Ecography

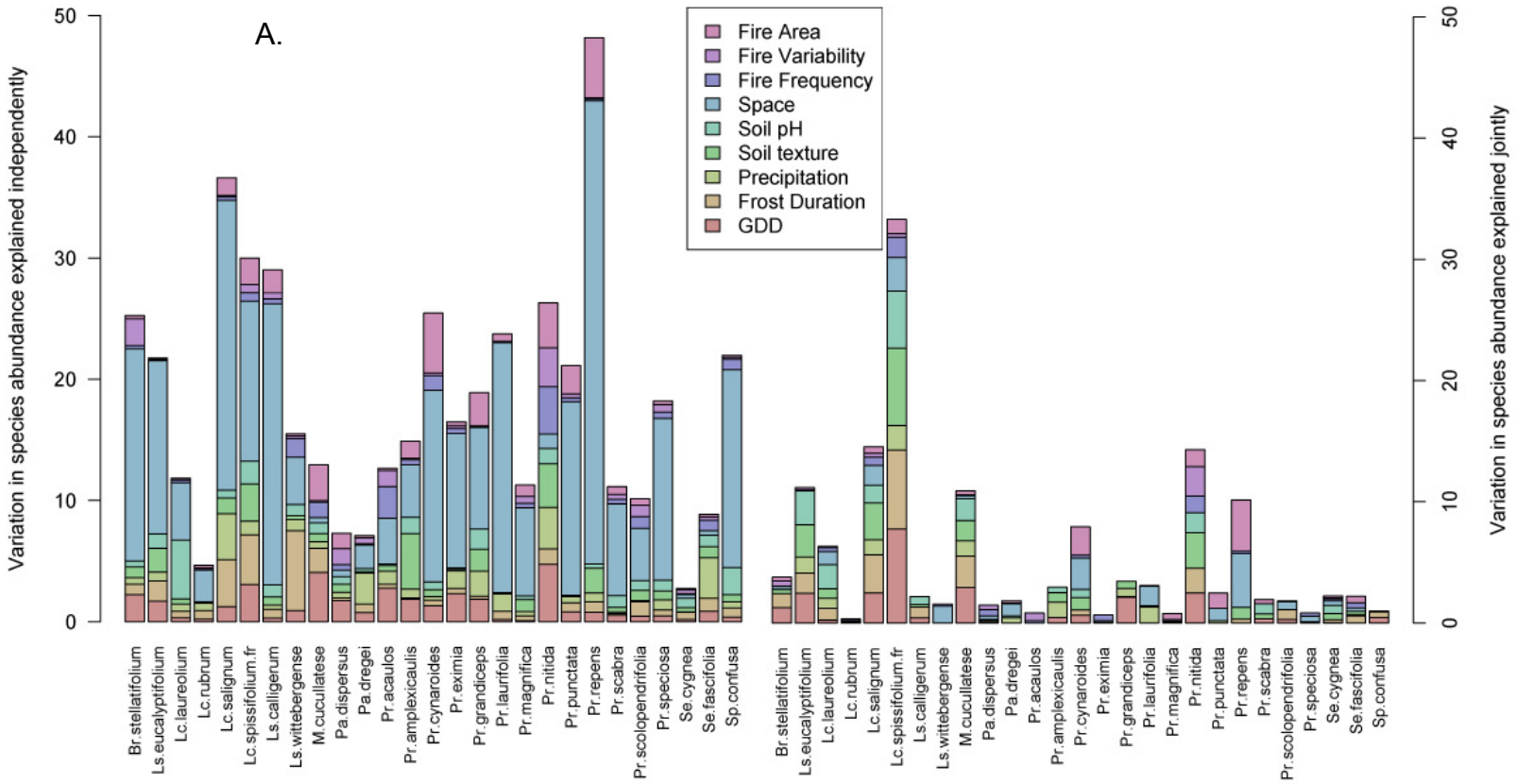
E6948
Tucker, C. M., Rebelo, A. G. and Manne, L. L. 2011. Contribution of disturbance to distribution and abundance in a fire-adapted system. – Ecography 34: xxx–xxx.

Supplementary material

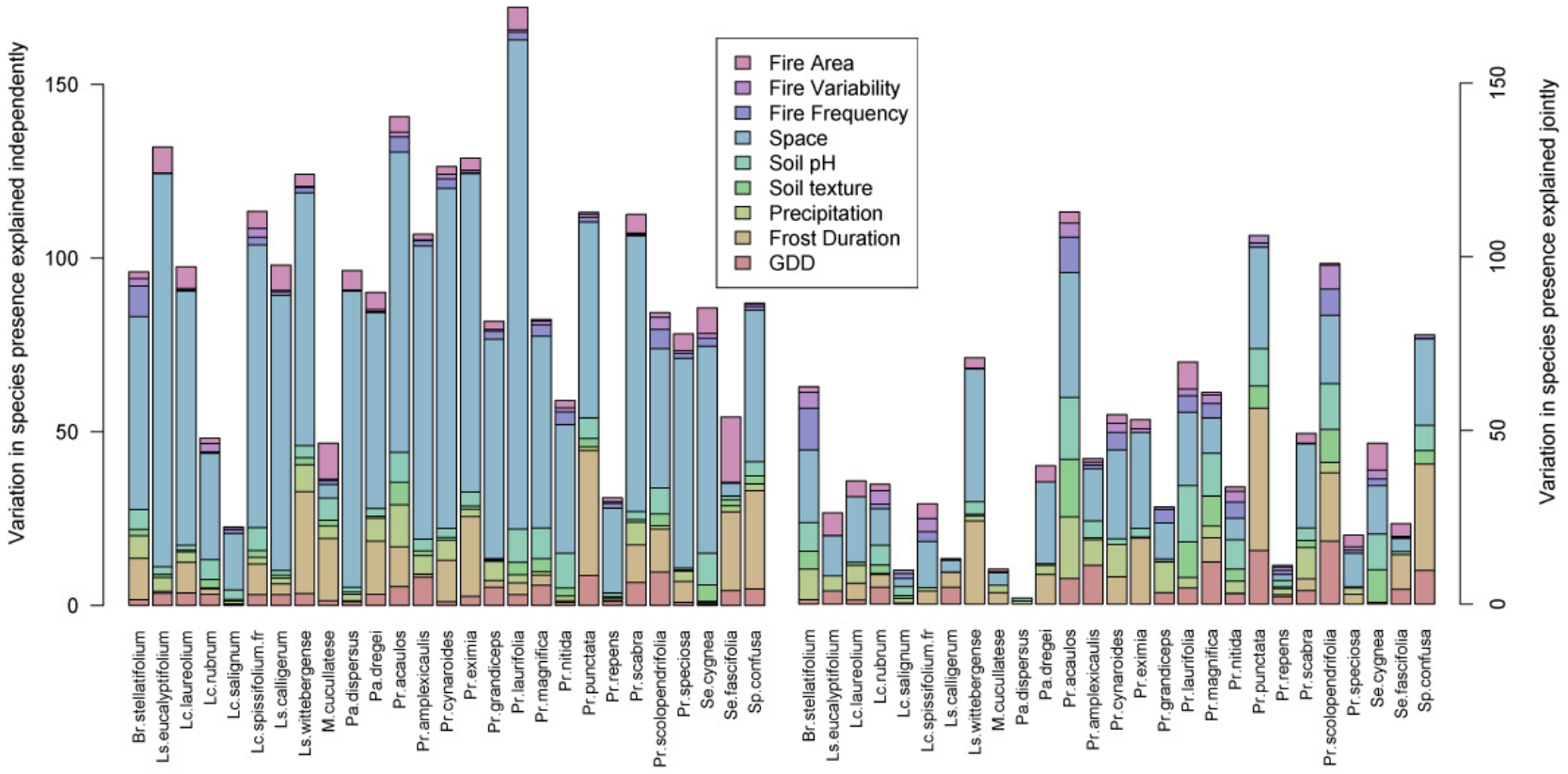
Appendix 1. Selected life history traits of the 27 Cape Floristic Proteaceae species included for analysis. Nomenclature follows Rebelo (2001).

Species	Generation (yr)	Seed dispersal vector	Average seed volume (mL)	Average seed production	Fire response	Seed storage	Height	Major Pollinator
Brabejum stellatifolium	400	water	NA	5000	resprouting	recalcitrant	10000	insect
Leucadendron eucalyptifolium	20	wind	42	18000	seeding	serotinous	3000	small beetles
Leucadendron laureolum	20	wind	100	5400	seeding	serotinous	1000	small beetles
Leucadendron rubrum	20	wind	56	2250	seeding	serotinous	1500	wind
Leucadendron salignum	200	wind	76	2100	resprouting	serotinous	500	small beetles
Leucadendron spissifolium fragrans	200	wind	42	2250	resprouting	serotinous	500	small beetles
Leucospermum calligerum	20	ant	54	525	seeding	underground	1500	birds
Leucospermum wittebergense	20	ant	54	200	seeding	underground	1000	birds
Mimetes cucullatus	200	ant	200	750	resprouting	underground	1000	birds
Paranomus dispersus	20	ant	96	2000	resprouting	underground	1000	insect
Paranomus dregei	20	ant	96	250	seeding	underground	1000	insect
Protea acaulos	20	wind	NA	NA	resprouting	serotinous	200	mammals
Protea amplexicaulis	20	wind	16	800	seeding	serotinous	300	mammals
Protea cynaroides	200	wind	72	720	resprouting	serotinous	1000	birds
Protea eximia	20	wind	67	5800	seeding	serotinous	3000	birds
Protea grandiceps	20	wind	34	2560	seeding	serotinous	2000	birds
Protea laurifolia	40	wind	NA	7600	seeding and escape	serotinous	4000	birds
Protea magnifica	20	wind	NA	350	seeding	serotinous	1500	birds
Protea nitida	200	wind	156	3000	resprouting	litter	500	birds
Protea punctata	20	wind	26	2400	seeding	serotinous	3000	birds
Protea repens	20	wind	145	9300	seeding	serotinous	2500	birds
Protea scabra	20	wind	NA	30	resprouting	serotinous	300	mammals
Protea scolopendriifolia	20	wind	NA	85	resprouting	serotinous	500	mammals
Protea speciosa	200	wind	43	240	resprouting	serotinous	750	birds
Serruria cygnea	200	ant	12	900	resprouting	underground	750	insect
Serruria fasciflora	20	ant	36	2400	seeding	underground	500	insect
Spatalla confusa	20	ant	9	1800	seeding	underground	500	insect

Appendix 2. Results of hierarchical partitioning for 27 Proteaceae species; stacked barplots show the contribution to variation (log-likelihood) in A. species abundance and B. species presence explained by each of the 9 explanatory variables. Graphs on the left represent the independent component of explained variation, while graphs on the right represent the joint component.



B.


Variation in species presence explained independently
Variation in species presence explained jointly
0
50
100
150
Fire Area
Fire Variability
Fire Frequency
Space
Soil pH
Soil texture
Precipitation
Frost Duration
GDD
Br.stellatifolium
Ls.eucalyptifolium
Lc.laureolium
Lc.rubrum
Lc.salignum
Lc.spissifolium.fr
Ls.calligerum
Ls.wittebergense
M.cucullatese
Pa.dispersus
Pa.dregei
Pr.acaulos
Pr.amplexicaulis
Pr.cynaroides
Pr.eximia
Pr.grandiceps
Pr.laurifolia
Pr.magnifica
Pr.nitida
Pr.punctata
Pr.repens
Pr.scabra
Pr.scolopendrifolia
Pr.speciosa
Se.cygnea
Se.fascifolia
Sp.confusa