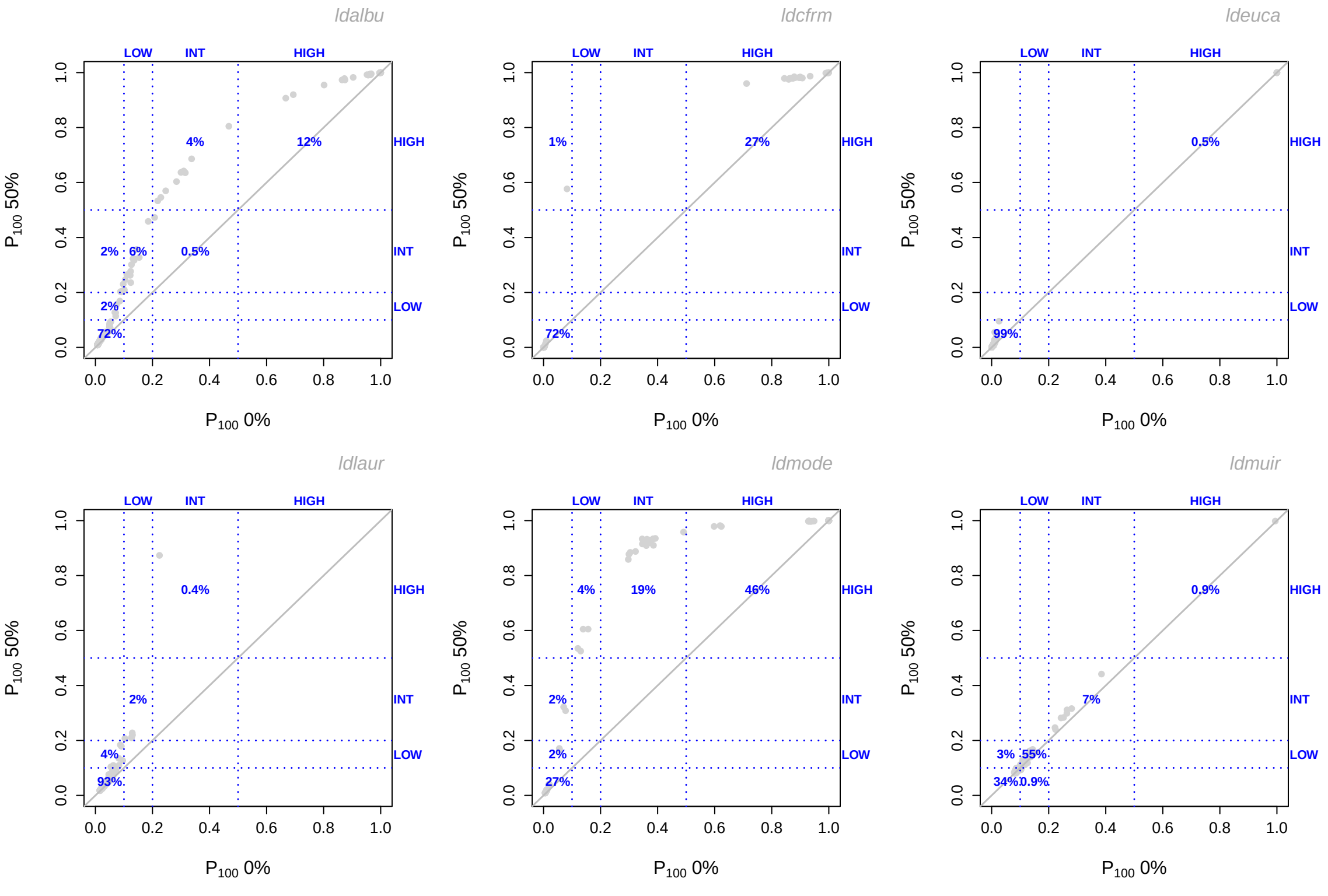
Fig S1 (continued overleaf) Intraspecific variation in sensitivity to wildflower harvesting across the global geographical distributions of 26 serotinous Proteaceae species. P_{100} 0% (x-axis) and P_{100} 50% (y-axis) are estimated population-level extinction probabilities over 100 years in response to 0% and 50% harvesting, respectively. In each plot, dots represent populations in different environments across the geographical ranges of each study species. The diagonal line (grey) represents no change in extinction probabilities across populations due to harvesting, whereas a greater deviation of points from this line indicates a higher sensitivity (ΔP) to harvesting for the respective populations. Dashed blue lines indicate thresholds between the different extinction risk categories (VERY LOW ($P_{100} < 0.1$; no label), LOW ($P_{100} \geq 0.1$), INTERMEDIATE ($P_{100} \geq 0.2$) or HIGH ($P_{100} \geq 0.5$)) and numbers give the percentages of populations that either remain in a category or move to a higher category due to harvesting. Note that the category "VERY LOW" is not labelled in these plots of Fig S1 (but see Fig. 2 in the main text).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ldeuca
ldlaur
ldmode
ldmuir
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INT
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6%
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2%
72%
1%
27%
72%
0.5%
99%
0.4%
2%
4%
93%
4%
19%
46%
2%
2%
27%
0.9%
7%
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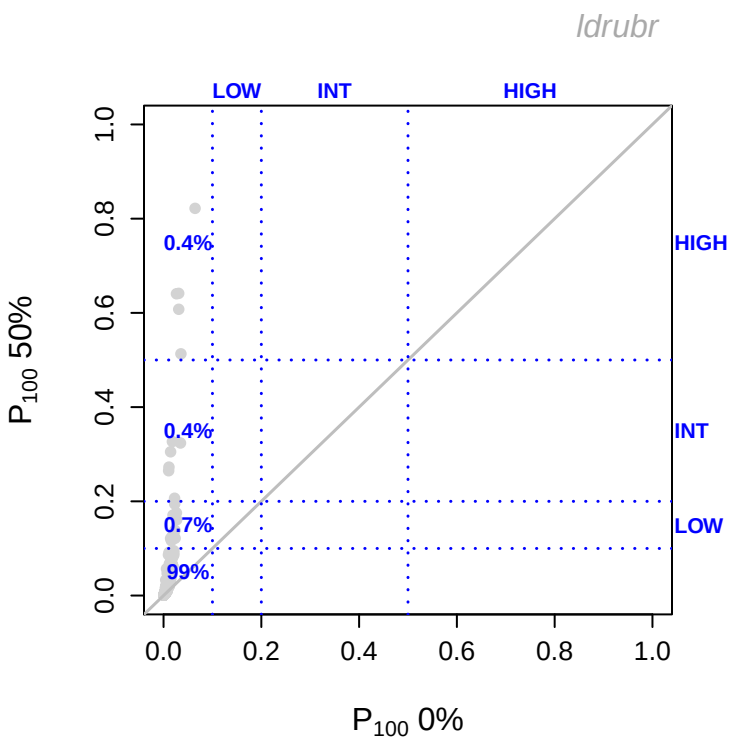
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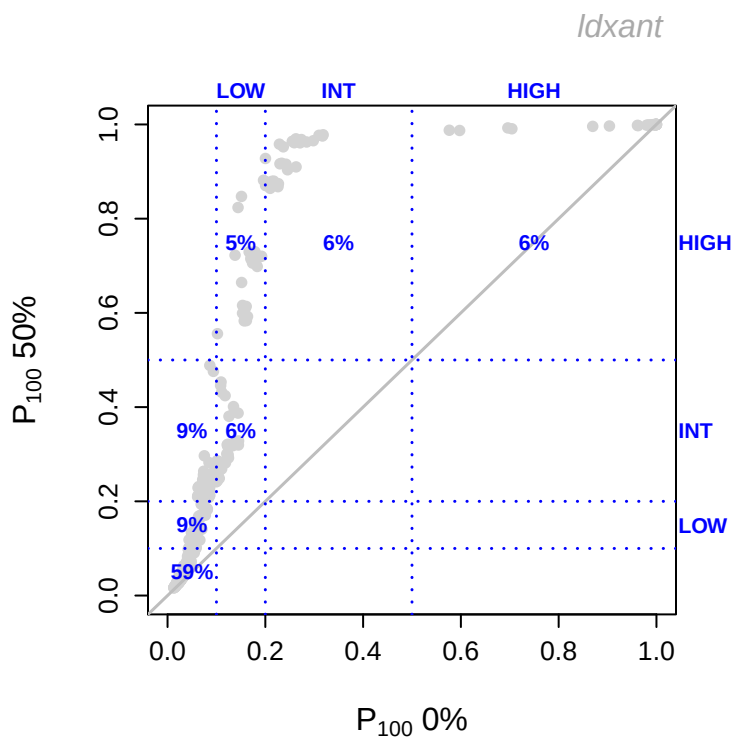
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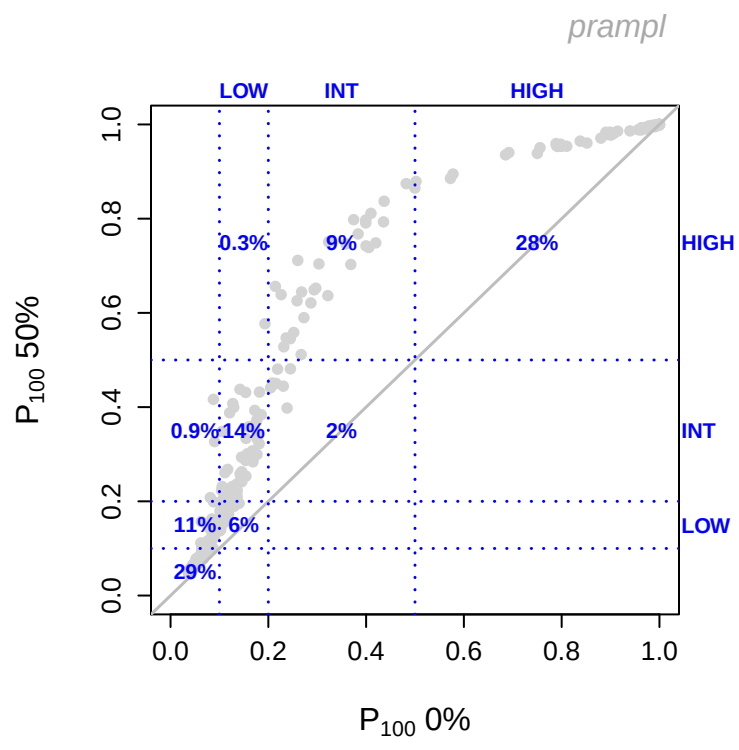
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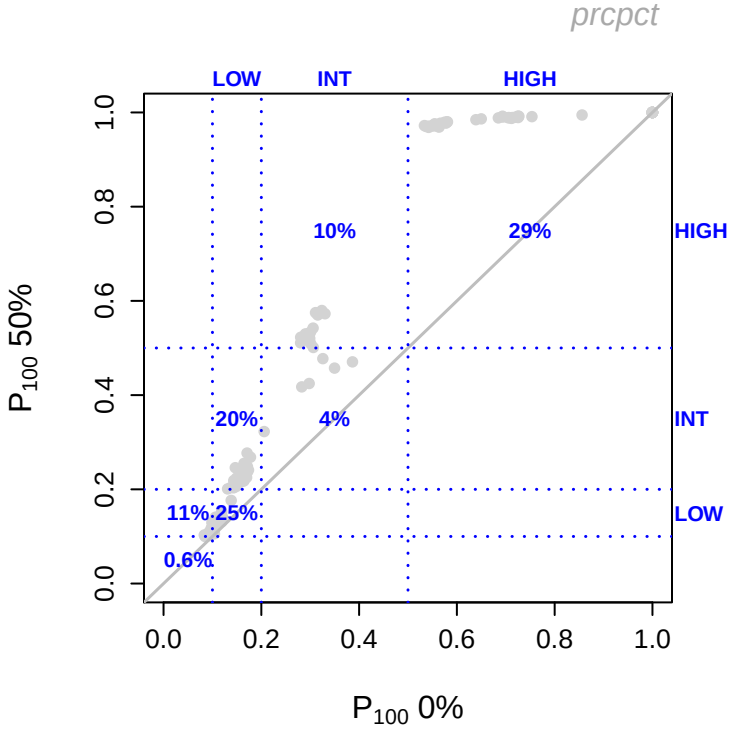
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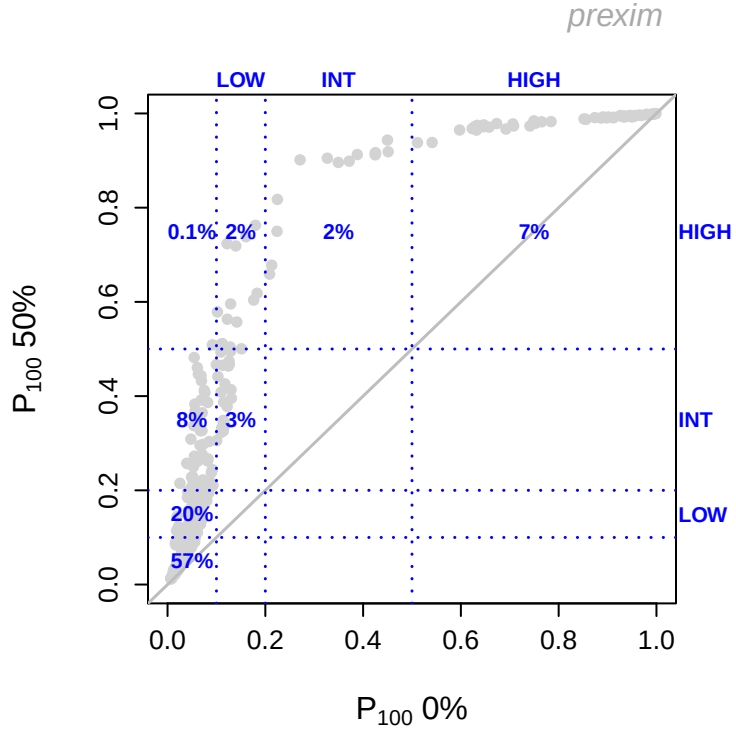
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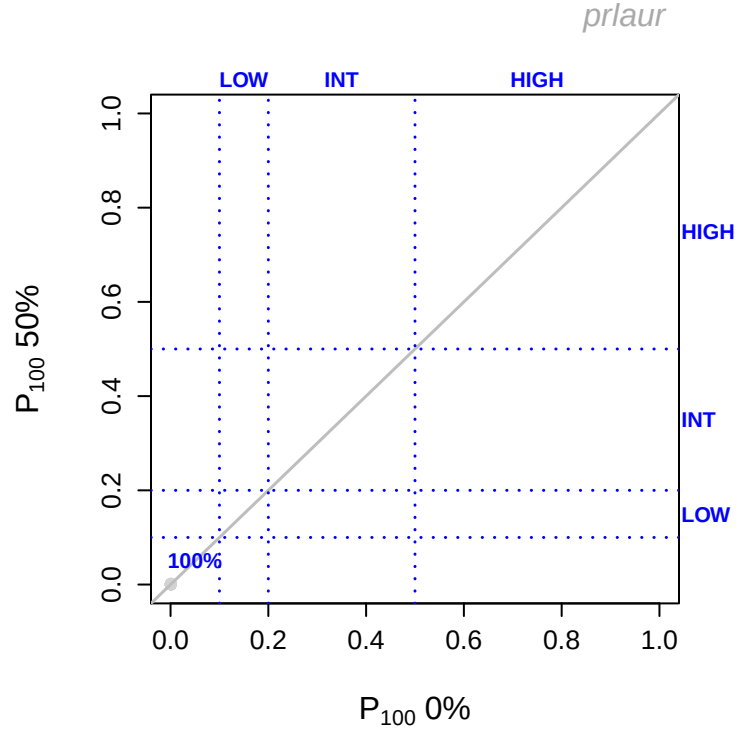
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INT
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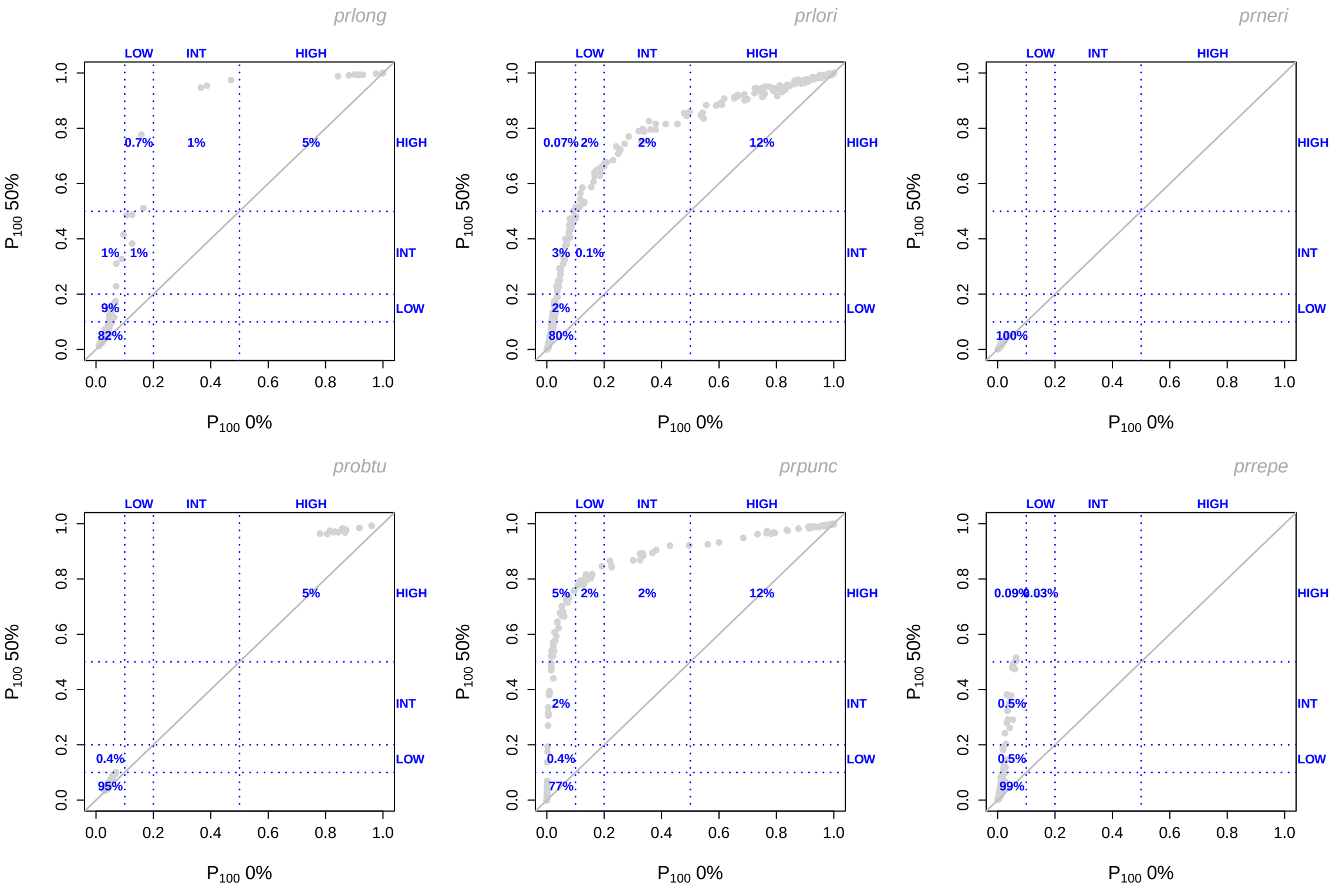
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5%
1%
1%
9%
82%
HIGH
INT
LOW
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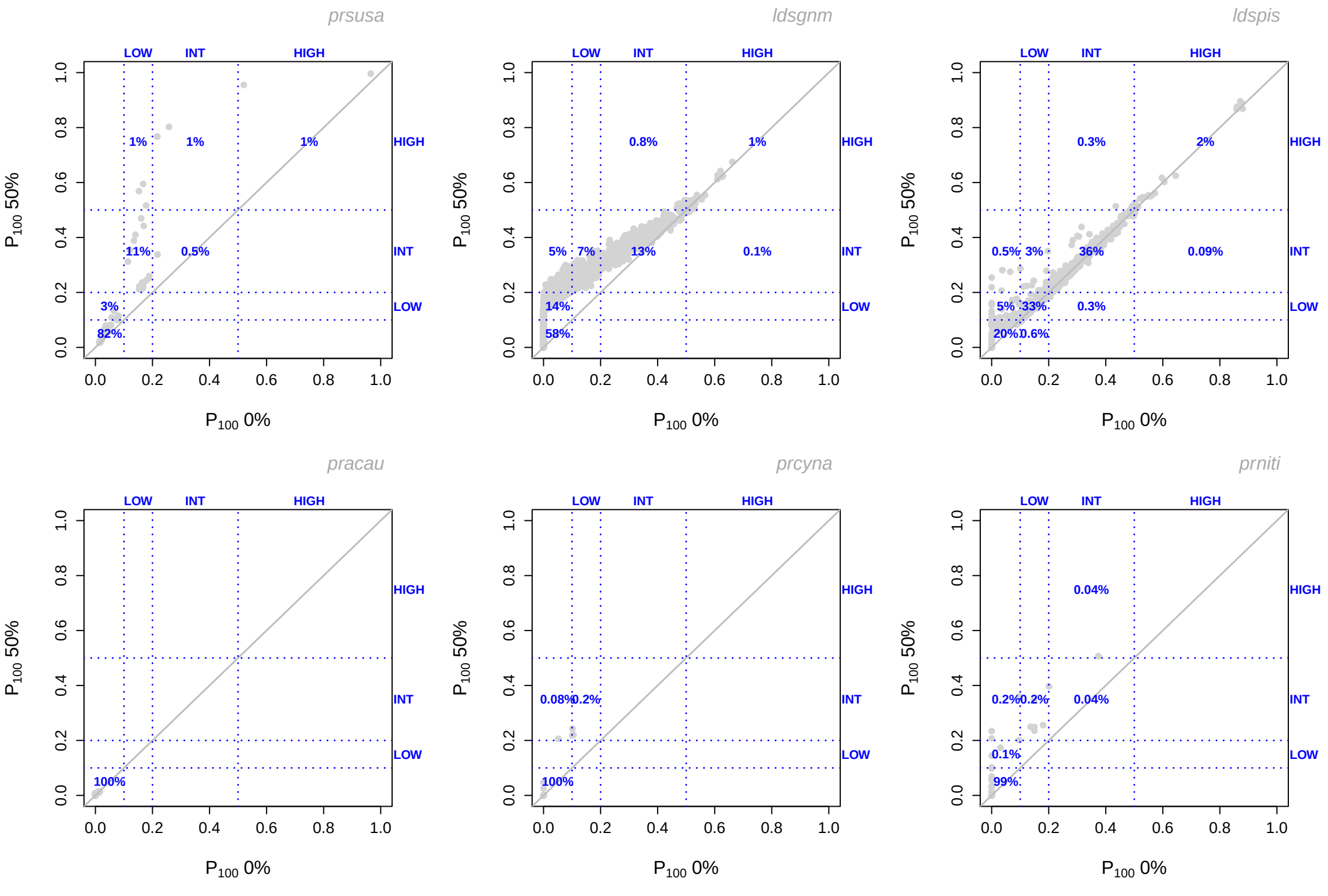
P100 0%
prlori
0.07%
2%
2%
12%
3%
0.1%
2%
80%
prneri
100%
probtu
5%
0.4%
95%
prpunc
5%
2%
2%
12%
2%
0.4%
77%
prrepe
0.09%
0.03%
0.5%
0.5%
99%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1%
1%
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3%
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HIGH
INT
LOW
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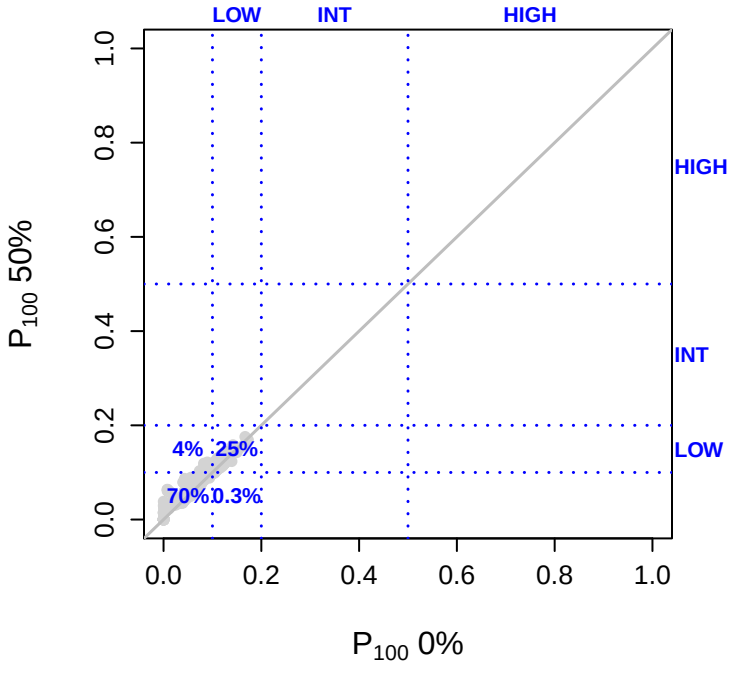
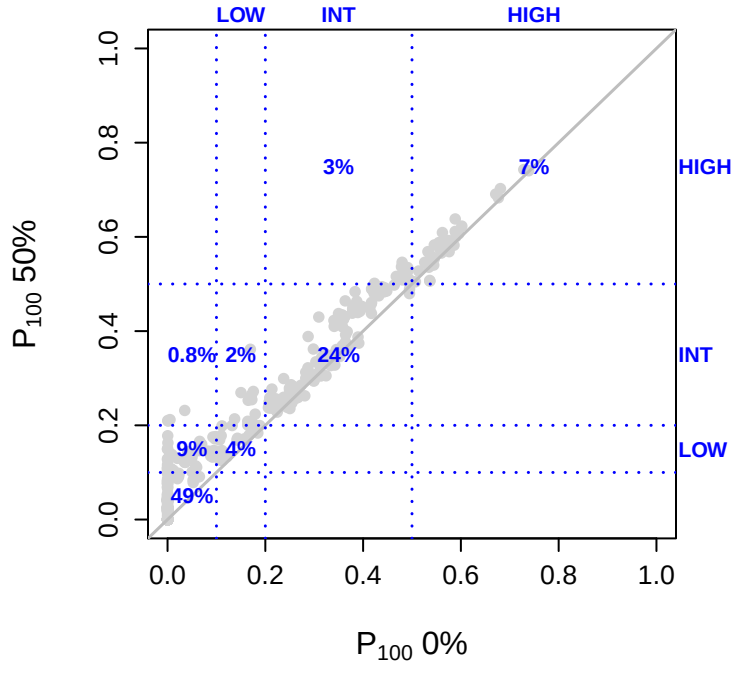
P100 0%
ldsgnm
0.8%
1%
5%
7%
13%
0.1%
14%
58%
ldspis
0.3%
2%
0.5%
3%
36%
0.09%
5%
33%
0.3%
20%
0.6%
pracau
100%
prcyna
0.08%
0.2%
100%
prniti
0.04%
0.2%
0.2%
0.04%
0.1%
99%

prscbr



prsrfl



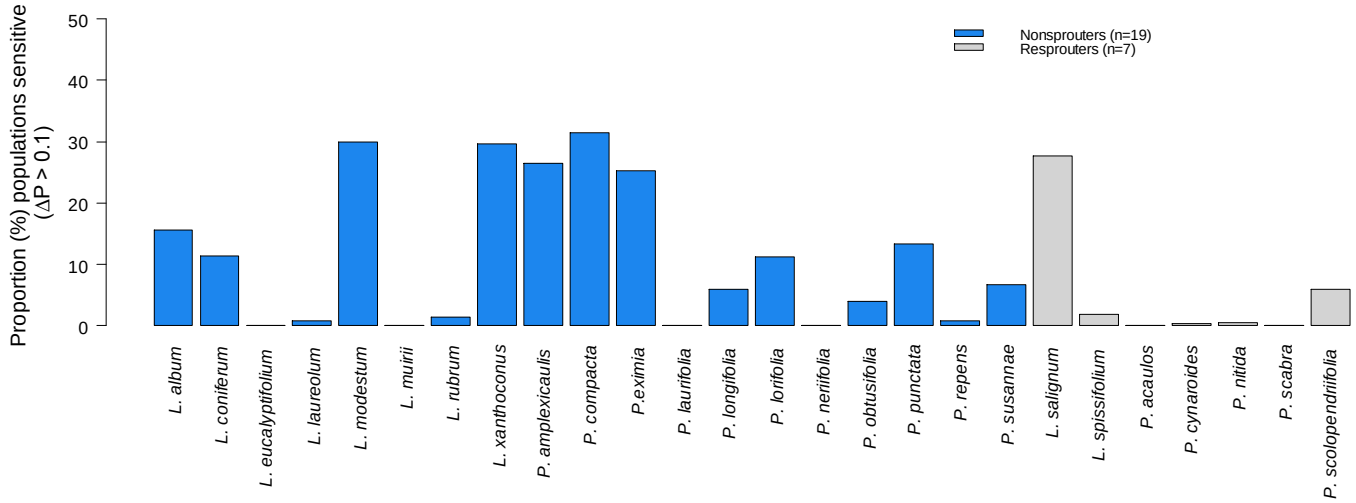
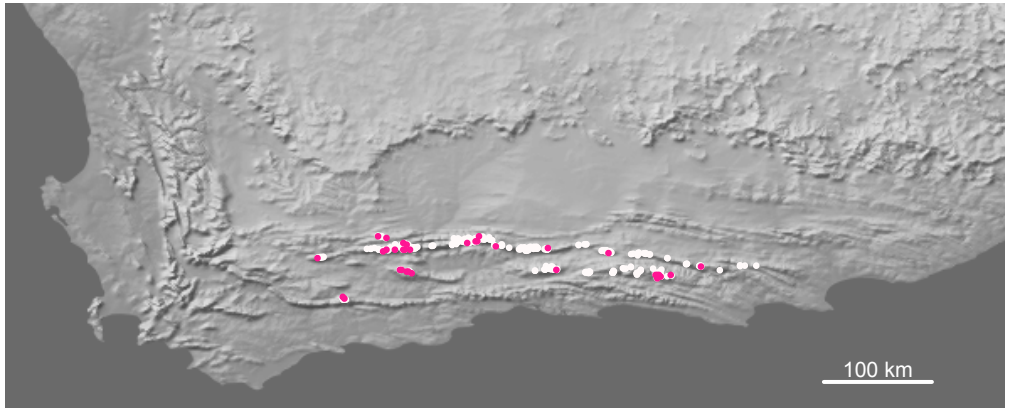


Fig S2 The proportion of populations per species that experience more than a 10% increase in extinction probability ($\Delta P > 0.1$) due to wildflower harvesting for 26 serotinous Proteaceae species (see also Figure 4 in the main text).

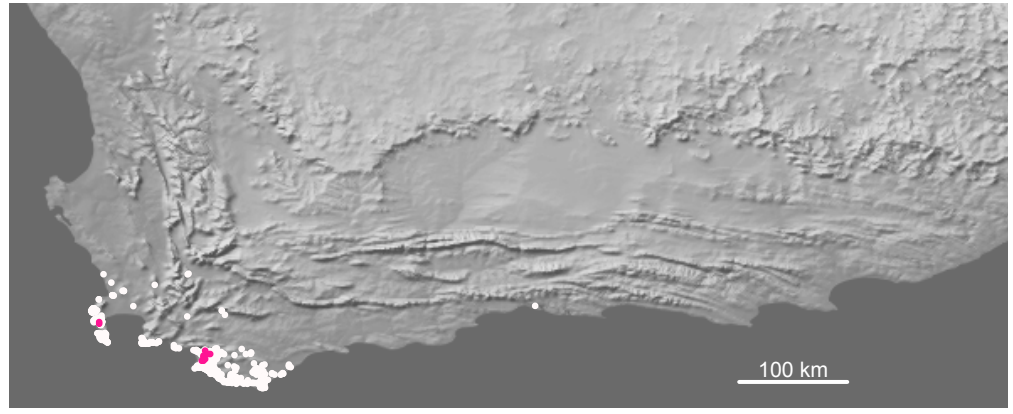
Fig S3 (continued overleaf) Geographical variation in sensitivity to wildflower harvesting for 26 Proteaceae study species (Cape Floristic Region, South Africa). Pink dots are highlighted grid cells (1' × 1') where the change in population-level extinction probability $\Delta P > 0.1$. ΔP was calculated as the difference between extinction probabilities under 0% and 50% harvesting (see Fig. 1 in the main text). The white areas depict species-specific occurrence records in the study region (Rebelo 2001).

L. album

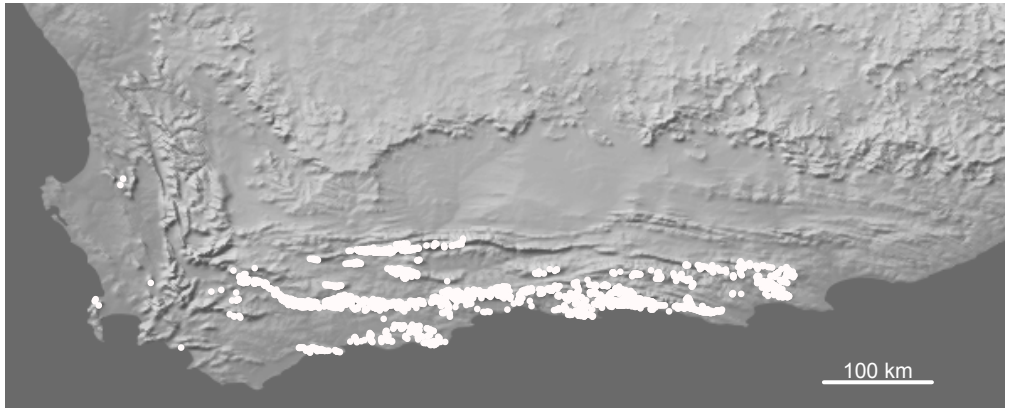
ΔP>0.1



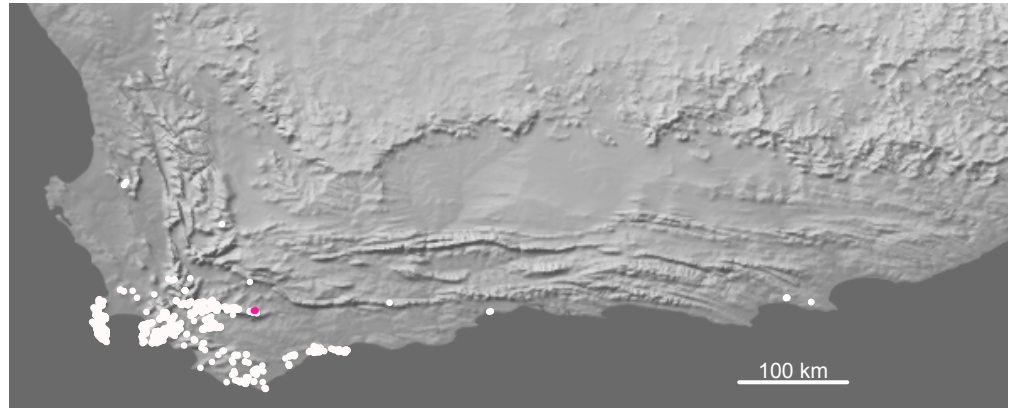
L. coniferum



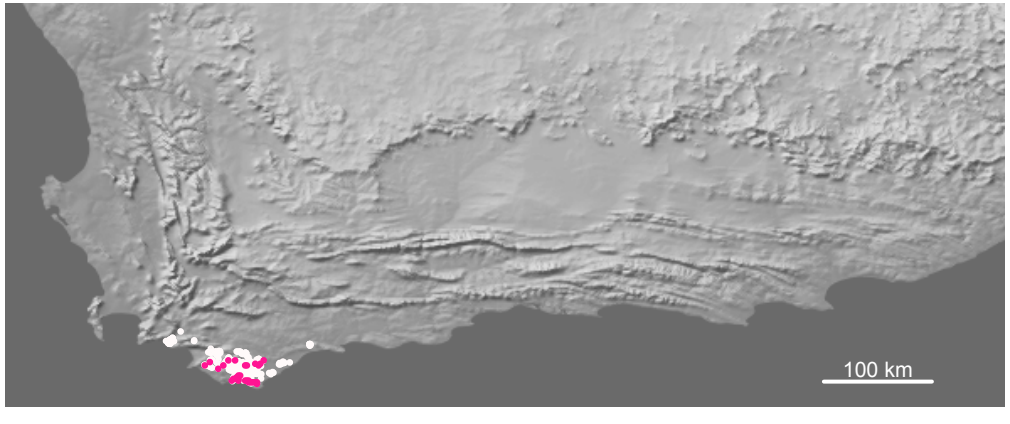
L. eucalyptifolium



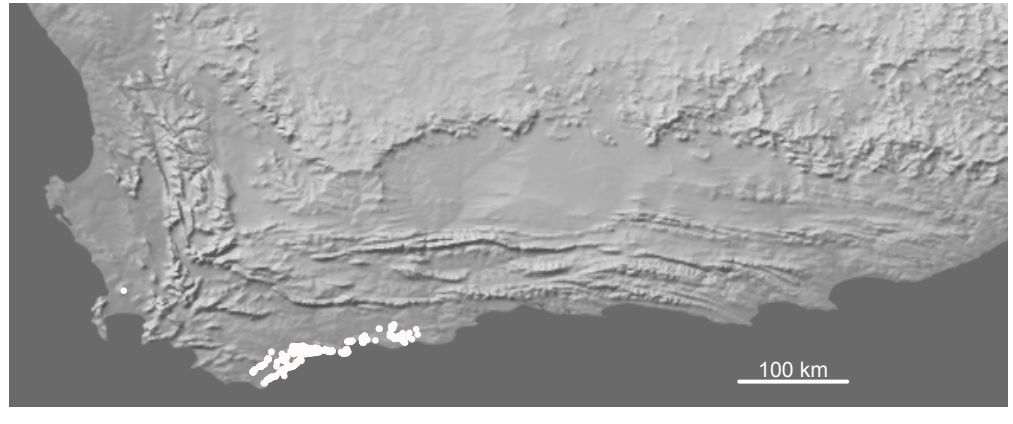
L. laureolum



L. modestum

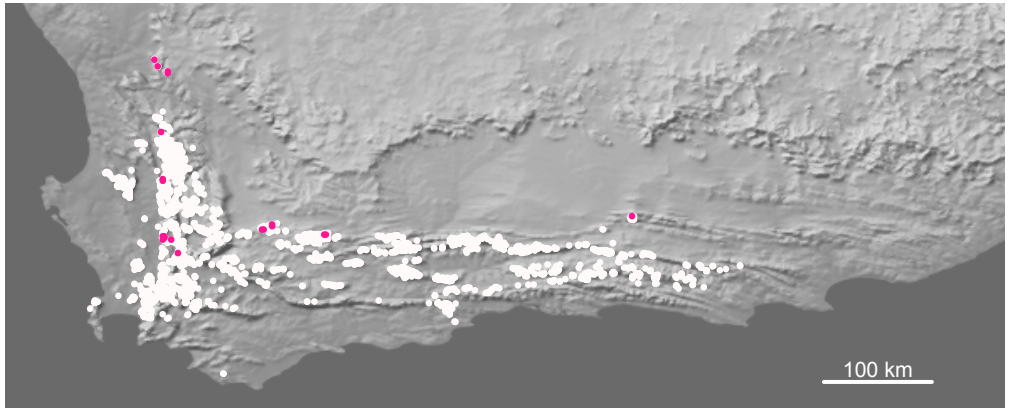


L. muirii

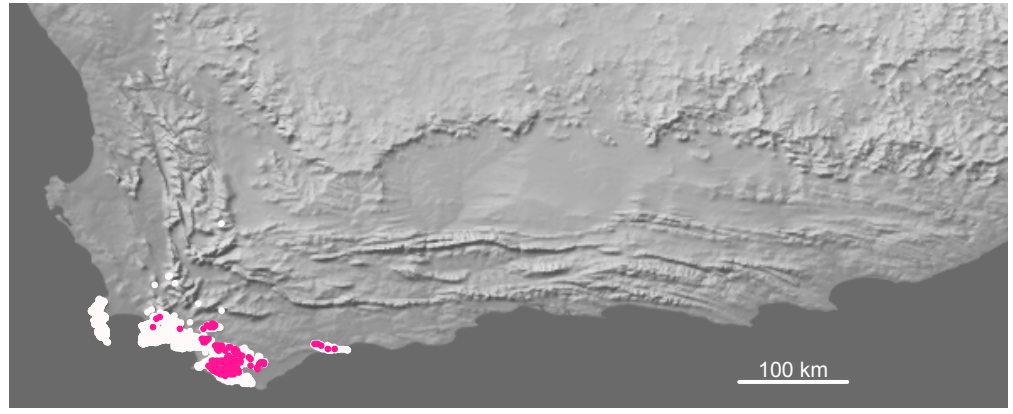


L. rubrum

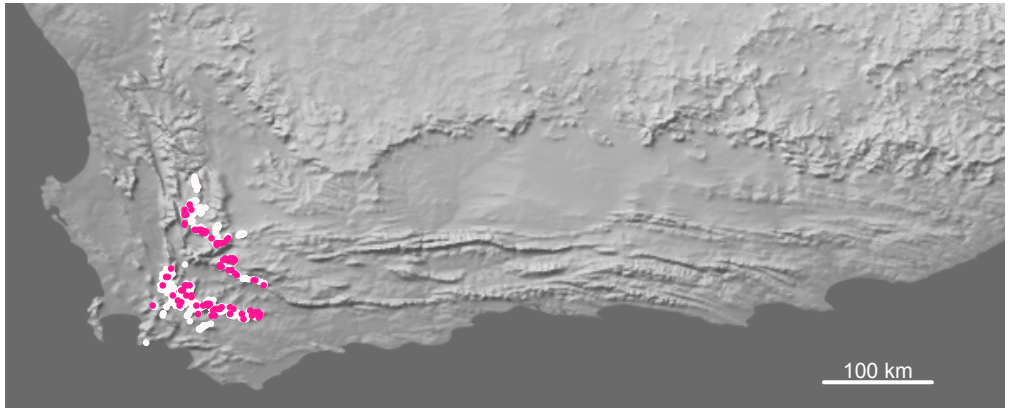
ΔP>0.1



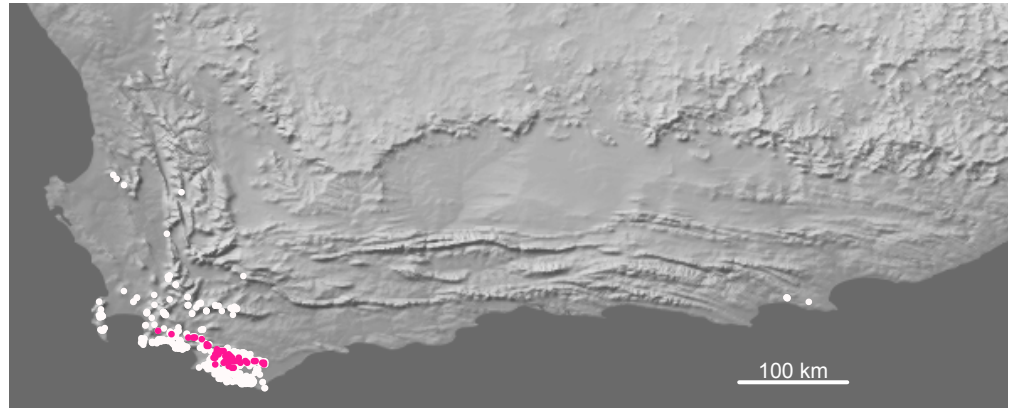
L. xanthoconus



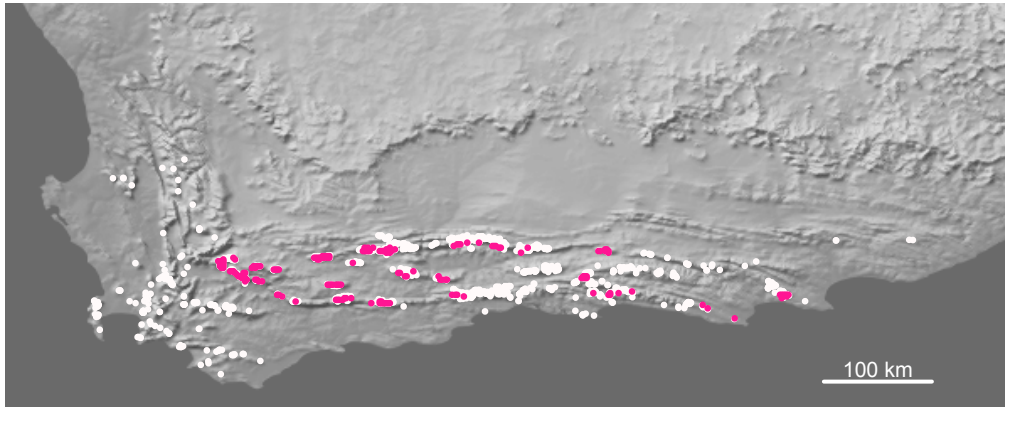
P. amplexicaulis



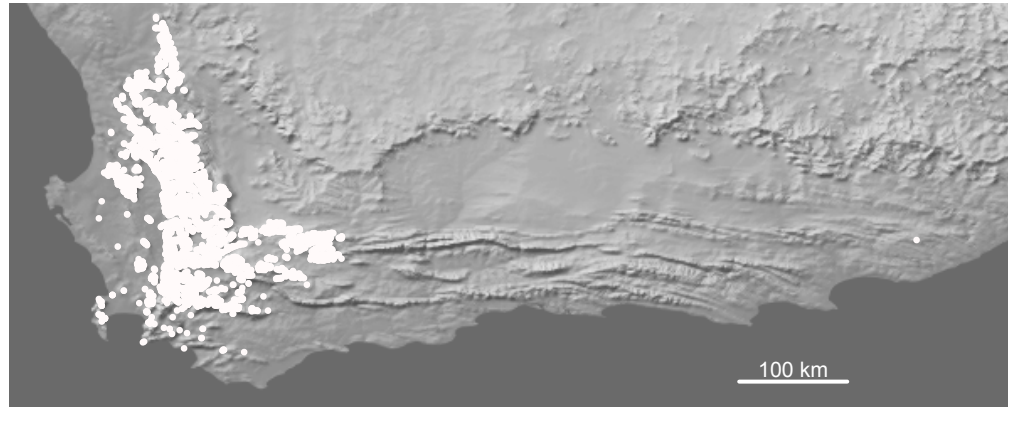
P. compacta



P. eximia

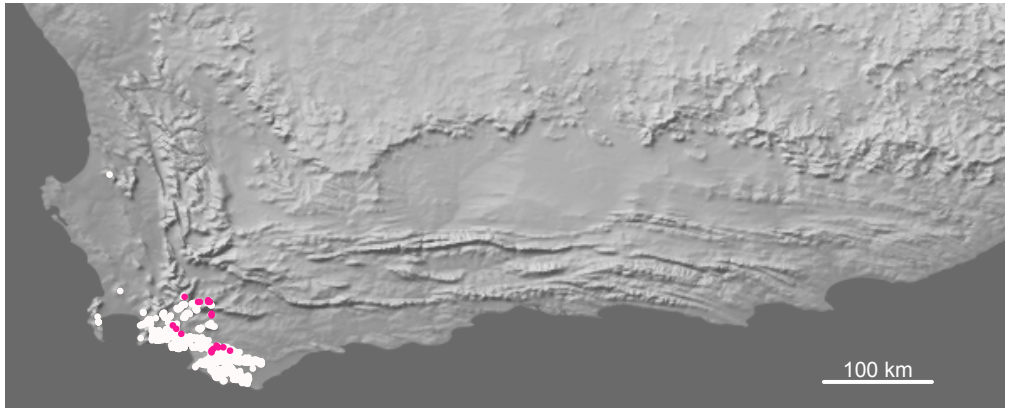


P. laurifolia

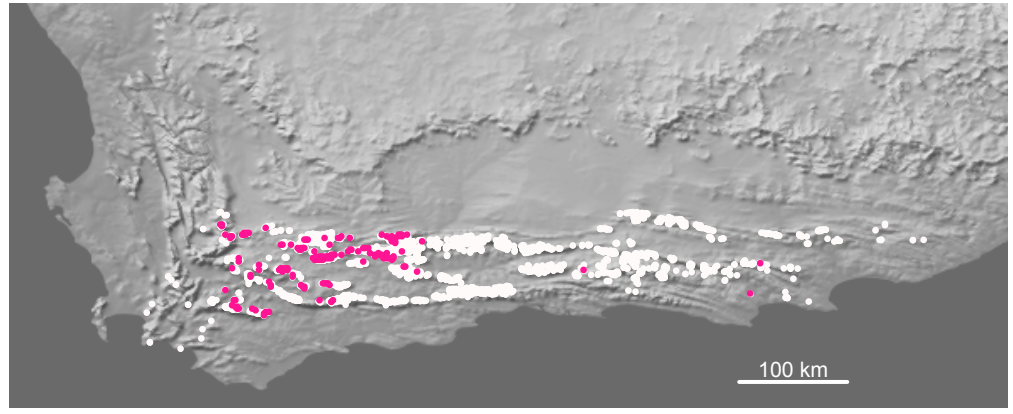


P. longifolia

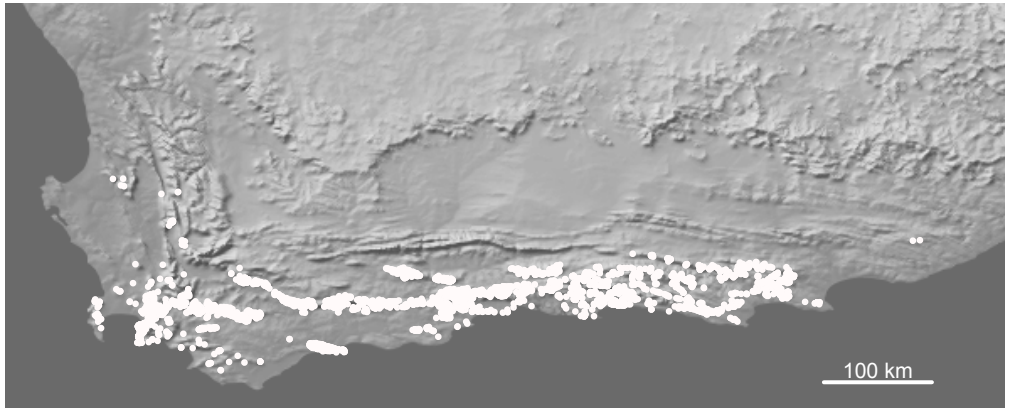
ΔP>0.1



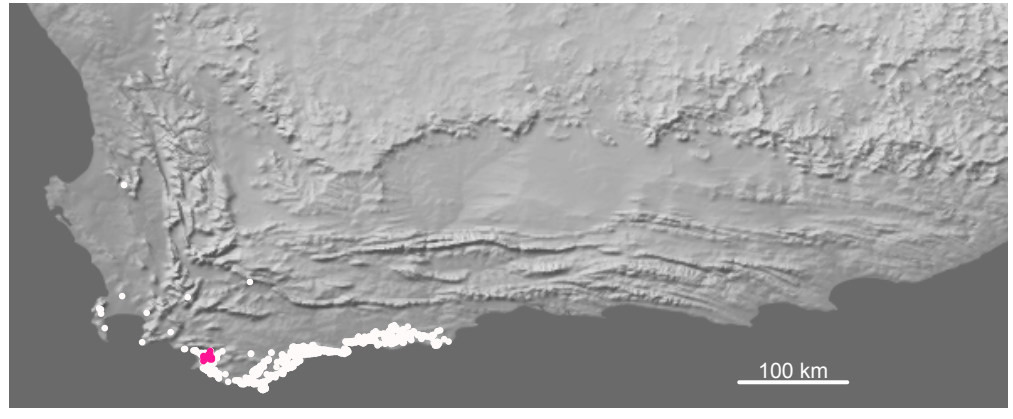
P. lorifolia



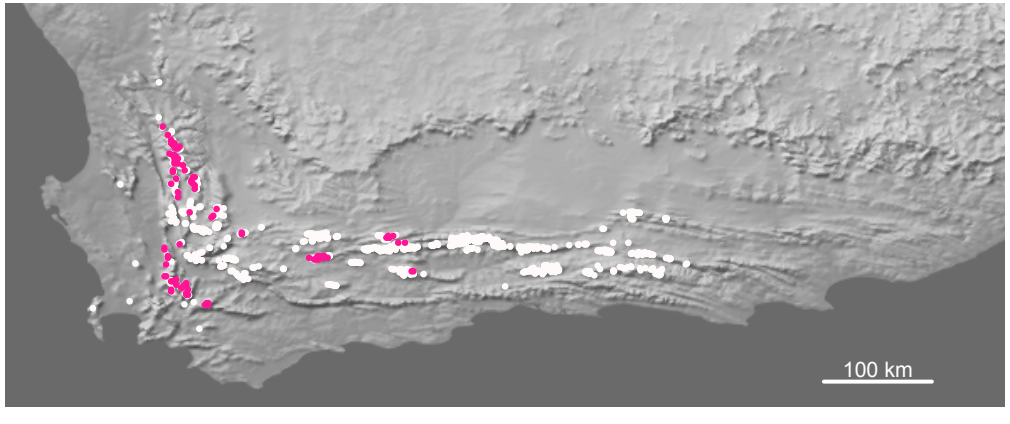
P. neriifolia



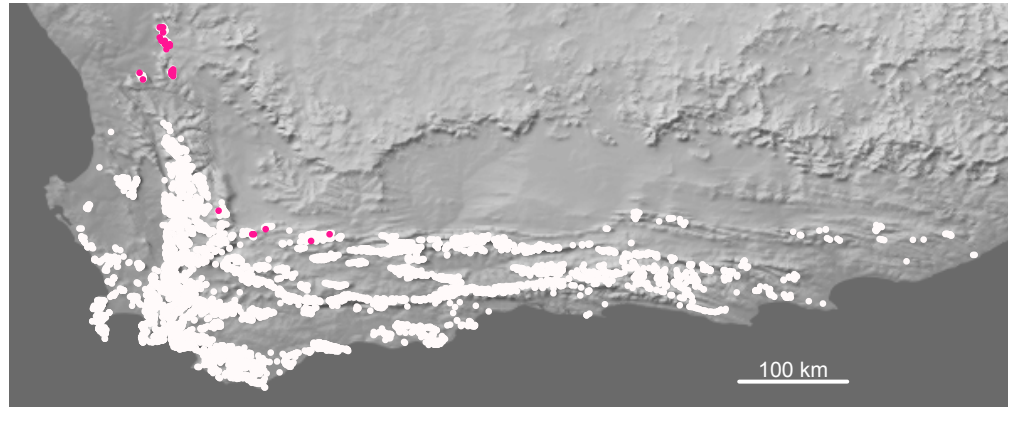
P. obtusifolia



P. punctata

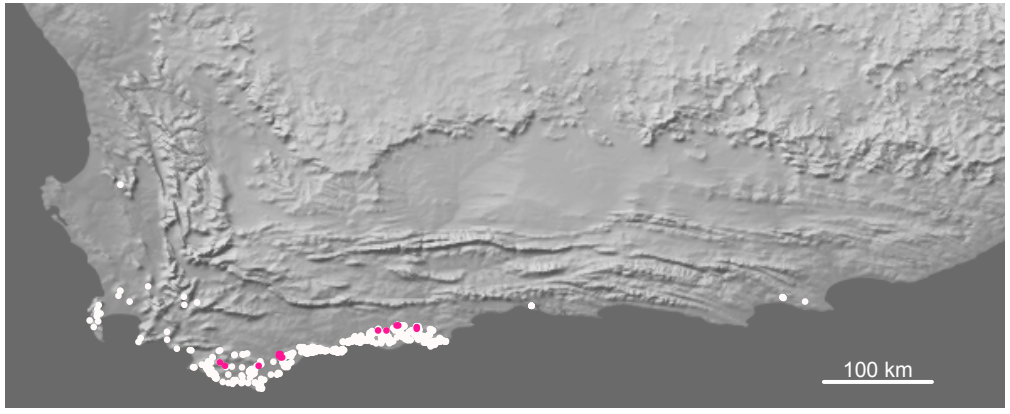


P. repens

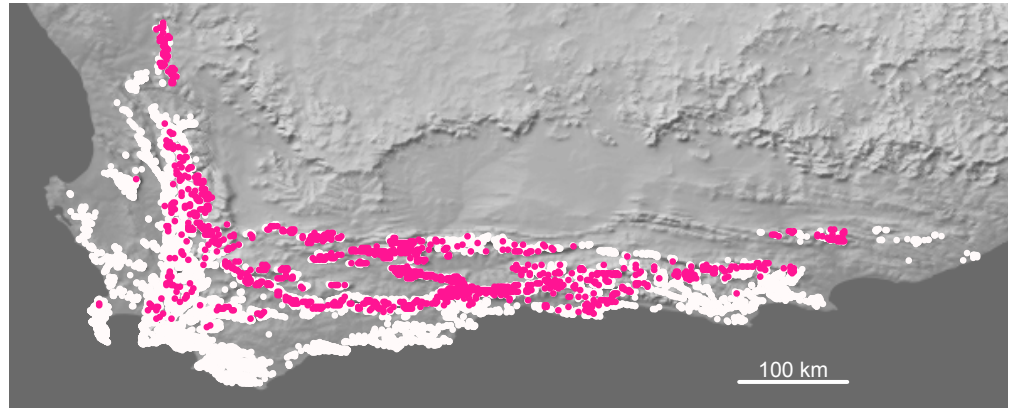


P. susannae

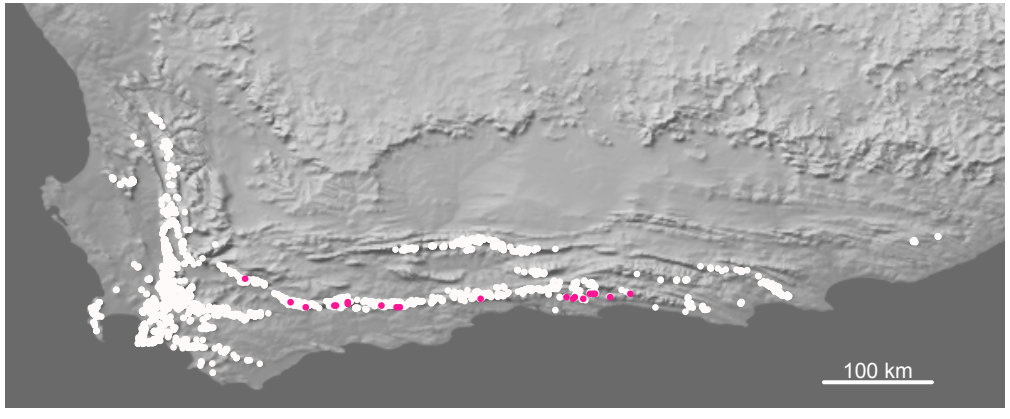
ΔP>0.1



L. salignum



L. spissifolium



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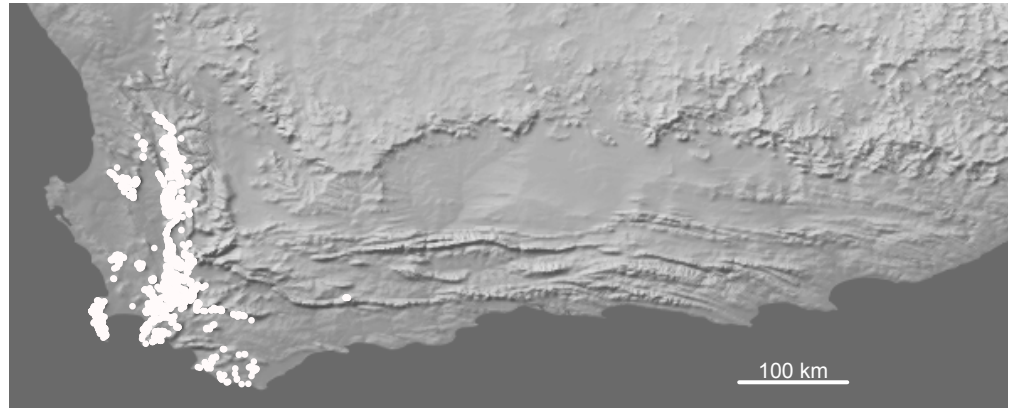
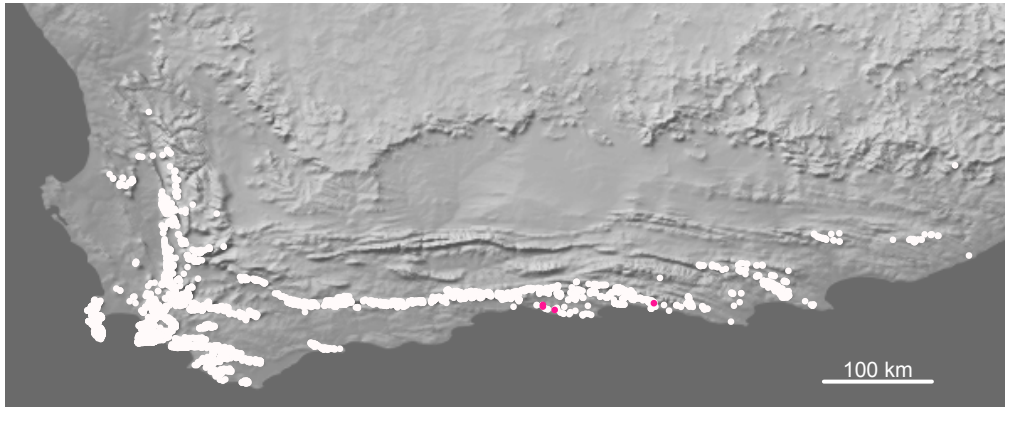
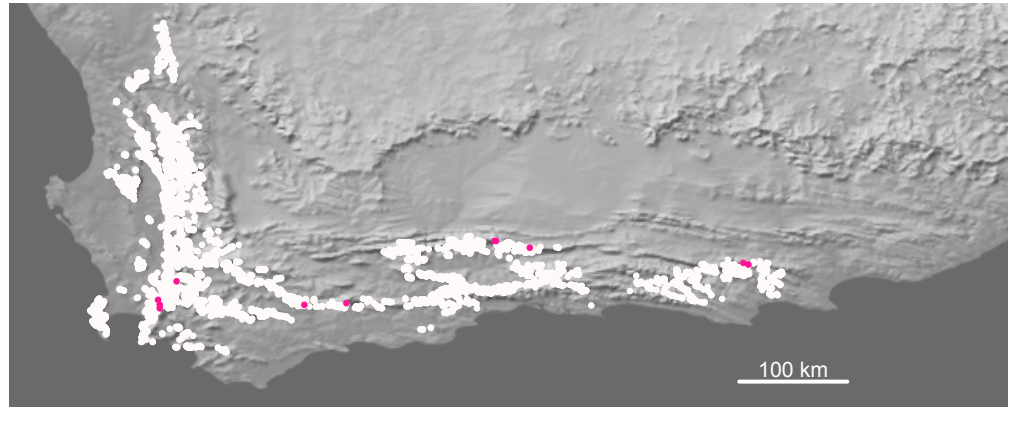


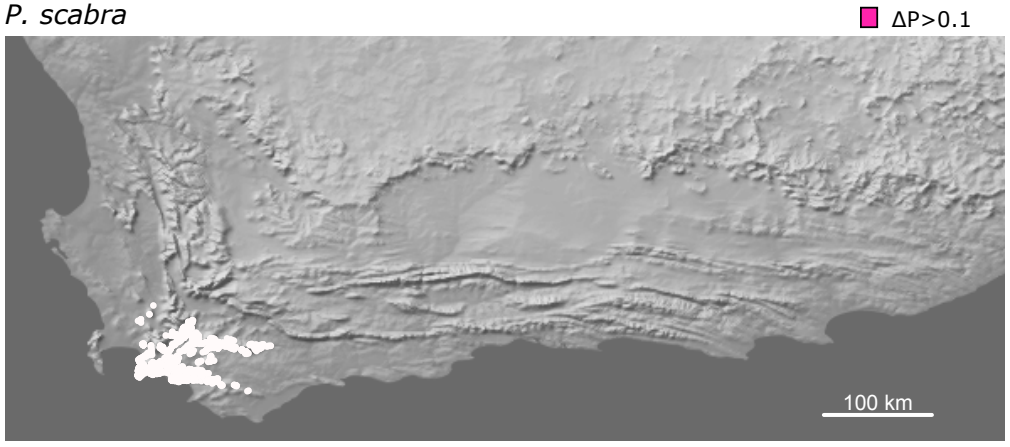
P. cynaroides



P. nitida



P. scabra



P. scolopendriifolia

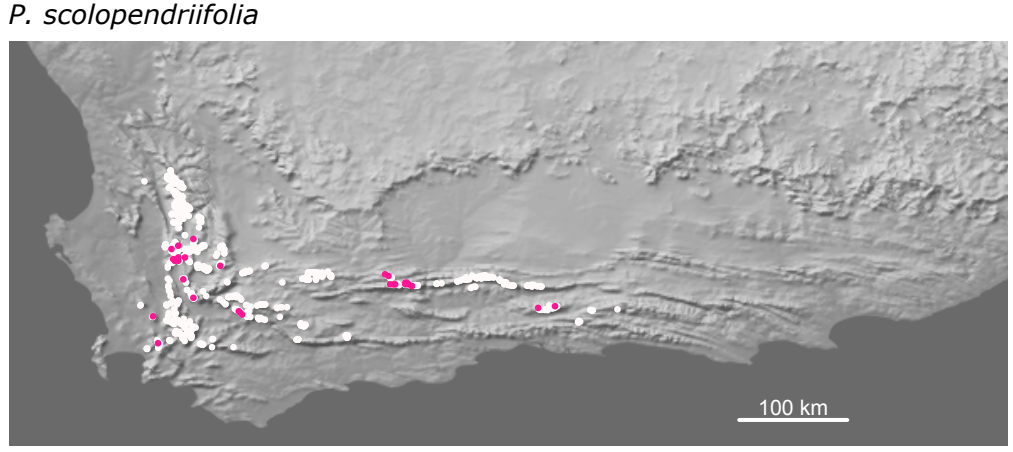


Table S1 (continued on next page). Shape of relationships between sensitivity to wildflower harvesting (ΔP) and five environmental variables for 26 serotinous Proteaceae species (with species abbreviations, geographical range size (Rebelo 2001) and National Red List status (Red List of South African Plants 2017)). Environmental variables include climate variables of drought, cold and heat stress (an aridity index (Aridity), winter minimum temperature in the month of July (Tmin; °C), summer maximum temperature in the month of January (Tmax; °C)), soil fertility (soil nutrient index) and mean fire return interval (years; fire interval). The shape of environmental responses was estimated as either positive (+), negative (-), unimodal (∩), u-shaped (∪) or not significant (ns) in a linear regression of population-level sensitivity against local environmental variables (summer aridity index, minimum winter temperature (T_{min}), maximum summer temperature (T_{max}), soil fertility index and mean fire return interval). Bottom panel of the table summarises the number of species for which a particular environmental effect (or shape) was detected. See also Figure 5 in the main text.

Table S1 (continued)

Species name	Abbreviation (Rebelo, 2001)	Range size (1' × 1' grid cells)	IUCN Red List status	Aridity	Tmin	Tmax	Soil fertility	Fire interval
Leucadendron *album*	ldalbu	213	LC	na	"∩"	"∪"	"∩"	"∪"
L. coniferum Δ	ldcfrm	287	VU	"∪"	"∩"	na	"∪"	na
L. eucalyptifolium	ldeuca	1407	LC	"∪"	"∪"	"∪"	"-"	na
L. laureolum	ldlaur	458	LC	na	"∪"	"∪"	na	"∪"
L. modestum	ldmode	223	EN	na	na	"∪"	"∩"	na
L. muirii	ldmuir	203	LC	"∪"	na	na	na	na
L. rubrum	ldrubr	1538	LC	"∪"	"∪"	"∪"	"∪"	"∪"
L. xanthoconus	ldxant	891	LC	na	na	"∪"	"∪"	na
Protea *amplexicaulis*	prampl	377	LC	"∩"	na	"∪"	na	na
P. compacta #	prcpct	391	NT	"∪"	"∩"	"∩"	"∪"	na
P. eximia	prexim	840	LC	"∩"	na	"∪"	"∩"	"∩"
P. laurifolia	prlaur	2752	LC	"-"	na	"+"	na	"-"
P. longifolia	prlong	453	VU	"∪"	"∪"	"∪"	na	"∪"
P. lorifolia	prlori	1469	LC	"∪"	"∪"	"∪"	na	"∩"
P. neriifolia #¶	prneri	1811	LC	"∪"	"∪"	"∪"	"∪"	"∪"
P. obtusifolia Δ	probtu	470	NT	"∪"	na	na	"∪"	na
P. punctata	prpunc	707	LC	"∪"	"∪"	"∪"	"∪"	na
P. repens #¶	prrepe	4070	LC	"∪"	"∪"	"∪"	"∪"	"∪"

Table S1 (continued)

Species name	Abbreviation (Rebelo, 2001)	Range size (1' × 1' grid cells)	IUCN Red List status	AI	Tmin	Tmax	Soil fert	Fire interval
P. susannae Δ	prsusa	359	NT	"∪"	na	"∪"	na	na
L. salignum	ldsgnm	6007	LC	"∪"	"∩"	"∪"	na	"∪"
L. spissifolium	ldspis	1338	LC	"∩"	na	na	na	na
P. acaulos	pracau	891	LC	"-"	"∩"	"∪"	na	"-"
P. cynaroides	prcyna	1719	LC	na	"∪"	"∪"	"∪"	na
P. nitida	prniti	2727	LC	"∪"	"∪"	"∪"	"∪"	"∩"
P. scabra	prscbr	476	NT	na	"∪"	na	na	na
P. scolopendriifolia	prsrfl	484	LC	na	"∪"	na	"∩"	na
	"∪"			**14**	**12**	**18**	**10**	**7**
	"-"			**2**	**0**	**0**	**1**	**2**
	"+"			**0**	**0**	**1**	**0**	**0**
	"∩"			**3**	**5**	**1**	**4**	**3**
	na			**7**	**9**	**6**	**11**	**14**

Underlined = resprouter; Symbols indicate species previously investigated as per: # Cabral et al (2011): *P. repens*, *P. neriifolia* and *P. compacta*; ¶ Maze & Bond (1996): *P. repens*, *P. neriifolia*; Δ Mustart & Cowling (1992): *P. obtusifolia*, *P. susannae*, *L. coniferum*.

Table S2 Interspecific variation in maximum demographic rates. The table shows for each study species the estimated average fecundity (number of fertile seeds in the canopy seedbank), seed establishment rate and fire survival rate, respectively, that is expected under optimal environmental conditions and without intraspecific competition effects. For demographic response curves that show how these demographic rates vary along environmental gradients see Fig. S1 in Pagel et al. (2020).

Species name	Abbreviation (Rebelo, 2001)	Nonsprouter/ Resprouter	Fecundity (number of fertile seeds in the canopy seedbank)	Seed establishment rate	Fire survival rate
***Leucadendron** album*	ldalbu	Nonsprouter	148.97	0.207	0.001
L. coniferum	ldcfrm	Nonsprouter	385.02	0.134	0.015
L. eucalyptifolium	ldeuca	Nonsprouter	327.32	0.083	0.014
L. laureolum	ldlaur	Nonsprouter	245.02	0.248	0.002
L. modestum	ldmode	Nonsprouter	228.37	0.060	0.008
L. muirii	ldmuir	Nonsprouter	1617.90	0.095	0.013
L. rubrum	ldrubr	Nonsprouter	710.74	0.020	0.008
L. salignum	ldsgnm	Resprouter	87.72	0.015	0.914
L. spissifolium	ldspis	Resprouter	391.94	0.002	0.974
L. xanthoconus	ldxant	Nonsprouter	230.44	0.228	0.002
***Protea** acaulos*	pracau	Resprouter	5.36	0.009	0.998
P. amplexicaulis	prampl	Nonsprouter	42.82	0.159	0.015
P. compacta	prcpct	Nonsprouter	346.67	0.090	0.001
P. cynaroides	prcyna	Resprouter	25.26	0.101	0.904
P. eximia	prexim	Nonsprouter	137.48	0.068	0.010
P. laurifolia	prlaur	Nonsprouter	61.10	0.190	0.065
P. longifolia	prlong	Nonsprouter	45.76	0.395	0.009
P. lorifolia	prlori	Nonsprouter	59.48	0.306	0.027
P. neriifolia	prneri	Nonsprouter	67.09	0.254	0.017
P. nitida	prniti	Resprouter	45.03	0.063	0.942
P. obtusifolia	probtu	Nonsprouter	89.50	0.119	0.004
P. punctata	prpunc	Nonsprouter	86.10	0.093	0.086
P. repens	prrepe	Nonsprouter	436.94	0.060	0.021
P. scabra	prscbr	Resprouter	64.03	0.238	0.984
P. scolopendriifolia	prsrfl	Resprouter	52.99	0.026	0.981
P. susannae	prsusa	Nonsprouter	39.14	0.124	0.008