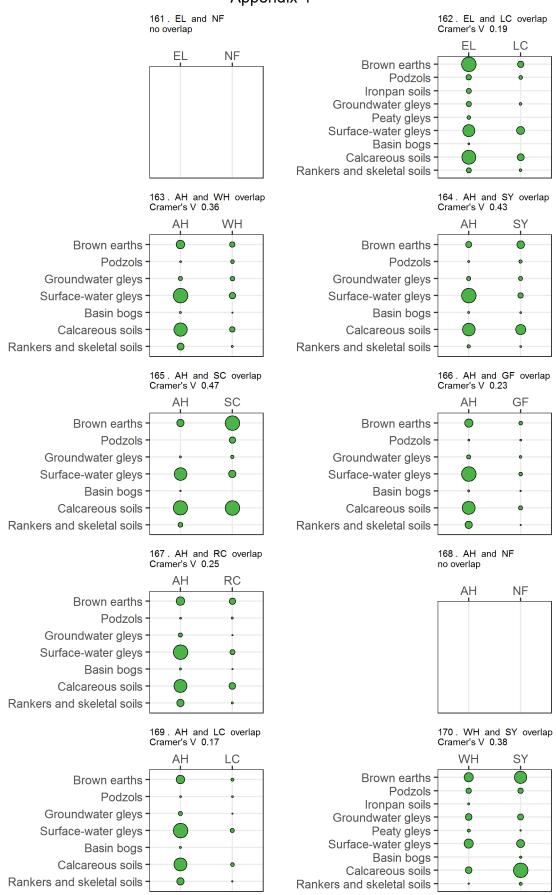




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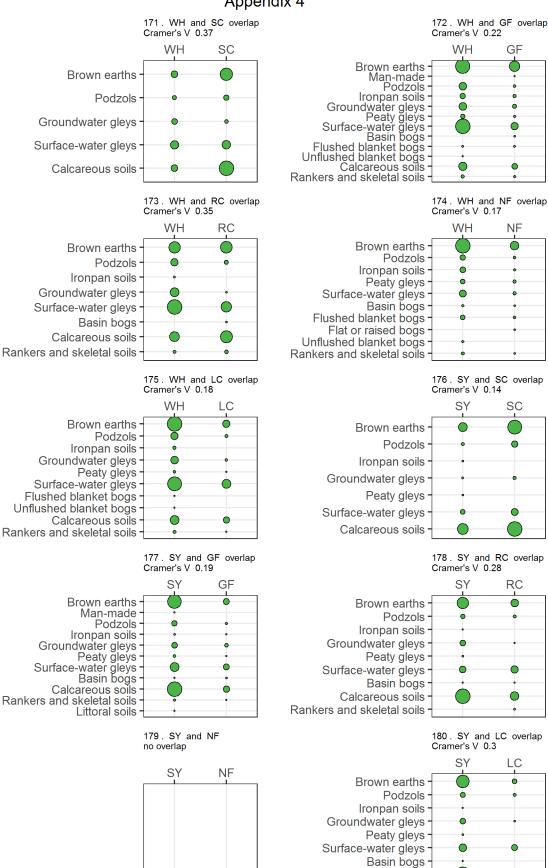


Rankers and skeletal soils





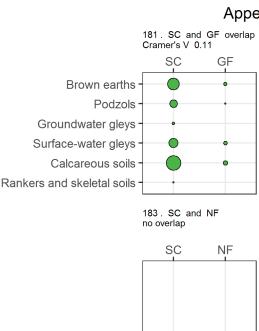
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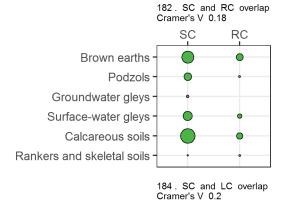


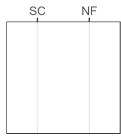
Calcareous soils

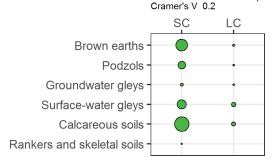
Rankers and skeletal soils

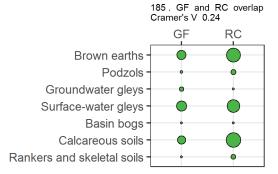
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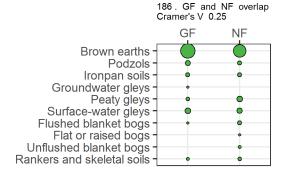


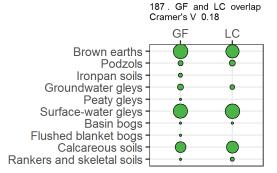


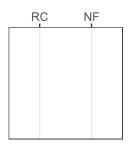


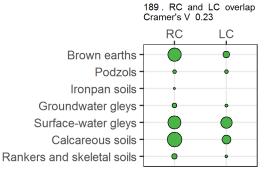








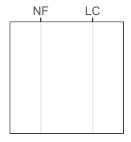




190 . NF and LC no overlap

188 . RC and NF

no overlap









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