

Table S1: Description of the sites sampled in the Andalusia network of protected areas (PAs)

PA # ^a and name	N ^b	S ^b	E ^b	Landscape ^c	Vegetation ^d	Altitude ^e
1. Acantilados de Maro-Cerro Gordo	1	12	2	L	Sc	10
2. Bahía de Cádiz	1	4	0	L	Du	0
3. Breña y Marismas de Barbate	2	15	0	L	Pi, Du	38
4. Cabo de Gata-Níjar	3	18	3	L	Sc	20
5. Desierto de Tabernas	2	11	3	S	Sc	0
6. Doñana, Parque Nacional	2	13	4	L	Sc	20
7. Doñana, Parque Natural	3	21	4	L	Sc, Pi, Du	58
8. Dunas de San Antón	1	10	0	L	Du	21
9. Enebrales de Punta Umbría	1	9	0	L	Pi	13
10. Los Alcornocales	3	14	1	S	Sc, Mi	163
11. Marismas del Odiel	2	16	5	L	Sc, Pi	4
12. Marismas Río Piedras y Flecha del Rompido	2	5	0	L	Sc, Du	0
13. Montes de Málaga	3	14	1	S	Pi	757
14. Punta Entinas-Sabinar	3	15	1	L	Sc	4
15. Sierra de Alhama, Tejada y Almirajara	2	19	2	S	Sc, Pi	709
16. Sierra de Aracena y Picos de Aroche	4	28	4	N	Sc, Pi, Mi	621
17. Sierra de Baza	3	24	5	S	Sc, Pi	1761
18. Sierra de Cardeña y Montoro	2	20	5	N	Pa, Pi	655
19. Sierra de Castril	2	14	5	S	Ol, Pa	1089
20. Sierra de Grazalema	4	24	3	S	Pi, Mi, Ol, Pa	849
21. Sierra de Hornachuelos	3	18	4	N	Sc, Mi, Pa	282
22. Sierra de Huétor	3	25	5	S	Sc, Mi, Co	1378
23. Sierra de las Nieves	2	16	5	S	Mi, Co	1107
24. Sierra Mágina	1	10	3	S	Sc	1972
25. Sierra María-Los Vélez	1	9	3	S	Pi	1245
26. Sierra Nevada, Parque Nacional	3	19	4	S	Sc, Mi, Co	1753
27. Sierra Nevada, Parque Natural	3	19	3	S	Sc, Pi, Mi	1741
28. Sierra Norte de Sevilla	5	35	10	N	Sc, Mi, Ol, Pa	336
29. Sierras de Andújar	3	31	8	N	Pa, Pi, Co	515
30. Sierras de Cazorla, Segura y las Villas	4	32	5	S	Pa, Mi, Co	1098
31. Sierras Subbéticas	4	27	4	S	Pa, Ol, Sc	872
32. Torcal de Antequera	1	9	3	S	Pa	1224

^a PA # corresponds to the codes provided in Figure 1a.

^b N refers to the number of plots, S to the observed richness, and E to the total number of endemic species (E_i+E_a) in each PA.

^c Landscape is abbreviated as follows: northern mountain chain (N), southern mountain chain (S), and littoral (L).

^d Vegetation type is abbreviated as follows: scrubland (Sc), pine forest (Pi), mixed forest (Mi), cork oak forest (Co), olive trees (Ol), dune (Du), and pasture (Pa).

^e Altitude refers to the mean altitude of the plots (m).

Table S2: Factor coordinates and cumulative eigenvalues for the climate and soil composition variables.

Climate variables	Factor 1	Factor 2
Annual mean temperature	-0.94	0.06
Maximum temperature of the warmest month	0.11	0.58
Minimum temperature of the coldest month	-0.98	-0.13
Annual range of temperature	0.83	0.41
Annual precipitation	0.58	-0.74
Precipitation in the wettest month	0.27	-0.87
Precipitation in the driest month	0.84	0.21
Cumulative eigenvalue %	52.4	79.4

Soil composition variables	Factor 1	Factor 2	Factor 3
Organic material	-0.76	-0.09	-0.37
Rocky sand	0.95	-0.13	-0.19
Fine sand	-0.49	0.70	0.08
Clay	-0.93	0.16	0.11
K – Potassium	-0.76	-0.43	0.02
P – Phosphorus	-0.34	-0.65	-0.26
pH	-0.01	-0.31	0.93
Cumulative eigenvalue %	46.8	64.7	80.4

Table S3 - List of the ant species collected indicating their abundances in the pitfall, occurrence in the sampling points (total number of sampling points: 607) and incidence in the plots (total number of plots: 79).

Species	Pitfall catches	Sampling points	Plots
1 <i>Aphaenogaster dulcineae</i>	7	3	2
2 <i>Aphaenogaster gibbosa</i>	2659	152	32
3 <i>Aphaenogaster iberica</i>	3222	197	37
4 <i>Aphaenogaster senilis</i>	3096	165	31
5 <i>Camponotus amaurus</i>	77	16	4
6 <i>Camponotus cruentatus</i>	1388	75	22
7 <i>Camponotus foreli</i>	112	23	9
8 <i>Camponotus lateralis</i>	583	38	19
9 <i>Camponotus piceus</i>	242	31	10
10 <i>Camponotus pilicornis</i>	542	124	37
11 <i>Camponotus ruber</i>	8	3	2
12 <i>Camponotus sylvaticus</i>	125	38	17
13 <i>Cardiocondyla batesii</i>	24	4	1
14 <i>Cataglyphis floricola</i>	214	16	4
15 <i>Cataglyphis tartessica</i>	999	19	3
16 <i>Cataglyphis hispanica</i>	2522	109	16
17 <i>Cataglyphis humeya</i>	334	8	1
18 <i>Cataglyphis iberica</i>	1082	62	9
19 <i>Cataglyphis rosenhaueri</i>	541	45	12
20 <i>Cataglyphis velox</i>	1437	63	11
21 <i>Crematogaster auberti</i>	4435	179	46
22 <i>Crematogaster scutellaris</i>	1032	47	21
23 <i>Crematogaster sordidula</i>	129	20	12
24 <i>Formica decipiens</i>	948	51	15
25 <i>Formica pyrenaee</i>	1776	8	2
26 <i>Formica rufibarbis</i>	1544	20	5
27 <i>Formica subrufa</i>	9048	102	24
28 <i>Gonomma baeticum</i>	2	2	2
29 <i>Gonomma blanci</i>	19	12	6
30 <i>Gonomma hispanicum</i>	5	3	3
31 <i>Lasius brunneus</i>	2	2	2
32 <i>Lasius cinereus</i>	204	18	3
33 <i>Lasius grandis</i>	18	2	1
34 <i>Lasius myops</i>	9	4	2
35 <i>Lasius niger</i>	3053	36	11
36 <i>Lepisiota frauenfeldi</i>	562	12	3
37 <i>Leptothorax angustulus</i>	347	50	21
38 <i>Leptothorax pardoii</i>	616	45	25
39 <i>Leptothorax racovitzai</i>	1873	108	37
40 <i>Leptothorax sp.</i>	26	9	5
41 <i>Leptothorax unifasciatus</i>	74	17	6
42 <i>Linepithema humile</i>	8081	24	4
43 <i>Messor barbarus</i>	3079	67	22
44 <i>Messor bouvieri</i>	2598	26	12
45 <i>Messor capitatus</i>	4124	16	6
46 <i>Messor hispanicus</i>	1505	19	10
47 <i>Messor lusitanicus</i>	79	20	9
48 <i>Messor maroccanus</i>	102	2	2
49 <i>Messor structor</i>	277	25	7
50 <i>Monomorium algericum</i>	4	2	2
51 <i>Monomorium subopacum</i>	8692	73	14
52 <i>Myrmica aloba</i>	1606	9	4
53 <i>Oxyopomyrmex saulcyi</i>	17	7	5
54 <i>Pheidole pallidula</i>	10550	166	41
55 <i>Plagiolepis pygmaea</i>	2252	150	43
56 <i>Plagiolepis schmitzi</i>	293	51	24
57 <i>Proformica longiseta</i>	1083	23	3
58 <i>Diplorhoptum sp.1</i>	64	24	11
59 <i>Strongylognathus testaceus</i>	2	1	1
60 <i>Tapinoma erraticum</i>	499	24	10
61 <i>Tapinoma nigerrimum</i>	7913	130	36
62 <i>Tapinoma simrothi</i>	6	2	1
63 <i>Tapinoma sp.1</i>	1	1	1
64 <i>Temnothorax fuentei</i>	23	10	2
65 <i>Temnothorax prope naeviventris</i>	1	1	1
66 <i>Temnothorax recedens</i>	89	1	1
67 <i>Temnothorax specularis</i>	131	3	3
68 <i>Tetramorium caespitum</i>	152	38	18
69 <i>Tetramorium impurum</i>	1442	84	34
70 <i>Tetramorium semilaeve</i>	538	107	45