

**Table S1.** List of plant species found in the Apennines dry grasslands (EU habitat type 6510) of the study area. Number of plants (N) and number of “pollination units” (PU) per species is reported.

Plant species		N	PU
1	<i>Achillea millefolium</i> L.	15	15
2	<i>Anacamptis pyramidalis</i> (L.) Rich.	1	1
3	<i>Bellis perennis</i> L.	17	17
4	<i>Campanula rapunculus</i> L.	16	60
5	<i>Carum carvi</i> L.	42	42
6	<i>Convolvulus arvensis</i> L.	35	35
7	<i>Daucus carota</i> L.	15	15
8	<i>Galium mollugo</i> L.	20	116
9	<i>Galium verum</i> L.	390	390
10	<i>Hypericum perforatum</i> L.	1	4
11	<i>Knautia</i> sp.	116	105
12	<i>Leucanthemum vulgare</i> Lam.	633	633
13	<i>Loncomelos brevistylum</i> (Wolfn.) Dostál.	7	17
14	<i>Lotus corniculatus</i> L.	1395	4642
15	<i>Medicago lupulina</i> L.	19	19
16	<i>Medicago sativa</i> L.	3	4
17	<i>Myosotis sylvatica</i> Hoffm.	62	60
18	<i>Onobrychis viciifolia</i> Scop.	551	551
19	<i>Plantago media</i> L.	20	17
20	<i>Polygala</i> sp.	74	300
21	<i>Potentilla reptans</i> L.	3	5
22	<i>Ranunculus acris</i> L.	57	70
23	<i>Rhinanthus alectorolophus</i> L.	3680	4228
24	<i>Salvia nemorosa</i> L.	6	96
25	<i>Sedum acre</i> L.	31	72
26	<i>Silene vulgaris</i> (Moench) Garcke	12	7
27	<i>Thymus</i> sp.	15	46
28	<i>Tragopogon pratensis</i> L.	5	5
29	<i>Trifolium pratense</i> L.	2433	2433
30	<i>Trifolium repens</i> L.	923	923
31	<i>Valeriana officinalis</i> L.	36	36
<b>Total</b>		<b>10633</b>	<b>14964</b>

**Table S2.** List of the Apennines dry grasslands (EU habitat type 6510) pollinator species and morpho-species found interacting with plants during the sampling season. The number of plant species contacted by each pollinator is also reported.

Pollinator species				N contacts	N plant species
	Order	Family	Species		
1	Lepidoptera	Adelidae	<i>Adelidae sp</i>	1	1
2	Coleoptera	Cerambycidae	<i>Anastrangalia sp.</i>	1	1
3	Hymenoptera	Apidae	<i>Andrena sp.</i>	15	4
4	Coleoptera	Buprestidae	<i>Anthaxia hungarica</i>	1	1
5	Coleoptera	Dermestidae	<i>Anthrenus sp.</i>	1	1
6	Hymenoptera	Apidae	<i>Apidae sp1</i>	2	2
7	Hymenoptera	Apidae	<i>Apidae sp2</i>	2	1
8	Hymenoptera	Apidae	<i>Apidae sp3</i>	7	2
9	Hymenoptera	Apidae	<i>Apis mellifera</i>	409	11
10	Lepidoptera	Nymphalidae	<i>Argynnis paphia</i>	1	1
11	Hymenoptera	Apidae	<i>Bombus humilis</i>	7	1
12	Hymenoptera	Apidae	<i>Bombus lapidarius</i>	67	5
13	Hymenoptera	Apidae	<i>Bombus pascuorum</i>	62	6
14	Hymenoptera	Apidae	<i>Bombus sp.</i>	26	6
15	Hymenoptera	Apidae	<i>Bombus terrestris</i>	8	4
16	Diptera	Bombyliidae	<i>Bombylella atra</i>	38	10
17	Diptera	Bombyliidae	<i>Bombyliidae sp2</i>	1	1
18	Diptera	Bombyliidae	<i>Bombyliidae sp3</i>	3	1
19	Diptera	Bombyliidae	<i>Bombyliidae sp4</i>	2	1
20	Diptera	Bombyliidae	<i>Bombylius fimbriatus</i>	1	1
21	Diptera	Bombyliidae	<i>Bombylius major</i>	2	2
22	Coleoptera	Cantharidae	<i>Cantharis sp.</i>	2	2
23	Hymenoptera	Apidae	<i>Ceratina sp.</i>	1	1
24	Coleoptera	Chrysomelidae	<i>Chrysolina rossia</i>	1	1
25	Diptera	Syrphidae	<i>Chrysotoxum bicinctum</i>	1	1
26	Coleoptera	Coccinellidae	<i>Coccinella septempunctata</i>	5	3
27	Lepidoptera	Nymphalidae	<i>Coenonympha pamphilus</i>	1	1
28	Coleoptera	Chrysomelidae	<i>Cryptocephalus sp.</i>	10	3
29	Diptera	Indeterminata	<i>Diptera sp1</i>	21	1
30	Diptera	Indeterminata	<i>Diptera sp2</i>	2	1
31	Diptera	Indeterminata	<i>Diptera sp3</i>	3	1
32	Diptera	Indeterminata	<i>Diptera sp4</i>	1	1
33	Diptera	Syrphidae	<i>Eristalis sp.</i>	5	4
34	Diptera	Syrphidae	<i>Eristalis tenax</i>	1	1
35	Hymenoptera	Apidae	<i>Eucera sp.</i>	2	1
36	Lepidoptera	Erebidae	<i>Euclidia glyphica</i>	1	1
37	Diptera	Syrphidae	<i>Eupeodes sp.</i>	3	1
38	Lepidoptera	Riodinidae	<i>Hamearis lucina</i>	1	1
39	Lepidoptera	Hesperiidae	<i>Hesperia comma</i>	3	2
40	Hymenoptera	Indeterminata	<i>Hymenoptera sp1</i>	4	1
41	Hymenoptera	Indeterminata	<i>Hymenoptera sp2</i>	7	1

42	Hymenoptera	Indeterminata	Hymenoptera <i>sp4</i>	6	1
43	Hymenoptera	Indeterminata	Hymenoptera <i>sp5</i>	1	1
44	Hymenoptera	Indeterminata	Hymenoptera <i>sp6</i>	12	3
45	Hymenoptera	Apidae	<i>Lasioglossum sp.</i>	2	1
46	Lepidoptera	Sphingidae	<i>Macroglossum stellatarum</i>	1	1
47	Lepidoptera	Nymphalidae	<i>Maniola jurtina</i>	7	4
48	Lepidoptera	Nymphalidae	<i>Melanargia galathea</i>	5	3
49	Coleoptera	Mordellidae	Mordellidae <i>sp</i>	7	4
50	Diptera	Muscidae	Muscidae <i>sp1</i>	1	1
51	Diptera	Muscidae	Muscidae <i>sp2</i>	1	1
52	Hemiptera	Nabidae	<i>Nabis sp.</i>	1	1
53	Lepidoptera	Hesperiidae	<i>Ochlodes sylvanus</i>	6	5
54	Coleoptera	Oedemeridae	<i>Oedemera flavipes</i>	7	5
55	Coleoptera	Oedemeridae	<i>Oedemera nobilis</i>	1	1
56	Coleoptera	Oedemeridae	<i>Oedemera podagrariae</i>	13	5
57	Coleoptera	Scarabaeidae	<i>Oxythyrea funesta</i>	2	2
58	Coleoptera	Cerambycidae	<i>Paracorymbia fulva</i>	1	1
59	Lepidoptera	Lycaenidae	<i>Plebejus argus</i>	4	2
60	Coleoptera	Buprestidae	<i>Poecilonota variolosa</i>	1	1
61	Coleoptera	Cantharidae	<i>Ragonycha fulva</i>	6	1
62	Diptera	Syrphidae	<i>Scaeva sp.</i>	2	1
63	Diptera	Syrphidae	<i>Sphaerophoria scripta</i>	42	14
64	Diptera	Syrphidae	<i>Syritta pipiens</i>	1	1
65	Diptera	Syrphidae	Syrphidae <i>sp1</i>	1	1
66	Diptera	Syrphidae	Syrphidae <i>sp2</i>	3	2
67	Diptera	Syrphidae	Syrphidae <i>sp7</i>	1	1
68	Diptera	Syrphidae	Syrphidae <i>sp8</i>	1	1
69	Diptera	Syrphidae	Syrphidae <i>sp9</i>	5	1
70	Diptera	Syrphidae	Syrphidae <i>sp10</i>	1	1
71	Diptera	Syrphidae	Syrphidae <i>sp11</i>	1	1
72	Diptera	Syrphidae	<i>Syrphus sp.</i>	2	1
73	Diptera	Tachinidae	Tachinidae <i>sp</i>	2	1
<b>Total</b>				<b>879</b>	<b>25</b>

**Table S3.** Results of multi-model inference based on corrected Akaike Information Criterion (AICc), carried out through generalized linear models to detect the effects of landscape composition and configuration on plant and pollinators richness and on seven network descriptors. Average standardized coefficient ( $\beta$ ),  $\pm$  standard error, of predictors from models with  $\Delta AICc < 2$  and relative importance from Akaike weights (W) are shown.

Response variable	N° models $\Delta < 2$	Predictor variables	Estimate ( $\beta$ )	S.E.	P	W
<b>Inter_poll (N)</b>	1	(Intercept)	10.33	0.32	<0.0001	-
		Shrublands	2.49	0.53	<0.0001	20
		Woodlands	-10.6	1.16	<0.0001	20
		Near distance to not6510habitats	-3.33	0.38	<0.0001	20
		Wooded meadows	-10.31	1.2	<0.0001	20
		Croplands	-17.21	1.68	<0.0001	20
<b>Plants (N)</b>	1	(Intercept)	13.22	0.13	<0.0001	-
		Shrublands	2.61	0.21	<0.0001	20
		Agricultural and Livestock settlements	1.16	0.26	<0.0001	20
		Patches size	0.8	0.2	<0.0001	20
		Wooded meadows	-1.57	0.23	<0.0001	20
		Croplands	-4.33	0.3	<0.0001	20
<b>Inter_plants (%)</b>	1	(Intercept)	0.52	0.01	<0.0001	-
		Shrublands	0.03	0.01	<0.0001	16.66
		Woodlands	-0.34	0.03	<0.0001	16.66
		Agricultural and Livestock settlements	-0.13	0.02	<0.0001	16.66
		Patches size	-0.09	0.01	<0.0001	16.66
		Wooded meadows	-0.27	0.03	<0.0001	16.66
		Croplands	-0.4	0.03	<0.0001	16.66
<b>C</b>	9	(Intercept)	-3.67	1.31	<0.0001	-
		Rocks	-3.01	1.38	<0.0001	12.58
		Near distance to 6510habitats	5.35	3.91	0.18	17.3
		Open meadows	2.86	1.4	0.06	9.87
		Arid croplands	-2.83	1.4	0.06	9.32
		Croplands	-2.73	1.42	0.08	7.95
		Human settlements	-2.71	1.42	0.08	7.7
		Wooded meadows	2.7	1.42	0.08	7.61
		Agricultural and Livestock settlements	8.96	3.83	<0.0001	6.15
		Patches size	8.44	3.62	<0.0001	6.15
<b>Nestedness</b>	4	(Intercept)	0.34	0.5	0.54	-
		Woodlands	5.43	4.46	0.23	18.66
		Agricultural and Livestock settlements	4.86	1.76	<0.0001	23.95
		Wooded meadows	8	3.59	<0.0001	20.28
		Croplands	6.98	2.7	<0.0001	15
		Shrublands	-1.59	0.76	0.06	9.5
		Human settlements	-2.69	0.75	<0.0001	5.29

		Patches size	7.28	1.7	<0.0001	3.67
		Near distance to 6510habitats	9.13	1.5	<0.0001	3.67
<b>E2</b>	7	(Intercept)	-15.96	5.04	<0.0001	-
		Rocks	-13.65	5.24	<0.0001	32.42
		Arid croplands	-12.17	5.4	<0.0001	12.6
		Croplands	-12.04	5.42	<0.0001	11.86
		Open meadows	11.6	5.48	0.04	9.76
		Near distance to not6510habitats	-5.87	5.25	0.3	8.97
		Human settlements	-11.4	5.51	0.06	8.93
<b>H2</b>	8	(Intercept)	0.83	0.02	<0.0001	-
		Near distance to not6510habitats	0.07	0.02	<0.0001	36.97
		Open meadows	0.07	0.02	<0.0001	6.38
		Wooded meadows	0.07	0.03	<0.0001	27.94
		Woodlands	0.04	0.02	0.11	10.21
		Human settlements	-0.03	0.02	0.15	4.73
		Rocks	0.05	0.03	0.16	4.18
		Croplands	-0.03	0.02	0.21	3.65
		Shannon diversity index of habitats	-0.02	0.02	0.23	3.29
		Arid croplands	-0.06	0.02	<0.0001	2.65
<b>HL</b>	2	(Intercept)	-10.27	2.32	<0.0001	-
		Agricultural and Livestock settlements	27.53	7.96	<0.0001	30.24
		Patches size	29.61	7.98	<0.0001	30.24
		Near distance to 6510habitats	29.79	6.96	<0.0001	30.24
		Woodlands	-4.02	3.36	0.26	9.27
<b>LL</b>	2	(Intercept)	-9.6	2.48	<0.0001	-
		Agricultural and Livestock settlements	29.18	8.73	<0.0001	29.23
		Patches size	30.9	8.99	<0.0001	29.23
		Near distance to 6510habitats	32.08	7.88	<0.0001	29.23
		Woodlands	-5.39	3.54	0.15	12.3