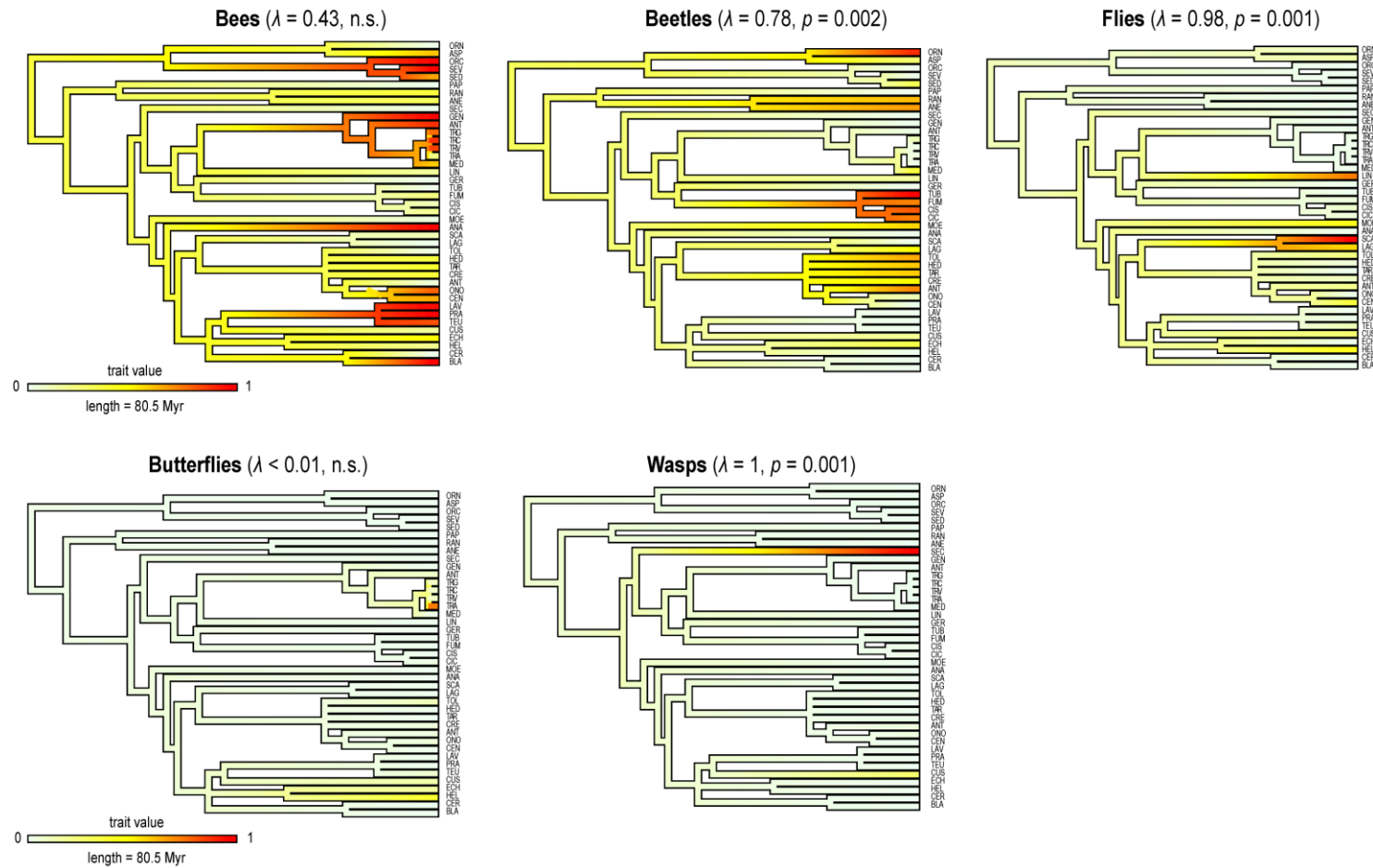


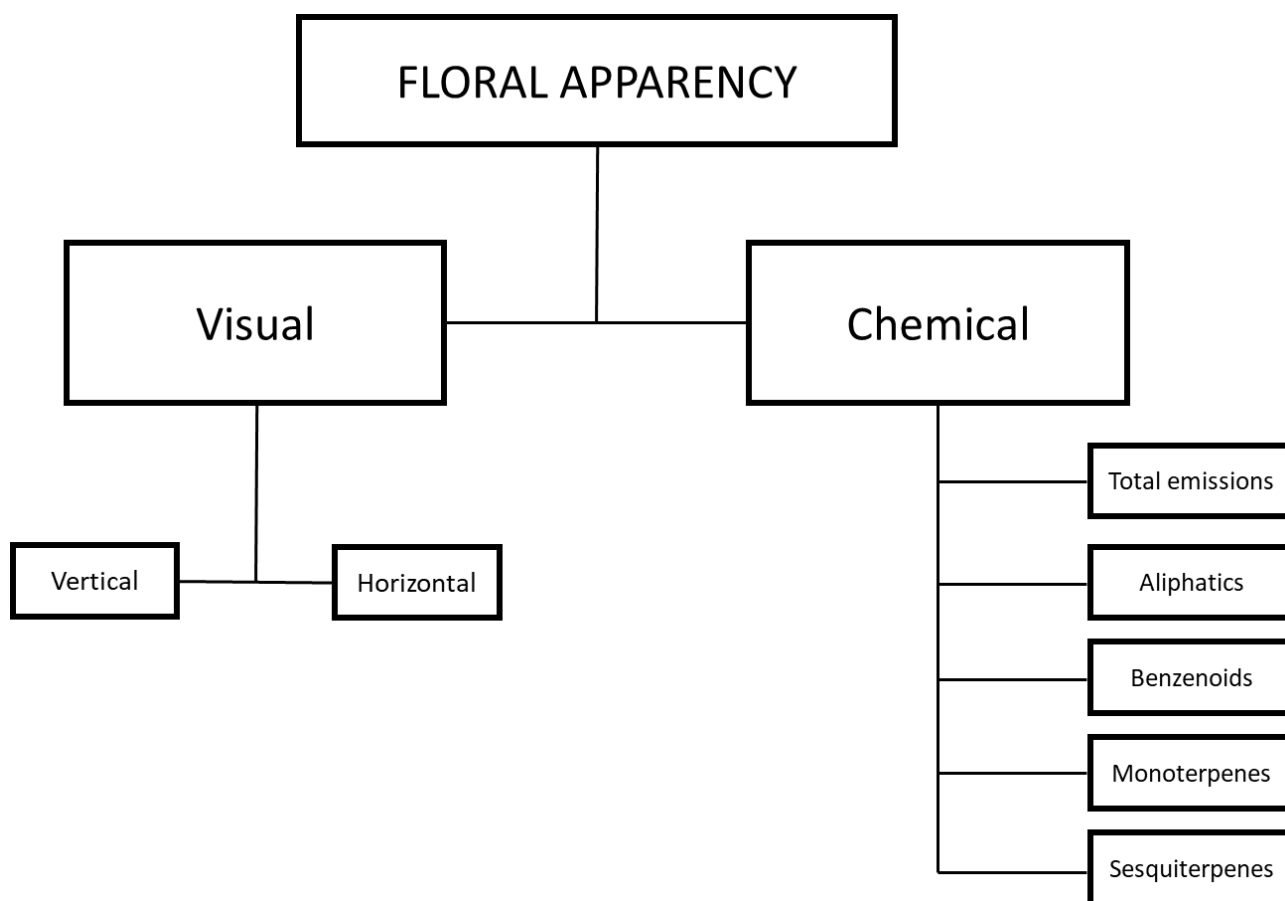
SUPPLEMENTARY INFORMATION

Disentangling the role of floral sensory stimuli in pollination networks

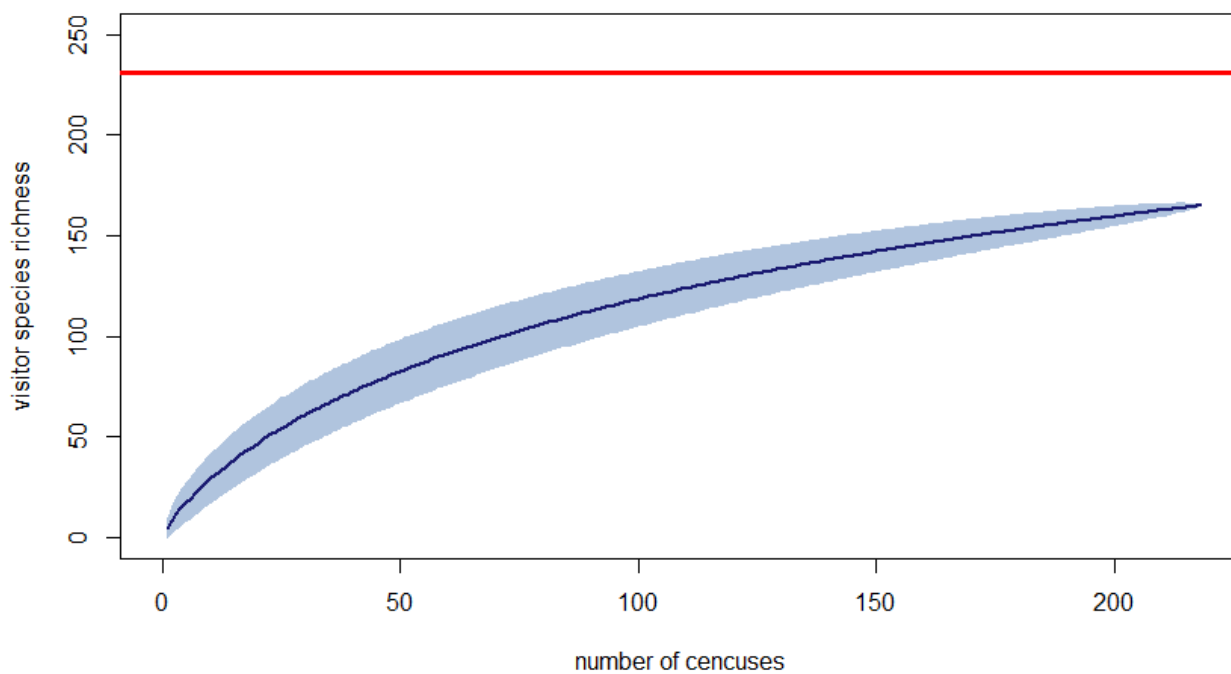
Aphrodite Kantsa, Robert A. Raguso, Adrian G. Dyer, Jens M. Olesen, Thomas Tscheulin, Theodora Petanidou



Supplementary Figure 1. The visitation rates (%) by each pollinator group mapped within the phylogram of the plants in the community. Phylogenetic signal measured with Pagel's λ is shown for every group (n.s.: $P > 0.05$). For details, see Methods. Plant name abbreviations are explained in Table S6



Supplementary Figure 2. The conceptual scheme including all types of floral apparency used in the present study.



Supplementary Figure 3. Accumulation curve of the flower visitor species richness with increasing sampling effort for the phrygana network. Asymptotic species richness based on the Chao 2 estimator (red line) is shown. Sampling completeness was estimated at 73.0%.

Supplementary Table 1. The 168 flower-visiting insects recorded in the study community, and their phenology. For each Order, number of taxa is given in parentheses. Insects found only in the first year are marked with (1), and insects found only in the second year, with (2). For the rest insects, days of activity (day numbers of the Julian calendar) represent the mean values of the two years.

Order	Family	Insect	First day of activity	Last day of activity
Coleoptera (26; 15.5%)	Buprestidae	<i>Acmaeodera bipunctata</i>	157	173
		Buprestidae sp. A	152	155
		Buprestidae sp. B (1)	150	150
		Buprestidae sp. C (1)	157	173
	Cerambycidae	Cerambycidae sp. A	124	130
		Cerambycidae sp. B (2)	153	153
		<i>Pseudovadonia livida</i>	143	143
	Chrysomelidae	<i>Chrysolina americana</i> (1)	103	129
		<i>Clytra atraphaxidis</i> (1)	103	129
		<i>Labidostomis humeralis</i> (1)	105	105
	Cleridae	<i>Diplocladus</i> sp. A	147	152
		<i>Trichodes alvearius</i>	101	139
	Curculionidae	<i>Larinus</i> sp. A (1)	157	173
	Glaphyridae	<i>Eulasia nitidicollis</i>	117	124
		<i>Pygopleurus</i> sp. A	101	102
	Melyridae	<i>Dasytes</i> sp. A	103	103
		<i>Malachius bipustulatus</i> (1)	102	160
	Mordellidae	Mordellidae sp. A (1)	167	167
	Oedemeridae	<i>Oedemera</i> sp. A	109	166
		<i>Oedemera</i> sp. B	168	168
	Scarabaeidae	<i>Anomala</i> sp. A	101	143
		<i>Epicometis hirta</i>	101	117
		<i>Osmoderma</i> sp. A	130	169
		<i>Oxythyrea funesta</i>	133	133

Order	Family	Insect	First day of activity	Last day of activity
	Unknown	Beetle sp. A (1)	103	120
		Beetle sp. B (2)	153	153
Diptera (37; 22.0%)	Asilidae	Asilidae sp. A (1)	105	120
		Asilidae sp. B (2)	153	153
	Bombyliidae	<i>Bombylella atra</i> (1)	103	157
		<i>Bombylius medius</i> (1)	103	120
		<i>Bombylius posticus</i>	147	166
		<i>Bombylius rhodius</i>	101	102
		<i>Cyllenia rustica</i>	157	157
		<i>Exoprosopa minois</i>	147	161
		<i>Exoprosopa pandora</i>	147	176
		<i>Lomatia</i> sp. A (1)	150	157
		<i>Petrorossia chraminensis</i> (2)	153	178
		<i>Phthiria subnitens</i> (1)	173	173
		<i>Thyridanthrax elegans</i> (1)	167	167
		<i>Villa hottentotta</i> (2)	164	164
	Calliphoridae	Calliphoridae sp. A (1)	167	167
		Calliphoridae sp. B (1)	103	142
	Empididae	Empididae sp. A (2)	98	98
	Hybotidae	Hybotidae sp. A (1)	103	105
	Syrphidae	<i>Eristalinus aeneus</i> (2)	164	164
		<i>Eristalis tenax</i>	136	150
		<i>Eumerus pulchellus</i>	102	150
		<i>Eupeodes corollae</i> (2)	113	113
		<i>Merodon albifrons</i> (1)	150	150
		<i>Merodon spinitarsis</i>	121	121
		<i>Paragus haemorrhous</i> (1)	167	167
		<i>Paragus</i> sp. A (1)	173	173

Order	Family	Insect	First day of activity	Last day of activity
		<i>Sphaerophoria scripta</i> (1)	142	142
		<i>Syrirta pipiens</i> (1)	167	167
	Tachinidae	Tachinidae sp. A	142	166
	Tephritidae	Tephritidae sp. A (1)	103	105
	Tipulidae	Tipulidae sp. A (1)	105	105
	Unknown	Fly sp. A	103	105
		Fly sp. B	105	105
		Fly sp. C	103	120
		Fly sp. D (1)	108	117
		Fly sp. E (1)	129	129
		Fly sp. F	105	105
Hemiptera (3; 1.8%)	Auchenorrhyncha	<i>Auchenorrhyncha</i> sp. A	142	150
	Miridae	<i>Calocoris</i> sp. A	103	105
		Bug sp. A	105	120
Hymenoptera – Bees (66; 39.3%)	Andrenidae	<i>Andrena</i> aff. <i>hesperia</i>	102	102
		<i>Andrena</i> aff. <i>neocyprica</i>	128	128
		<i>Andrena panurgimorpha</i> (1)	135	142
		<i>Andrena schencki</i> (2)	113	113
		<i>Andrena</i> sp. A (1)	103	129
		<i>Andrena</i> sp. C (1)	120	129
		<i>Andrena westensis</i> (2)	98	178
	Apidae	<i>Amegilla albigena</i>	152	169
		<i>Amegilla quadrifasciata</i>	163	176
		<i>Amegilla salviae</i> (1)	173	173
		<i>Anthophora crinipes</i> (2)	113	125
		<i>Anthophora dalmatica</i>	109	127
		<i>Anthophora plumipes</i> (1)	103	103

Order	Family	Insect	First day of activity	Last day of activity
		<i>Anthophora rubricrus</i> (1)	105	105
		<i>Apis mellifera</i>	101	176
		<i>Bombus terrestris</i>	114	155
		<i>Ceratina acuta</i> (2)	125	153
		<i>Ceratina schwarzi</i> (2)	113	178
		<i>Ceratina</i> sp. A (1)	167	167
		<i>Epeolus variegatus</i> (1)	157	157
		<i>Eucera cineraria</i> group	124	143
		<i>Eucera digitata</i>	130	138
		<i>Eucera</i> aff. <i>pseudeucnemidea</i> (2)	125	125
		<i>Eucera seminuda</i>	139	139
		<i>Xylocopa iris</i>	114	169
		<i>Xylocopa violacea</i>	141	166
	Colletidae	<i>Colletes eous</i> (2)	136	136
		<i>Colletes</i> sp. A	147	147
		<i>Hylaeus meridionalis</i> (1)	167	167
	Halictidae	<i>Halictus resurgens</i>	147	176
		<i>Halictus sexcinctus</i> (1)	167	173
		<i>Halictus</i> aff. <i>tumulorum.confusus</i> (2)	153	153
		<i>Lasioglossum laticeps/mediterraneum</i> (2)	136	153
		<i>Lasioglossum</i> aff. <i>lativentre/haesitans</i> (2)	136	136
		<i>Lasioglossum leucozonium</i>	109	155
		<i>Lasioglossum malachurum</i> group	152	157
		<i>Lasioglossum marginatum</i> (1)	129	129
		<i>Lasioglossum pygmaeum/pauperatum</i>	101	133
		<i>Lasioglossum</i> sp. B (2)	113	113
		<i>Lasioglossum tricinctum</i> group	101	160
		<i>Lasioglossum villosulum</i> group (2)	136	136

Order	Family	Insect	First day of activity	Last day of activity
		<i>Pseudapis monstrosa</i> (2)	136	153
	Megachilidae	<i>Anthidiellum strigatum</i>	155	155
		<i>Anthidium</i> aff. <i>dalmaticum</i> (2)	153	153
		<i>Eoanthidium insulare</i> (2)	178	178
		<i>Eoanthidium</i> aff. <i>judaense</i> (2)	160	160
		<i>Eoanthidium</i> sp. A	164	164
		<i>Hoplitis adunca</i> group (2)	125	125
		<i>Hoplitis</i> aff. <i>illyrica</i>	141	141
		<i>Hoplitis</i> aff. <i>lysholmi</i>	152	155
		<i>Hoplitis</i> sp. A (2)	125	125
		<i>Hoplitis</i> sp. C (1)	142	142
		<i>Lithurgus chrysurus</i> (1)	173	173
		<i>Megachile albisecta</i>	163	163
		<i>Megachile giraudi</i> (2)	136	136
		<i>Megachile hungarica</i>	147	173
		<i>Megachile manicata</i> (2)	98	153
		<i>Megachile parietina</i> (2)	98	136
		<i>Megachile pilicrus</i>	155	176
		<i>Megachile</i> sp. A (1)	167	167
		<i>Osmia dimidiata</i>	163	163
		<i>Osmia</i> aff. <i>helicosmia</i> (2)	125	125
		<i>Osmia</i> sp. B (2)	125	125
		<i>Osmia</i> sp. C (2)	125	125
		<i>Osmia versicolor</i> (2)	125	125
		<i>Rhodanthidium septemdentatum</i> (2)	125	178
Hymenoptera – Wasps (19; 11.3%)	Chrysididae	<i>Chrysididae</i> sp. A (1)	157	157
		<i>Chrysididae</i> sp. B (2)	113	113
		<i>Chrysura circe</i> (1)	103	103

Order	Family	Insect	First day of activity	Last day of activity
	Crabronidae	<i>Bembix bicolor</i> (2)	136	153
		Crabronidae sp. A (1)	150	150
		Crabronidae sp. C (2)	164	178
	Eumenidae	Eumenidae sp. A (1)	167	167
		Eumenidae sp. B (2)	136	136
		Eumenidae sp. C (2)	136	136
		Eumenidae sp. D (2)	136	136
	Leucospidae	<i>Leucospis gigas</i> (1)	167	167
	Pompilidae	<i>Cryptocheilus</i> sp. A	117	124
	Sapygidae	<i>Sapyga</i> sp. A (1)	135	135
	Scoliidae	<i>Colpa quinquecincta</i> (2)	178	178
		<i>Megascolia maculata</i>	147	155
		<i>Scolia</i> sp. A (2)	164	178
	Tiphiidae	<i>Tiphia</i> sp. A (2)	113	113
	Vespidae	<i>Polistes</i> sp. A	164	173
		<i>Vespa orientalis</i> (1)	142	167
Lepidoptera (17; 10.1%)	Hesperiidae	<i>Charcharodus orientalis</i> (2)	153	178
		<i>Spialia orbifer</i> (2)	178	178
		<i>Thymelicus acteon</i> (1)	157	157
		<i>Thymelicus sylvestris</i>	160	160
	Lycaenidae	<i>Lycaena phlaeas</i>	143	161
		<i>Pseudophilotes vicrama</i>	128	155
	Noctuidae	Noctuidae sp. A (1)	167	167
		Noctuidae sp. B (2)	136	136
		<i>Trichoplusia ni</i> (1)	157	157
	Nymphalidae	<i>Coenonympha pamphilus</i>	141	157
		<i>Maniola telmessia</i>	130	143
	Papilionidae	<i>Papilio machaon</i> (1)	157	167

Order	Family	Insect	First day of activity	Last day of activity
	Pieridae	<i>Colias crocea</i>	128	155
		<i>Gonepteryx cleoptatra</i> (2)	136	136
		<i>Pieris brassicae</i> (1)	157	167
	Sphingidae	<i>Macroglossum stellatarum</i> (2)	136	153
	Zygaenidae	Zygaenidae sp. A (2)	125	125

Supplementary Table 2. Module composition of the entire network in the study community. For details, see Methods.

Module		Species
#1	Plants	<i>Sedum confertiflorum</i>
	Insects	<i>Chrysididae</i> sp. B <i>Chrysura circe</i>
#2	Plants	<i>Anthemis auriculata</i>
		<i>Blackstonia perfoliata</i>
		<i>Heliotropium lasiocarpum</i>
		<i>Linum trigynum</i>
		<i>Trifolium arvense</i>
	Insects	<i>Bombylius posticus</i>
		<i>Cerambycidae</i> sp. A
		<i>Ceratina schwarzi</i>
		<i>Charcharodus orientalis</i>
		<i>Chrysididae</i> sp. A
		<i>Cyllenia rustica</i>
		<i>Eucera digitata</i>
		<i>Eupeodes corollae</i>
		<i>Exoprosopa minois</i>
<i>Exoprosopa pandora</i>		
<i>Hoplitis illyrica</i> aff.		
<i>Hoplitis lysholmi</i> aff.		
<i>Lasioglossum lativentre/haesitans</i> aff.		
<i>Sapyga</i> sp. A		
<i>Spialia orbifer</i>		
#3	Plants	<i>Anagallis arvensis</i>
		<i>Cistus creticus</i>
		<i>Lavandula stoechas</i> subsp. <i>stoechas</i>
		<i>Prasium majus</i>
		<i>Serapias cordigera</i>
		<i>Trifolium angustifolium</i>
	Insects	<i>Acmaeodera bipunctata</i>
		<i>Anthophora crinipes</i>
		<i>Anthophora dalmatica</i>
		<i>Anthophora plumipes</i>
		<i>Anthophora rubricrus</i>
<i>Asilidae</i> sp. A		
<i>Beetle</i> sp. B		
<i>Bembix bicolor</i>		
<i>Bombylius medius</i>		
<i>Cerambycidae</i> sp. B		
<i>Chrysolina americana</i>		
<i>Crabronidae</i> sp. A		
<i>Cryptocheilus</i> sp. A		
<i>Eoanthidium insulare</i>		
<i>Eristalinus aeneus</i>		
<i>Eristalistenax</i>		

Module	Species
	<i>Eucera cineraria</i> -group <i>Eucera seminuda</i> <i>Eumenidae</i> sp. B <i>Eumenidae</i> sp. C <i>Hoplitis</i> sp. A <i>Lasioglossum laticeps/mediterraneum</i> <i>Lasioglossum pygmaeum/pauperatum</i> <i>Maniola telmessia</i> <i>Merodon albifrons</i> <i>Oedemera</i> sp. B <i>Pseudapis monstrosa</i> <i>Pseudovadonia livida</i> <i>Rhodanthidium septedentatum</i> <i>Tipulidae</i> sp. A <i>Villa hottentotta</i> <i>Xylocopa iris</i> <i>Zygaenidae</i> sp. A
#4	Plants <i>Cuscuta epithimum</i> Insects <i>Asilidae</i> sp. B <i>Calliphoridae</i> sp. A <i>Colletes</i> sp. A <i>Colpa quinquecincta</i> <i>Crabronidae</i> sp. C <i>Eoanthidium judaense</i> aff. <i>Eoanthidium</i> sp. A <i>Eumenidae</i> sp. A <i>Hylaeus meridionalis</i> <i>Leucospis gigas</i> <i>Megascolia maculata</i> <i>Mordellidae</i> sp. A <i>Paragushaemorhous</i> <i>Paraguss</i> sp. A <i>Polistes</i> sp. A <i>Scolia</i> sp. A <i>Syritta pipiens</i> <i>Thyridanthrax elegans</i>
#5	Plants <i>Asphodelus ramosus</i> <i>Moenchia mantica</i> <i>Scandix</i> sp. Insects <i>Andrena</i> sp. A <i>Bombylius rhodius</i> <i>Calocoris</i> sp. A <i>Empididae</i> sp. A <i>Eumerus pulchellus</i> <i>Fly</i> sp. A <i>Fly</i> sp. B <i>Fly</i> sp. C <i>Fly</i> sp. D <i>Fly</i> sp. F

Module		Species
		<i>Hybotidae</i> cf. sp. A <i>Tephritidae</i> sp. A <i>Trichodes alvearius</i>
#6	Plants	<i>Anthyllis hermanniae</i> <i>Echium plantagineum</i> <i>Genista acanthoclada</i> <i>Orchis sancta</i>
	Insects	<i>Anthidiellum strigatum</i> <i>Ceratina acuta</i> <i>Ceratina</i> sp. A <i>Colletes eous</i> <i>Epeolus variegatus</i> <i>Hoplitis adunca</i> -group <i>Lasioglossum leucozonium</i> <i>Lasioglossum</i> sp. B <i>Lycaena phlaeas</i> <i>Megachile manicata</i> <i>Megachile parietina</i> <i>Noctuidae</i> sp. B <i>Osmia helicosmia</i> aff. <i>Oxythyrea funesta</i> <i>Pseudophilotes vicrama</i>
#7	Plants	<i>Centaurea solstitialis</i> <i>Onopordum tauricum</i> <i>Teucrium divaricatum</i>
	Insects	<i>Amegilla albigena</i> <i>Amegilla quadrifasciata</i> <i>Amegilla salviae</i> <i>Anthidium dalmaticum</i> aff. <i>Bombus terrestris</i> <i>Buprestidae</i> sp. A <i>Buprestidae</i> sp. C <i>Colias crocea</i> <i>Diplocladus</i> sp. A <i>Gonepteryx cleoptatra</i> <i>Halictus resurgens</i> <i>Halictus sexcinctus</i> <i>Larinus</i> sp. A <i>Lithurgus chrysurus</i> <i>Macroglossum stellatarum</i> <i>Megachile albisecta</i> <i>Megachile giraudi</i> <i>Megachile hungarica</i> <i>Megachile pilicrus</i> <i>Megachile</i> sp. A <i>Noctuidae</i> sp. A <i>Osmia dimidiata</i> <i>Papiliomachaon</i> <i>Phthiria subnitens</i>

Module	Species
	<i>Pieris brassicae</i> <i>Osmoderma</i> sp. A <i>Thymelicus acteon</i> <i>Thymelicus sylvestris</i> <i>Trichoplusiani</i> <i>Vespa orientalis</i> <i>Xylocopa violacea</i>
#8	Plants <i>Anemone pavonina</i> <i>Cistus salvifolius</i> <i>Fumana arabica</i> <i>Hedypnois cretica</i> <i>Lagoecia cuminoidea</i> <i>Medicago minima</i> <i>Ornithogalum</i> sp. <i>Ranunculus paludosus</i> <i>Taraxacum</i> sp. <i>Tolpis barbata</i> <i>Trifolium campestre</i> <i>Trifolium glanduliferum</i> var. <i>nervulosum</i> <i>Tuberaria guttata</i>
	Insects <i>Andrena hesperia</i> aff. <i>Andrena schencki</i> <i>Andrena westensis</i> <i>Anomala</i> cf. sp. A <i>Apis mellifera</i> <i>Auchenorrhyncha</i> sp. A <i>Beetle</i> sp. A <i>Bombylella atra</i> <i>Bug</i> sp. A <i>Coenonympha pamphilus</i> <i>Dasytes</i> sp. A <i>Epicometis hirta</i> <i>Eulasia nitidicollis</i> <i>Eumenidae</i> sp. D <i>Labidostomis humeralis</i> <i>Lasioglossum tricinatum</i> (group) <i>Lomatia</i> sp. A <i>Malachius bipustulatus</i> <i>Oedemera</i> sp. A <i>Osmia</i> sp. B <i>Osmia versicolor</i> <i>Pygopleurus</i> sp. A <i>Tachinidae</i> sp. A
#9	Plants <i>Crepis neglecta</i> <i>Serapias vomeracea</i>
	Insects <i>Andrena neocyprica</i> aff. <i>Andrena panurgimorpha</i> <i>Andrena</i> sp. C <i>Buprestidae</i> sp. B

Module	Species
	<i>Calliphoridae</i> sp. B
	<i>Clytra atraphaxidis</i>
	<i>Eucera pseudeucnemidea</i> aff.
	<i>Fly</i> sp. E
	<i>Halictus tumulorum/confusus</i> aff.
	<i>Hoplitis</i> sp. C
	<i>Lasioglossum malachurum</i> (group)
	<i>Lasioglossum marginatum</i>
	<i>Lasioglossum villosulum</i> -group
	<i>Merodon spinitarsis</i>
	<i>Osmia</i> sp. C
	<i>Petrorossia chraminensis</i>
	<i>Sphaerophoria scripta</i>
	<i>Tiphia</i> sp. A

Supplementary Table 3. Sizes of the *phenonets* in the study community, connectance and nestedness. Metrics are also shown for the *phenonets* of the plants that received no visits.

<i>phenonet</i>	Connectance (%)	Nestedness (%)	# Insects	# Plants
<i>Anagallis arvensis</i>	6.7	95.2	158	37
<i>Anemone pavonina</i>	13.9	82.5	47	24
<i>Anthemis auriculata</i>	6.6	95.3	165	36
<i>Anthyllis hermanniae</i>	16.5	85.4	51	20
<i>Asphodelus ramosus</i>	14.4	81.8	47	23
<i>Blackstonia perfoliata</i>	9.2	92.8	68	36
<i>Centaurea solstitialis</i>	19	82.2	42	16
<i>Centaureum pulchellum</i>	19.8	80.5	42	15
<i>Cistus creticus</i>	6.7	95.2	158	37
<i>Cistus salviifolius</i>	8.3	92.9	99	34
<i>Crepis neglecta</i>	7.8	94.6	115	35
<i>Cuscuta epithymum</i>	14.3	86.6	77	16
<i>Echium plantagineum</i>	6.8	95.8	143	37
<i>Fumana arabica</i>	6.7	95.2	158	37
<i>Genista acanthoclada</i>	13.7	82.5	47	24
<i>Geranium robertianum</i>	8.9	94.4	91	32
<i>Hedypnois cretica</i>	8.5	93.4	96	33
<i>Heliotropium lasiocarpum</i>	NA	NA	NA	NA
<i>Lagoecia cuminoides</i>	11.4	91.1	68	27
<i>Lavandula stoechas</i>	7.1	94.3	139	37
<i>Linum trigynum</i>	6.8	95.8	143	37
<i>Medicago minima</i>	15.2	89.9	46	18
<i>Moenchia mantica</i>	7.2	94.0	135	37
<i>Onopordum tauricum</i>	13.5	87.0	88	16
<i>Orchis sancta</i>	9.9	89.7	72	31
<i>Ornithogalum</i> sp.	17.1	78.7	30	24
<i>Papaver argemone</i>	11.4	92.5	49	28
<i>Prasium majus</i>	14	89.4	41	25
<i>Ranunculus paludosus</i>	15.5	79.5	39	19
<i>Scandix</i> sp.	9.9	89.7	72	31
<i>Sedum confertiflorum</i>	13.8	82.6	48	24
<i>Serapias cordigera</i>	9	92.6	83	31
<i>Serapias vomeracea</i>	9.8	89.8	72	30
<i>Taraxacum</i> sp.	12.4	83.5	54	27
<i>Teucrium divaricatum</i>	11.8	90.8	99	20
<i>Tolpis barbata</i>	7.1	95.7	136	35
<i>Trifolium angustifolium</i>	11.8	88.9	50	29
<i>Trifolium arvense</i>	8.2	94.2	109	33
<i>Trifolium campestre</i>	10.8	85.1	67	28
<i>Trifolium glanduliferum</i>	11.3	85.7	64	27
<i>Tuberaria guttata</i>	9.9	89.7	72	31

Supplementary Table 4. Comparison of the node properties computed within the ‘static’ network of the entire flowering season and for the plant *phenonets* in the community. Properties were calculated using the function ‘specieslevel’ in the R package *bipartite* v.2.05, except for the functional role which was computed with the *NetCarto* software (see Methods). Plants with no insect visitors (*viz.* *Centaureum pulchellum*, *Geranium robertianum*, and *Papaver argemone*) as well as *Heliotropium lasiocarpum* that flowered alone, are not included. For details on each property see Materials and Methods.

Plant	Normalized Degree		Betweenness Centrality		Closeness Centrality		Functional Role	
	static	<i>phenonet</i>	static	<i>phenonet</i>	static	<i>phenonet</i>	static	<i>phenonet</i>
<i>Anagallis arvensis</i>	0.006	0.006	0.000	0.000	0.020	0.021	Peripheral	Peripheral
<i>Anemone cf. pavonina</i>	0.024	0.085	0.007	0.020	0.028	0.043	Peripheral	Connector
<i>Anthemis auriculata</i>	0.071	0.073	0.062	0.052	0.031	0.032	Connector	Connector
<i>Anthyllis hermanniae</i>	0.071	0.137	0.025	0.040	0.029	0.050	Module hub	Peripheral
<i>Asphodelus ramosus</i>	0.065	0.213	0.008	0.034	0.027	0.045	Peripheral	Peripheral
<i>Blackstonia perfoliata</i>	0.006	0.015	0.000	0.000	0.021	0.023	Peripheral	Peripheral
<i>Centaurea solstitialis</i>	0.018	0.048	0.004	0.015	0.023	0.052	Peripheral	Peripheral
<i>Cistus creticus</i>	0.411	0.430	0.207	0.194	0.035	0.035	Network hub	Network hub
<i>Cistus salvifolius</i>	0.113	0.182	0.020	0.025	0.031	0.035	Peripheral	Connector
<i>Crepis neglecta</i>	0.155	0.200	0.124	0.138	0.030	0.032	Module hub	Module hub
<i>Cuscuta epithymum</i>	0.143	0.260	0.021	0.114	0.030	0.068	Module hub	Connector
<i>Echium plantagineum</i>	0.054	0.063	0.025	0.027	0.030	0.030	Peripheral	Peripheral
<i>Fumana arabica</i>	0.077	0.082	0.059	0.066	0.032	0.033	Connector	Connector
<i>Genista acanthoclada</i>	0.012	0.043	0.000	0.000	0.020	0.029	Peripheral	Peripheral
<i>Hedypnois cretica</i>	0.054	0.094	0.013	0.017	0.031	0.035	Peripheral	Peripheral
<i>Lagoecia cuminoides</i>	0.012	0.029	0.001	0.002	0.027	0.036	Peripheral	Peripheral
<i>Lavandula stoechas</i>	0.125	0.137	0.102	0.107	0.032	0.032	Connector	Peripheral
<i>Linum trigynum</i>	0.048	0.056	0.032	0.025	0.030	0.030	Peripheral	Module hub
<i>Medicago minima</i>	0.018	0.065	0.014	0.047	0.029	0.058	Peripheral	Peripheral
<i>Moenchia mantica</i>	0.065	0.074	0.009	0.010	0.029	0.029	Connector	Connector
<i>Onopordum taunicum</i>	0.208	0.375	0.033	0.049	0.029	0.059	Module hub	Module hub
<i>Orchis sancta</i>	0.012	0.028	0.008	0.021	0.026	0.032	Peripheral	Peripheral
<i>Ornithogalum sp.</i>	0.030	0.100	0.004	0.009	0.028	0.043	Peripheral	Peripheral
<i>Prasium majus</i>	0.024	0.073	0.000	0.000	0.020	0.029	Peripheral	Peripheral
<i>Ranunculus paludosus</i>	0.024	0.103	0.004	0.011	0.028	0.055	Peripheral	Peripheral
<i>Scandix sp.</i>	0.065	0.153	0.001	0.002	0.023	0.029	Module hub	Module hub
<i>Sedum confertiflorum</i>	0.012	0.042	0.000	0.000	0.000	0.000	Peripheral	Peripheral
<i>Serapias cordigera</i>	0.018	0.036	0.001	0.001	0.021	0.025	Peripheral	Peripheral
<i>Serapias vomeracea</i>	0.006	0.014	0.000	0.000	0.016	0.021	Peripheral	Peripheral
<i>Taraxacum sp.</i>	0.089	0.278	0.046	0.117	0.031	0.044	Peripheral	Connector
<i>Teucrium divaricatum</i>	0.119	0.172	0.050	0.106	0.030	0.050	Peripheral	Module hub
<i>Tolpis barbata</i>	0.077	0.081	0.047	0.029	0.032	0.033	Peripheral	Peripheral
<i>Trifolium angustifolium</i>	0.006	0.020	0.000	0.000	0.019	0.025	Peripheral	Peripheral
<i>Trifolium arvense</i>	0.060	0.092	0.050	0.055	0.032	0.036	Connector	Peripheral
<i>Trifolium campestre</i>	0.006	0.015	0.000	0.000	0.025	0.034	Peripheral	Peripheral
<i>Trifolium glanduliferum</i>	0.054	0.094	0.021	0.025	0.031	0.042	Peripheral	Peripheral
<i>Tuberaria guttata</i>	0.018	0.042	0.002	0.002	0.027	0.034	Peripheral	Peripheral

Supplementary Table 5. Vertical, horizontal, and chemical floral apparency in the study community.

Plant	Vertical apparency	Horizontal apparency	Total emissions apparency	Aliphatics apparency	Benzenoids apparency	Monoterpenes apparency	Sesquiterpenes apparency
<i>Anagallis arvensis</i>	-12.89	0.50	-0.15	0.18	0.09	-0.09	0.00
<i>Anemone pavonina</i>	4.91	1.44	-0.45	-0.10	0.00	-0.04	0.00
<i>Anthemis auriculata</i>	-2.80	2.26	0.50	0.13	0.01	0.36	0.30
<i>Anthyllis hermanniae</i>	11.56	-0.37	80.94	1.69	12.61	63.25	1.78
<i>Asphodelus ramosus</i>	58.94	0.75	-0.73	-0.29	-0.01	-0.10	0.00
<i>Blackstonia perfoliata</i>	-8.59	-0.96	-0.52	-0.07	-0.01	-0.09	0.00
<i>Centaurea solstitialis</i>	6.98	-1.62	-1.12	-0.24	-0.01	-0.24	-0.05
<i>Centaureum pulchellum</i>	-9.77	-1.82	-1.43	-0.29	-0.02	-0.34	-0.09
<i>Cistus creticus</i>	16.86	139.73	19.56	0.31	1.97	4.63	8.63
<i>Cistus salvifolius</i>	14.28	64.10	2.55	0.81	0.26	0.15	0.98
<i>Crepis neglecta</i>	11.40	8.41	0.90	0.77	0.00	0.14	0.00
<i>Cuscuta epithymum</i>	8.35	-0.96	-0.86	-0.12	0.05	-0.23	-0.05
<i>Echium plantagineum</i>	-9.38	-0.54	-0.57	-0.14	0.00	-0.08	0.00
<i>Fumana arabica</i>	4.15	2.83	-0.11	0.16	0.04	-0.02	0.00
<i>Genista acanthoclada</i>	24.86	-1.12	0.24	-0.13	0.45	0.15	0.06
<i>Geranium robertianum</i>	-12.21	-1.25	0.61	-0.23	0.01	0.80	0.38
<i>Hedypnois cretica</i>	-5.79	-0.14	0.73	0.53	0.07	0.21	-0.01
<i>Lagoecia cuminoides</i>	0.19	-0.26	26.36	-0.23	3.08	23.07	0.83
<i>Lavandula stoechas</i>	17.68	137.13	391.45	4.96	0.00	350.03	30.70
<i>Linum trigynum</i>	-5.69	0.98	-0.26	-0.16	0.00	0.26	0.00
<i>Medicago minima</i>	-10.32	-1.54	-1.33	-0.39	-0.01	-0.31	-0.08
<i>Moenchia mantica</i>	-3.38	2.22	1.21	1.50	0.00	-0.05	0.00
<i>Onopordum tauricum</i>	92.94	14.19	-1.15	-0.24	-0.01	-0.27	-0.05
<i>Orchis sancta</i>	2.72	-1.18	2.74	-0.20	3.25	-0.12	0.09
<i>Ornithogalum sp.</i>	-9.06	-1.16	-0.64	-0.28	-0.01	-0.07	-0.01
<i>Papaver argemone</i>	0.48	-0.72	-0.94	-0.27	-0.01	-0.18	-0.02
<i>Prasium majus</i>	46.57	-1.26	-0.72	-0.26	-0.01	-0.07	0.02

Plant	Vertical apparency	Horizontal apparency	Total emissions apparency	Aliphatics apparency	Benzenoids apparency	Monoterpenes apparency	Sesquiterpenes apparency
<i>Ranunculus paludosus</i>	-4.00	-1.51	-0.25	-0.28	-0.02	0.43	-0.01
<i>Scandix</i> sp.	2.41	2.01	219.88	2.47	214.56	2.09	1.13
<i>Sedum confertiflorum</i>	-10.98	-1.62	-0.67	-0.28	0.00	-0.07	0.01
<i>Serapias cordigera</i>	3.36	3.68	0.14	0.64	-0.01	-0.11	0.00
<i>Serapias vomeracea</i>	3.69	-0.15	0.19	0.65	-0.01	-0.10	0.00
<i>Taraxacum</i> sp.	8.90	0.78	-0.69	-0.24	-0.01	-0.11	-0.01
<i>Teucrium divaricatum</i>	25.87	4.34	24.66	4.00	-0.01	6.28	14.79
<i>Tolpis barbata</i>	-1.87	4.76	0.06	0.26	0.00	-0.05	0.05
<i>Trifolium angustifolium</i>	-9.29	-1.27	-0.36	0.06	0.00	-0.09	-0.01
<i>Trifolium arvense</i>	-8.73	6.66	-0.27	-0.21	0.03	0.10	-0.01
<i>Trifolium campestre</i>	-7.53	1.47	2.83	2.46	0.34	0.30	0.02
<i>Trifolium glanduliferum</i>	-9.23	6.60	80.12	6.60	64.84	5.80	2.02
<i>Tuberaria guttata</i>	-0.54	0.35	-0.28	-0.14	-0.01	0.22	-0.01

Supplementary Table 6. Flowering phenology, floral morphology and the volatility of the scent blends of the plants in the community. Days of flowering and floral density represent mean values of the two years of sampling, except for *Geranium robertianum* and *Heliotropium europaeum* that were observed in the community only in the second year. Note that *Cuscuta epithimum* is a parasitic vine that was found on *Cistus creticus* towards the end of its flowering period.

Abbrev.	Plant	First day of flowering ¹	Last day of flowering ¹	Floral density (fl. units/m ²)	Corolla depth ²	Symmetry	Floral surface (cm ²)	Floral height (cm)	Mean nBP (°C)
ANA	<i>Anagallis arvensis</i>	102	169	3.23	short	actinomorphic	0.47	3.71	218.1
ANE	<i>Anemone pavonina</i>	102	117	0.23	short	actinomorphic	13.67	20.67	222.9
ANL	<i>Anthemis auriculata</i>	117	169	0.67	short	actinomorphic	4.95	13.97	207.7
ANT	<i>Anthyllis hermanniae</i>	141	152	8.58	short	zygomorphic	0.12	28.79	227.5
ASP	<i>Asphodelus ramosus</i>	102	117	0.71	short	actinomorphic	3.39	74.65	206.7
BLA	<i>Blackstonia perfoliata</i>	117	138	1.09	short	actinomorphic	0.29	6.74	188.8
CEP	<i>Centaurea solstitialis</i>	152	155	0.01	long	actinomorphic	0.58	25.95	213.1
CES	<i>Centaurium pulchellum</i>	147	152	0.01	short	actinomorphic	0.49	10.11	228.5
CIC	<i>Cistus creticus</i>	102	173	8.29	short	actinomorphic	16.97	33.48	235.2
CIS	<i>Cistus salvifolius</i>	102	146	6.70	short	actinomorphic	9.74	30.28	209.6
CRE	<i>Crepis neglecta</i>	117	161	3.69	long	actinomorphic	2.56	28.20	205.6
CUS	<i>Cuscuta epithimum</i>	152	173	1.50	short	actinomorphic	0.47	27.35	221.4
ECH	<i>Echium plantagineum</i>	110	169	0.32	long	zygomorphic	1.39	7.25	169.9
FUM	<i>Fumana arabica</i>	102	173	0.96	short	actinomorphic	3.97	20.75	206.3
GEN	<i>Genista acanthoclada</i>	102	117	0.73	long	zygomorphic	0.73	40.53	208.2
GER	<i>Geranium robertianum</i>	125	153	0.08	short	actinomorphic	0.56	4.63	226.8
HED	<i>Hedypnois cretica</i>	102	143	1.99	long	actinomorphic	0.44	9.82	202.2
HEL	<i>Heliotropium lasiocarpum</i>	178	178	0.10	short	actinomorphic	4.42	16.71	200.9
LAG	<i>Lagoecia cuminoides</i>	130	152	1.30	short	actinomorphic	0.66	17.21	180.5
LAV	<i>Lavandula stoechas</i>	102	163	28.99	long	zygomorphic	4.76	34.23	209.1
LIN	<i>Linum trigynum</i>	110	169	18.05	short	actinomorphic	0.11	10.87	166.0
MED	<i>Medicago minima</i>	136	146	0.56	short	zygomorphic	0.07	5.10	201.2
MOE	<i>Moenchia mantica</i>	102	157	3.34	long	actinomorphic	0.96	13.33	222.1
ONO	<i>Onopordum tauricum</i>	147	176	0.40	long	actinomorphic	39.43	111.47	202.5

Abbrev.	Plant	First day of flowering ¹	Last day of flowering ¹	Floral density (fl. units/m ²)	Corolla depth ²	Symmetry	Floral surface (cm ²)	Floral height (cm)	Mean nBP (°C)
ORC	<i>Orchis sancta</i>	102	130	0.07	long	zygomorphic	1.01	18.33	261.8
ORN	<i>Ornithogalum</i> sp.	117	122	0.12	short	actinomorphic	3.44	7.00	194.8
PAP	<i>Papaver argemone</i>	128	141	0.02	short	actinomorphic	19.81	16.31	244.6
PRA	<i>Prasium majus</i>	122	133	0.04	long	zygomorphic	1.35	61.75	205.6
RAN	<i>Ranunculus paludosus</i>	102	110	0.16	short	actinomorphic	2.35	13.70	198.2
SCA	<i>Scandix</i> sp.	102	132	3.01	short	actinomorphic	1.08	18.00	237.8
SED	<i>Sedum confertiflorum</i>	102	117	0.54	short	actinomorphic	0.12	4.66	211.1
SEC	<i>Serapias cordigera</i>	102	138	1.86	long	zygomorphic	2.60	18.68	268.3
SEV	<i>Serapias vomeracea</i>	102	130	1.43	long	zygomorphic	0.72	19.56	274.5
TAR	<i>Taraxacum</i> sp.	102	125	0.20	long	actinomorphic	10.77	24.25	247.0
TEU	<i>Teucrium divaricatum</i>	139	176	7.80	long	zygomorphic	0.74	43.50	215.1
TOL	<i>Tolpis barbata</i>	117	173	2.93	short	actinomorphic	1.98	14.96	212.1
TRA	<i>Trifolium angustifolium</i>	117	130	1.94	short	zygomorphic	0.03	6.55	202.9
TRV	<i>Trifolium arvense</i>	122	161	7.66	short	zygomorphic	1.00	7.75	200.1
TRC	<i>Trifolium campestre</i>	102	128	3.48	short	zygomorphic	0.80	7.95	206.8
TRG	<i>Trifolium glanduliferum</i>	102	127	6.54	short	zygomorphic	1.22	5.99	217.7
TUB	<i>Tuberaria guttata</i>	102	134	1.02	short	actinomorphic	1.54	15.12	202.3

¹Day numbers of the Julian calendar.

²short < 3 mm; long ≥ 3 mm.

Supplementary Table 7. The phylogenetic signal in all floral traits and attributes used in the present study. Different methods have been used according to variable type (see Methods). D : statistic for binary traits; P_{rand} : probability of D resulting from no (random) phylogenetic structure; P_{Brown} : probability of D resulting from Brownian phylogenetic structure. DM: distance matrix (Bray-Curtis). P -values implying significance ($P \leq 0.050$) are shown in bold.

Trait/matrix	Pagel's λ	P	D	P_{random}	P_{Brownian}	Mantel r	P
Trichromatic saturation: r_{tri}	0.22	0.199					
Trichromatic hue: θ_{tri}	0.00	1.000					
Tetrachromatic saturation: r_{tet}	0.83	0.003					
Tetrachromatic hue angle: ϕ_{tet}	0.00	1.000					
Tetrachromatic hue angle: θ_{tet}	0.00	1.000					
Proportion (%) of aliphatics	0.00	1.000					
Proportion (%) of benzenoids	0.00	1.000					
Proportion (%) of monoterpenes	0.00	1.000					
Proportion (%) of sesquiterpenes	0.38	0.232					
Apparency of aliphatic emissions	0.00	1.000					
Apparency of benzenoid emissions	0.00	1.000					
Apparency of monoterpene emissions	0.00	1.000					
Apparency of sesquiterpene emissions	0.21	0.675					
Apparency of total emissions	0.00	1.000					
Normal boiling point of the scent blend	0.87	0.008					
Floral height apparency	0.00	1.000					
Floral surface apparency	0.00	1.000					
Start date	0.20	0.497					
Flowering duration	0.00	1.000					
Normalized degree	0.00	1.000					
Betweenness centrality	0.47	0.043					
Closeness centrality	0.00	1.000					
Nectar			0.09	0.006	0.471		
Symmetry			-0.75	0.000	0.955		
Corolla depth			-0.15	0.000	0.958		
Plant interactions DM (weighted)						0.09	0.062
Pollinator interactions DM (weighted)						-0.01	0.671

Supplementary Table 8. The independent variables (predictors) used in the present study in order to estimate the best models (PGLS or MGLM) according to AIC.

Variable	Type
Trichromatic saturation: r_{tri}	Continuous
Trichromatic hue: θ_{tri}	Continuous
Trichromatic color: $r_{\text{tri}} \times \theta_{\text{tri}}$	Interaction term – Continuous
Tetrachromatic saturation: r_{tet}	Continuous
Tetrachromatic hue: θ_{tet} and φ_{tet}	Continuous
Tetrachromatic color: $r_{\text{tet}} \times \theta_{\text{tet}} \times \varphi_{\text{tet}}$	Interaction term – Continuous
Proportion (%) of aliphatics in the scent blend	Proportion
Proportion (%) of benzenoids in the scent blend	Proportion
Proportion (%) of monoterpenes in the scent blend	Proportion
Proportion (%) of sesquiterpenes in the scent blend	Proportion
Apparency of aliphatic emissions	Continuous
Apparency of benzenoid emissions	Continuous
Apparency of monoterpene emissions	Continuous
Apparency of sesquiterpene emissions	Continuous
Interaction of VOC class apparencies	Interaction term – Continuous
Apparency of total emissions	Continuous
Normal boiling point of the scent blend	Continuous
Nectar presence/absence	Binary
Symmetry (actinomorphic/zygomorphic)	Binary
Corolla depth (short/long)	Binary
Floral height apparency	Continuous
Floral surface apparency	Continuous
Flowering phenology (start date \times flowering duration)	Interaction term – Integers