

Table S1. List of the grassland types identified in the surveyed pastures and mowed/grazed meadows in the study area; Annex I Habitat types refer to the 92/43/EEC 'Habitats' Directive and their interpretation follows the official European [58] and national sources [59,99]; altitude and aspect have been recorded in the field.

ID	Grassland type	Annex I Habitat	Altitude (av±sd)	Prevalent Aspect
1.Pot_Bra	<i>Potentillo rigoanae-Brachypodium genuens</i> Lucchese, Persia e Pignatti 1995	6210	1602±88	N
2.Poo_Fes	<i>Poo alpinae-Festucetum circummediterraneae</i> Biondi, Ballelli, Allegrezza, Frattaroli & Taffetani 1992	6210	1712±73	N, S
3.Fes_mic	grassland dominated by <i>Festuca rubra</i> subsp. <i>microphylla</i>	6210	1775±173	N, W
4.Luz_Nar	<i>Luzulo italicae-Nardetum strictae</i> Biondi, Ballelli, Allegrezza, Frattaroli & Taffetani 1992 <i>caricetosum kitaibeliana</i> Biondi, Ballelli, Allegrezza, Taffetani, Frattaroli, Guitian et Zuccarello 1999	6230*	2371±2	S
5.Tar_Tri	<i>Taraxaco apenninii-Trifolietum thalii</i> Biondi, Allegrezza, Frattaroli, Taffetani 1992 <i>gnaphalietosum magellensis</i> Blasi, Di Pietro, Pelino 2005	6170	2383±3	indifferent
6.Poo_Nar	<i>Poo violaceae-Nardetum strictae</i> Pedrotti 1981 <i>festucetosum circummediterraneae</i> Biondi, Ballelli, Allegrezza, Taffetani, Frattaroli, Guitian et Zuccarello 1999	6230*	1776±7	W
7.Koe_Bro	<i>Koelerio splendentis-Brometum erecti</i> Biondi, Ballelli, Allegrezza, Frattaroli, Taffetani 1992	6210	1567±121	W, S
8.Ses_Bro	<i>Seslerio nitidae-Brometum erecti</i> Bruno in Bruno et Covarelli 1968 variant with a <i>Stipa apenninicola</i>	6210	1441±219	S, W
9.Ast_Ses	<i>Astragalo sempervirentis-Seslerietum nitidae</i> Biondi & Ballelli 1995 variant with <i>Centaurea tenoreana</i>	6210	1381±69	S
10.Ses_ape	<i>Seslerietum apenninae</i> Furnari 1961 corr. Furnari 1966	6170	1924±83	S, E
11.Asp_Bro	<i>Asperulo purpureae-Brometum erecti</i> Biondi et Ballelli 1981 ex Biondi, Ballelli, Allegrezza et Zuccarello 1995"	6210	1142±135	S, E
12.Ant_Bra	grassland dominated by <i>Anthoxanthum odoratum</i> and <i>Brachypodium rupestre</i>	6210	1167±94	W, N
13.Pol_Bra	<i>Polygalo mediterraneae-Brachypodium rupestris</i> Di Pietro, Conte et Iamónico 2014	6210	1027±248	N, E
14.Bri_Bro	<i>Brizo mediae-Brometum erecti</i> Bruno in Bruno et Covarelli 1968 corr. Biondi et Ballelli 1982	6210	1283±14	S, N
15.Alo_pra	Mowed/grazed meadows with <i>Alopecurus pratensis</i> and <i>Cynosurus cristatus</i>	-	1277±59	E, S
16.Cyn_cri	Mowed/grazed meadows with <i>Cynosurus cristatus</i>	-	1330±23	W, N
17.Alo_ren	Mowed/grazed meadows with <i>Alopecurus rendlei</i>	-	1256±3	indifferent

Table S2. Syntaxonomic scheme used to categorize the grassland types found in the surveyed pastures and mowed/grazed meadows in the study area. The classes are interpreted according to the Prodrome of Italian Vegetation [96 and subsequent updates, symbolized by *] and the European Vegetation Checklist [97, symbolized by °). The types of grassland are listed in bold, with their corresponding ID codes on the right column.

*FESTUCO VALESIIACAE-BROMETEA ERECTI Br.-Bl. et Tuxen ex Br.-Bl. 1949	
PHLEO AMBIGUI-BROMETALIA ERECTI Biondi, Allegrezza, Blasi et Galdenzi in Biondi, Allegrezza, Casavecchia, Galdenzi, Gasparri, Pesaresi, Vagge et Blasi 2014	
Polygalo mediterraneae-Bromion erecti (Biondi, Allegrezza et Zuccarello 2005) Di Pietro in Di Pietro, Theurillat, Capelo, Fernández- González, Terzi, Carni et Mucina 2015	
Polygalo mediterraneae-Brachypodietum rupestris Di Pietro, Conte et Iamónico 2014	13. Pol_Bra
Phleo ambigu-Bromion erecti Biondi, Ballelli, Allegrezza et Zuccarello ex Biondi et Galdenzi 2012	
Phleo ambigu-Bromion erecti Biondi, Allegrezza et Zuccarello ex Di Pietro 2011	
Asperulo purpureae-Brometum erecti Biondi et Ballelli 1981 ex Biondi, Ballelli, Allegrezza et Zuccarello 1995	11. Asp_Bro
grassland dominated by Anthoxanthum odoratum and Brachypodium rupestre	12. Ant_Bra
Brachypodenion genuensis Biondi, Ballelli, Allegrezza et Zuccarello ex Biondi et Galdenzi 2012	
Brizo mediae-Brometum erecti Bruno in Bruno et Covarelli 1968 corr. Biondi et Ballelli 1982	14. Bri_Bro
Koelerio splendens-Brometum erecti Biondi, Ballelli, Allegrezza, Frattaroli, Taffetani 1992	7. Koe_Bro
Astragalo sempervirentis-Seslerietum nitidae Biondi & Ballelli 1995 variant with <i>Centaurea tenoreana</i>	9. Ast_Ses
Seslerio nitidae-Brometum erecti Bruno in Bruno et Covarelli 1968 variant with <i>Stipa dasyvaginata</i> subsp. <i>apenninica</i>	8. Ses_Bro
grassland dominated by Festuca rubra subsp. <i>microphylla</i>	3. Fes_rub
Poo alpinae-Festucetum circummediterraneae Biondi, Ballelli, Allegrezza, Frattaroli et Taffetani 1992	2. Poo_Fes
Potentillo rigosae-Brachypodietum genuensis Lucchese, Persia et Pignatti 1995	1. Pot_Bra
°ELYNO-SESLERIETEA Br.-Bl. 1948	
Seslerietalia tenuifoliae Horvat 1930	
Seslerion apenninae Furnari in Bruno et Furnari 1966	
Seslerienion apenninae Blasi, Di Pietro, Fortini et Catonica 2003	
Seslerietum apenninae Furnari 1961 corr. Furnari 1966	10. Ses_ape
*NARDETEA STRICTAE Rivas Goday in Rivas Goday et Rivas-Martínez 1963	
NARDEALIA STRICTAE Oberdorfer ex Preising 1949	
Ranunculo pollinensis-Nardion strictae Bonin 1972	
Poo violaceae-Nardetum strictae Pedrotti 1981 <i>festucetosum circummediterraneae</i> Biondi, Ballelli, Allegrezza, Taffetani, Frattaroli, Guitian et Zuccarello 1999	6. Poo_Nar
Luzulo italicae-Nardetum strictae Biondi, Ballelli, Allegrezza, Frattaroli et Taffetani 1992 <i>caricetosum kitaibelianae</i> Biondi, Ballelli, Allegrezza, Taffetani, Frattaroli, Guitian et Zuccarello 1999	4. Luz_Nar
Taraxaco apenninii-Trifolietum thalii Biondi, Ballelli, Allegrezza, Frattaroli et Taffetani 1992 <i>gnaphalietosum magellensis</i> Blasi, Di Pietro et Pelino 2005	5. Tar_ape
°MOLINIO-ARRHENATHERETEA Tx. 1937	
ARRHENATHERETALIA ELATIORIS Tx. 1931	
Cynosurion cristati Tx. 1947	
mowed/grazed meadows dominated by Alopecurus pratensis and Cynosurus cristatus	15. Alo_pra
mowed/grazed meadows dominated by Cynosurus cristatus	16. Cyn_cri
TRIFOLIO-HORDEETALIA Horvatić 1963	
Molinio-Hordeion secalini Horvatić 1934 (syn.: <i>Alopecurion utriculati</i> Zeidler 1954)	
mowed/grazed meadows dominated by Alopecurus rendlei	17. Alo_ren

Table S3. Dominant species (average cover >10%; in bold species with average cover >15%; average cover \pm standard deviation are reported) and Indicator Species Analysis results [association values > 0.5; in bold species with values of association values > 0.7; 'indicspecies' package for "R", version 1.7.12, Association function: IndVal.g, minimum statistic value (minstat): 0.5, permutations: 9999] for the 17 identified grassland types.

Grassland Type: 1.Pot_Bra				
Indicator species				Dominant species
species with stat>0.5: 15	stat	p.value		
species with stat>0.7: 3				
Dianthus hyssopifolius L.	0.707	0.0016	**	Brachypodium genuense (DC.) Roem. & Schult. (46.7\pm16.6)
Geranium rotundifolium L.	0.707	0.0017	**	Bromopsis erecta (Huds.) Fourr. s.l. (16.8\pm11.9)
Luzula multiflora (Ehrh.) Lej. subsp. multiflora	0.707	0.0016	**	Festuca circummediterranea Patzke (12.3\pm5.2)
Cynoglossum magellense Ten.	0.654	0.0006	***	
Leontodon hispidus L. subsp. dubius (Hoppe) Pawłowska	0.653	0.0040	**	
Silene roemerii Friv. subsp. staminea (Bertol.) Nyman	0.653	0.0031	**	
Verbascum densiflorum Bertol.	0.631	0.0045	**	
Genista sagittalis L.	0.577	0.0087	**	
Carlina vulgaris L.	0.547	0.0113	*	
Carex pairae F.W. Schultz	0.530	0.0078	**	
Campanula glomerata L.	0.522	0.0160	*	
Achillea millefolium L.	0.519	0.0128	*	
Stachys heraclea All.	0.506	0.0181	*	
Valeriana stolonifera Czern. subsp. angustifolia Soó	0.506	0.0164	*	
Brachypodium genuense (DC.) Roem. & Schult.	0.501	0.0014	**	
Grassland Type: 2.Poo_Fes				
Indicator species				Dominant species
species with stat>0.5: 9	stat	p.value		
species with stat>0.7: 1				
Armeria gracilis Ten. subsp. gracilis	0.733	0.0001	***	Bromopsis erecta (Huds.) Fourr. s.l. (41.1\pm16.7)
Galium parisiense L.	0.667	0.0037	**	Festuca circummediterranea Patzke (21.7\pm9.7)
Carduus affinis Guss. subsp. affinis	0.650	0.0014	**	Brachypodium genuense (DC.) Roem. & Schult. (13.8 \pm 13.0)
Plantago argentea Chaix subsp. argentea	0.640	0.0009	***	Festuca rubra L. subsp. microphylla St.-Yves (13.0\pm13.6)
Carex caryophyllea Latourr.	0.630	0.0013	**	
Galium anisophyllum Vill.	0.627	0.0022	**	
Helianthemum nummularium (L.) Mill. subsp. obscurum (Čelak.) Holub	0.595	0.0026	**	
Nocca brachypetala (Jord.) F.K. Mey.	0.577	0.0034	**	
Trifolium pratense L. subsp. semipurpureum (Strobl) Pignatti	0.518	0.0051	**	
Grassland Type: 3.Fes_mic				
Indicator species				Dominant species
species with stat>0.5: 3	stat	p.value		
species with stat>0.7: 0				
Armeria gracilis Ten. subsp. majellensis (Boiss.) Arrigoni	0.636	0.0014	**	Festuca rubra L. subsp. microphylla St.-Yves (37.8\pm21.7)
Cynanchica aristata (L.f.) P.Caputo & Del Guacchio subsp. aristata	0.552	0.0068	**	Bromopsis erecta (Huds.) Fourr. s.l. (16.7\pm16.6)
Festuca centroaemennica (Markgr.-Dann.) Foggi, F.Conti & Pignatti	0.548	0.0059	**	
Grassland Type: 4.Luz_Nar				
Indicator species				Dominant species
species with stat>0.5: 13	stat	p.value		
species with stat>0.7: 6				
Gentiana nivalis L.	1.000	0.0001	***	Nardus stricta L. (63.3\pm20.8)
Erigeron epiroticus (Vierh.) Halácsy	0.964	0.0001	***	Poa alpina L. subsp. alpina (15.0 \pm 0.0)
Luzula spicata (L.) DC. subsp. bulgarica (Chrtk & Křisa) Gamisans	0.949	0.0001	***	Ranunculus pollinensis (N.Terracc.) Chiov. (10.0\pm4.4)
Pilosella hoppeana (Schult.) F.W.Schultz & Sch.Bip. subsp. macrantha (Ten.) S.Bräut. & Greuter	0.849	0.0001	***	Festuca rubra L. subsp. microphylla St.-Yves (10.0\pm8.7)
Trifolium pratense L. subsp. nivale Ces.	0.791	0.0001	***	
Nardus stricta L.	0.711	0.0005	***	
Ranunculus pollinensis (N.Terracc.) Chiov.	0.684	0.0001	***	
Cerastium aroense L. subsp. strictum (W.D.J.Koch) Gremli	0.650	0.0010	***	
Potentilla crantzii (Crantz) Beck ex Fritsch subsp. crantzii	0.637	0.0043	**	
Campanula micrantha Bertol.	0.594	0.0021	**	
Botrychium lunaria (L.) Sw.	0.553	0.0118	*	
Ranunculus apenninus (Chiov.) Pignatti	0.527	0.0368	*	
Poa alpina L. subsp. alpina	0.517	0.0011	**	
Grassland Type: 5.Tar_Tri				
Indicator species				Dominant species
species with stat>0.5: 13	stat	p.value		
species with stat>0.7: 6				

species with stat>0.5: 8					
species with stat>0.7: 5					
<i>Taraxacum glaciale</i> É. Huet & A. Huet ex Hand.-Mazz.	0.931	0.0001	***	<i>Trifolium thalii</i> Vill. (55.7±4.0)	
<i>Trifolium thalii</i> Vill.	0.862	0.0001	***	<i>Scorzoneroideis montana</i> (Lam.) Holub subsp. <i>breviscapa</i> (DC.) Greuter (20±17.3)	
<i>Plantago atrata</i> Hoppe subsp. <i>fuscescens</i> (Jord.) Pilg.	0.816	0.0009	***	<i>Plantago atrata</i> Hoppe subsp. <i>atrata</i> (11.0±3.6)	
<i>Scorzoneroideis montana</i> (Lam.) Holub subsp. <i>breviscapa</i> (DC.) Greuter	0.816	0.0009	***		
<i>Taraxacum apenninum</i> (Ten.) DC.	0.816	0.0006	***		
<i>Plantago atrata</i> Hoppe subsp. <i>atrata</i>	0.673	0.0007	***		
<i>Phleum rhaeticum</i> (Humphries) Rauschert	0.659	0.0035	**		
<i>Sabulina verna</i> (L.) Rchb. subsp. <i>verna</i>	0.629	0.0015	**		
Grassland Type: 6.Poo_Nar					
Indicator species					
species with stat>0.5: 14	stat	p.value		Dominant species	
species with stat>0.7: 9					
<i>Veronica serpyllifolia</i> L.	1.000	0.0001	***	<i>Nardus stricta</i> L. (57.5±6.9)	
<i>Verbascum thapsus</i> L. subsp. <i>thapsus</i>	0.978	0.0001	***		
<i>Omalotheca sylvatica</i> (L.) Sch.Bip. & F.W.Schultz	0.968	0.0001	***		
<i>Ajuga tenorei</i> C.Presl	0.913	0.0001	***		
<i>Achillea setacea</i> Waldst. & Kit.	0.880	0.0001	***		
<i>Veronica officinalis</i> L.	0.745	0.0001	***		
<i>Carduus defloratus</i> L. subsp. <i>carlinifolius</i> (Lam.) Ces.	0.707	0.0026	**		
<i>Dianthus deltoides</i> L. subsp. <i>deltoides</i>	0.702	0.0001	***		
<i>Bellardiachloa variegata</i> (Lam.) Kerguélen	0.702	0.0006	***		
<i>Agrostis capillaris</i> L. subsp. <i>capillaris</i>	0.614	0.0010	***		
<i>Rumex nebroides</i> Campd.	0.601	0.0018	**		
<i>Helleborus viridis</i> L. subsp. <i>bocconeii</i> (Ten.) Peruzzi	0.577	0.0086	**		
<i>Sagina alexandrae</i> Iamónico	0.577	0.0081	**		
<i>Stachys germanica</i> L.	0.516	0.0197	*		
Grassland Type: 7.Koe_Bro					
Indicator species					
species with stat>0.5: 3	stat	p.value		Dominant species	
species with stat>0.7: 0					
<i>Koeleria splendens</i> C.Presl	0.648	1e-04	***	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (20.0±18.7)	
<i>Petrosedum rupestre</i> (L.) P.V.Heath	0.638	9e-04	***	<i>Festuca circummediterranea</i> Patzke (16.2±12.5)	
<i>Petrorhagia saxifraga</i> (L.) Link	0.545	1e-04	***		
Grassland Type: 8.Ses_Bro					
Indicator species					
species with stat>0.5: 16	stat	p.value		Dominant species	
species with stat>0.7: 4					
<i>Plantago subulata</i> L.	0.745	0.0004	***	<i>Sesleria nitida</i> Ten. (17.1±14.1)	
<i>Paronychia kapela</i> (Hacq.) A. Kern.	0.731	0.0005	***	<i>Stipa dasyvaginata</i> Martinovský subsp. <i>apenninica</i> Martinovský & Moraldo (11.1±20.1)	
<i>Teucrium montanum</i> L.	0.716	0.0001	***	<i>Sesleria juncifolia</i> Wulfen ex Suffren subsp. <i>juncifolia</i> (11.0±20.7)	
<i>Cytisus spinescens</i> Sieber ex Spreng.	0.713	0.0001	***		
<i>Helianthemum apenninum</i> (L.) Mill. subsp. <i>apenninum</i>	0.671	0.0010	***		
<i>Globularia cordifolia</i> L. subsp. <i>bellidifolia</i> (Nyman) Wettst.	0.600	0.0008	***		
<i>Stipa dasyvaginata</i> Martinovský subsp. <i>apenninica</i> Martinovský & Moraldo	0.584	0.0020	**		
<i>Centaurea ceratophylla</i> Ten. subsp. <i>ceratophylla</i>	0.546	0.0164	*		
<i>Allium sphaerocephalon</i> L.	0.540	0.0145	*		
<i>Pimpinella tragium</i> Vill.	0.539	0.0040	**		
<i>Anthyllis vulneraria</i> L. subsp. <i>polyphylla</i> (DC.) Nyman	0.535	0.0142	*		
<i>Cynanchica pyrenaica</i> (L.) P.Caputo & Del Guacchio subsp. <i>neglecta</i> (Guss.) P.Caputo & Del Guacchio	0.535	0.0142	*		
<i>Astragalus damicus</i> Retz.	0.535	0.0302	*		
<i>Oxytropis neglecta</i> J.Gay ex Ten.	0.535	0.0380	*		
<i>Petrosedum montanum</i> (Songeon & E.P.Perrier) Grulich	0.535	0.0300	*		
<i>Sabulina glauca</i> (Dvořáková) Dillenb. & Kadereit	0.535	0.0156	*		
Grassland Type: 9.Ast_Ses					
Indicator species					
species with stat>0.5: 11	stat	p.value		Dominant species	
species with stat>0.7: 4					
<i>Centaurea tenoreana</i> Willk.	0.900	0.0001	***	<i>Sesleria nitida</i> Ten. (57.0±10.4)	
<i>Astragalus monspessulanus</i> L. subsp. <i>monspessulanus</i>	0.894	0.0001	***		
<i>Lomelosia crenata</i> (Cirillo) Greuter & Burdet subsp. <i>pseudisetensis</i> (Lacaita) Greuter & Burdet	0.712	0.0010	***		
<i>Ononis spinosa</i> L.	0.706	0.0005	***		
<i>Sesleria nitida</i> Ten.	0.690	0.0002	***		

<i>Coronilla minima</i> L. subsp. <i>minima</i>	0.653	0.0009	***	
<i>Cuscuta epithymum</i> (L.) L.	0.626	0.0019	**	
<i>Onobrychis alba</i> (Waldst. & Kit.) Desv.	0.575	0.0069	**	
<i>Vicia onobrychioides</i> L.	0.537	0.0070	**	
<i>Dianthus virgineus</i> L.	0.535	0.0032	**	
<i>Astragalus sempervirens</i> Lam.	0.506	0.0145	*	
Grassland Type: 10.Ses_ape				
Indicator species				Dominant species
species with stat>0.5: 20	stat	p.value		
species with stat>0.7: 12				
<i>Juniperus communis</i> L. var. <i>saxatilis</i> Pall.	1.000	0.0001	***	<i>Sesleria juncifolia</i> Wulfen ex Suffren subsp. <i>juncifolia</i> (45.7±27.4)
<i>Edraianthus graminifolius</i> (L.) A.DC. ex Meisn. subsp. <i>graminifolius</i>	0.941	0.0001	***	<i>Sesleria nitida</i> Ten. (14.7±20.1)
<i>Festuca laevigata</i> Gaudin	0.940	0.0001	***	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (14.0±5.9)
<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	0.913	0.0001	***	<i>Festuca laevigata</i> Gaudin (12.5±4.2)
<i>Carex humilis</i> Leyss.	0.913	0.0002	***	<i>Helianthemum oelandicum</i> (L.) Dum.Cours. subsp. <i>incanum</i> (Willk.) G.López (10.3±4.2)
<i>Pedicularis elegans</i> Ten.	0.886	0.0002	***	
<i>Anthyllis montana</i> L. subsp. <i>jacquini</i> (A.Kern.) Rohlena	0.827	0.0001	***	
<i>Anthyllis vulneraria</i> L. subsp. <i>pulchella</i> (Vis.) Bornm.	0.816	0.0002	***	
<i>Trinia glauca</i> (L.) Dumort.	0.775	0.0002	***	
<i>Gymnadenia conopsea</i> (L.) R.Br.	0.714	0.0003	***	
<i>Sesleria juncifolia</i> Wulfen ex Suffren subsp. <i>juncifolia</i>	0.712	0.0004	***	
<i>Cynanchica aristata</i> (L.f.) P.Caputo & Del Guacchio subsp. <i>scabra</i> (Nyman) P.Caputo & Del Guacchio	0.707	0.0025	**	
<i>Helianthemum nummularium</i> (L.) Mill. subsp. <i>grandiflorum</i> (Scop.) Schinz & Thell.	0.677	0.0002	***	
<i>Bupleurum falcatum</i> L. subsp. <i>cernuum</i> (Nyman) Arcang.	0.671	0.0009	***	
<i>Thymus striatus</i> Vahl subsp. <i>acicularis</i> (Waldst. & Kit.) Ronniger	0.645	0.0010	***	
<i>Helianthemum oelandicum</i> (L.) Dum.Cours. subsp. <i>incanum</i> (Willk.) G.López	0.636	0.0002	***	
<i>Gentiana dinarica</i> Beck	0.577	0.0076	**	
<i>Pulsatilla alpina</i> (L.) Delarbre subsp. <i>millefoliata</i> (Bertol.) D.M.Moser	0.577	0.0076	**	
<i>Carex kitaibeliana</i> Degen ex Bech.	0.574	0.0118	*	
<i>Lotus corniculatus</i> L. subsp. <i>alpinus</i> (DC.) Rothm.	0.506	0.0182	*	
Grassland Type: 11.Asp_Bro				
Indicator species				Dominant species
species with stat>0.5: 9	stat	p.value		
species with stat>0.7: 0				
<i>Bupleurum baldense</i> Turra	0.596	0.0019	**	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (31.2±15.3)
<i>Stachys germanica</i> subsp. <i>salviifolia</i> (Ten.) Gams	0.595	0.0048	**	<i>Festuca circummediterranea</i> Patzke (24.6±19.5)
<i>Phleum hirsutum</i> Honck. subsp. <i>ambiguum</i> (Ten.) Cif. & Giacom.	0.591	0.0001	***	
<i>Centaurea scabiosa</i> L.	0.542	0.0092	**	
<i>Pilosella acutifolia</i> (Vill.) Arv.-Touv.	0.542	0.0087	**	
<i>Trifolium scabrum</i> L.	0.531	0.0024	**	
<i>Poterium sanguisorba</i> L. subsp. <i>balearicum</i> (Bourg. ex Nyman) Stace	0.527	0.0001	***	
<i>Thliphthisa purpurea</i> (L.) P.Caputo & Del Guacchio subsp. <i>purpurea</i>	0.521	0.0058	**	
<i>Helichrysum italicum</i> (Roth) G.Don subsp. <i>italicum</i>	0.510	0.0134	*	
Grassland Type: 12.Ant_Bra				
Indicator species				Dominant species
species with stat>0.5: 11	stat	p.value		
species with stat>0.7: 1				
<i>Centaurea ambigua</i> Guss. subsp. <i>ambigua</i>	0.750	0.0001	***	<i>Anthoxanthum odoratum</i> L. (31.7±11.5)
<i>Cota tinctoria</i> (L.) J.Gay subsp. <i>australis</i> (R.Fern.) Oberpr. & Greuter	0.645	0.0035	**	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (27.9±22.3)
<i>Dianthus carthusianorum</i> L. subsp. <i>tenorei</i> (Lacaita) Pignatti	0.645	0.0036	**	<i>Festuca circummediterranea</i> Patzke (24.6±12.1)
<i>Galium lucidum</i> All. subsp. <i>lucidum</i>	0.609	0.0001	***	
<i>Teucrium chamaedrys</i> L.	0.595	0.0001	***	
<i>Hypericum perforatum</i> L. subsp. <i>veronense</i> (Schrank) Ces.	0.577	0.0045	**	
<i>Scabiosa columbaria</i> L.	0.548	0.0023	**	
<i>Origanum vulgare</i> L.	0.535	0.0108	*	
<i>Odontites vernus</i> (Bellardi) Dumort. subsp. <i>serotinus</i> (Dumort.) Corb.	0.531	0.0151	*	
<i>Tordylium apulum</i> L.	0.500	0.0164	*	

<i>Trifolium incarnatum</i> L. subsp. <i>molinerii</i> (Balb. ex Hornem.) Ces.	0.500	0.0283	*	
Grassland Type: 13.Pol_Bra				
Indicator species				
species with stat>0.5: 4	stat	p.value		Dominant species
species with stat>0.7: 0				
<i>Agrimonia eupatoria</i> L. subsp. <i>eupatoria</i>	0.566	0.0025	**	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (33.8±11.6)
<i>Lolium arundinaceum</i> (Schreb.) Darbysh.	0.550	0.0041	**	<i>Brachypodium rupestre</i> (Host) Roem. & Schult. (23.7±13.1)
<i>Dactylis glomerata</i> L.	0.518	0.0008	***	
<i>Pilosella piloselloides</i> (Vill.) Soják subsp. <i>piloselloides</i>	0.508	0.0112	*	
Grassland Type: 14.Bri_Bro				
Indicator species				
species with stat>0.5: 22	stat	p.value		Dominant species
species with stat>0.7: 5				
<i>Equisetum arvense</i> L.	0.756	0.0002	***	<i>Bromopsis erecta</i> (Huds.) Fourr. s.l. (31.4±6.3)
<i>Briza media</i> L.	0.751	0.0001	***	<i>Brachypodium rupestre</i> (Host) Roem. & Schult. (27.1±7.0)
<i>Gentiana cruciata</i> L. subsp. <i>cruciata</i>	0.743	0.0003	***	<i>Briza media</i> L. (20.4±6.7)
<i>Prunella laciniata</i> (L.) L.	0.723	0.0001	***	<i>Lotus herbaceus</i> (Vill.) Jauzein (10.6±9.7)
<i>Carex flacca</i> Schreb. subsp. <i>flacca</i>	0.712	0.0001	***	
<i>Leucanthemum vulgare</i> (Vaill.) Lam. subsp. <i>vulgare</i>	0.686	0.0001	***	
<i>Lotus dorycnium</i> L. subsp. <i>herbaceus</i> (Vill.) Kramina & D.D. Sokoloff	0.672	0.0001	***	
<i>Cuscuta epithymum</i> subsp. <i>kotschy</i> (Des Moul.) Arcang.	0.655	0.0027	**	
<i>Linum viscosum</i> L.	0.655	0.0027	**	
<i>Polygala nicaeensis</i> Risso ex W.D.J.Koch subsp. <i>mediterranea</i> Chodat	0.610	0.0001	***	
<i>Centaurea nigrescens</i> Willd. subsp. <i>neapolitana</i> (Boiss.) Dostál	0.609	0.0039	**	
<i>Trifolium ochroleucon</i> Huds.	0.609	0.0001	***	
<i>Blackstonia perfoliata</i> (L.) Huds.	0.589	0.0021	**	
<i>Linum capitatum</i> Kit. ex Schult. subsp. <i>serrulatum</i> (Bertol.) Hartvig	0.584	0.0043	**	
<i>Daucus carota</i> L. subsp. <i>carota</i>	0.583	0.0002	***	
<i>Scorzonoides cichoriacea</i> (Ten.) Greuter	0.557	0.0001	***	
<i>Brachypodium rupestre</i> (Host) Roem. & Schult.	0.544	0.0001	***	
<i>Trifolium echinatum</i> M.Bieb.	0.535	0.0160	*	
<i>Tussilago farfara</i> L.	0.535	0.0411	*	
<i>Leontodon hispidus</i> L.	0.516	0.0115	*	
<i>Crepis biennis</i> L.	0.511	0.0170	*	
<i>Ophioglossum vulgatum</i> L.	0.502	0.0239	*	
Grassland Type: 15.Alo_pra				
Indicator species				
species with stat>0.5: 15	stat	p.value		Dominant species
species with stat>0.7: 4				
<i>Hordeum secalinum</i> Schreb.	0.832	0.0001	***	<i>Cynosurus cristatus</i> L. (29.2±15.8)
<i>Sanguisorba officinalis</i> L.	0.832	0.0001	***	<i>Anthoxanthum odoratum</i> L. (17.2±12.8)
<i>Ranunculus marsicus</i> Guss. & Ten.	0.734	0.0005	***	<i>Phleum nodosum</i> L. (11.0±7.2)
<i>Thalictrum simplex</i> L.	0.734	0.0002	***	
<i>Bistorta officinalis</i> Delarbre	0.687	0.0007	***	
<i>Lotus tenuis</i> Waldst. & Kit. ex Willd.	0.662	0.0002	***	
<i>Allium vineale</i> L.	0.645	0.0006	***	
<i>Narcissus poeticus</i> L.	0.641	0.0030	**	
<i>Vicia tenuifolia</i> Roth	0.620	0.0058	**	
<i>Rumex acetosa</i> L. subsp. <i>acetosa</i>	0.578	0.0029	**	
<i>Serratula tinctoria</i> L. subsp. <i>tinctoria</i>	0.555	0.0051	**	
<i>Centaurea nigrescens</i> Willd. subsp. <i>nigrescens</i>	0.546	0.0079	**	
<i>Phleum nodosum</i> L.	0.522	0.0031	**	
<i>Rhinanthus minor</i> L.	0.515	0.0002	***	
<i>Poa pratensis</i> L. subsp. <i>pratensis</i>	0.513	0.0072	**	
Grassland Type: 16.Cyn_cri				
Indicator species				
species with stat>0.5: 13	stat	p.value		Dominant species
species with stat>0.7: 1				
<i>Bellis perennis</i> L.	0.734	0.0001	***	<i>Cynosurus cristatus</i> L. (24.3±11.7)
<i>Carduus nutans</i> L. subsp. <i>perspinosus</i> (Fiori) Arènes	0.693	0.0017	**	<i>Trifolium repens</i> L. (12.0±14.1)
<i>Potentilla reptans</i> L.	0.662	0.0002	***	<i>Festuca rubra</i> L. subsp. <i>microphylla</i> St.-Yves (11.6±7.9)
<i>Chaerophyllum temulum</i> L.	0.655	0.0027	**	
<i>Plantago media</i> L. subsp. <i>media</i>	0.639	0.0005	***	
<i>Centaurea jacea</i> L. subsp. <i>jacea</i>	0.620	0.0006	***	
<i>Prunella vulgaris</i> L. subsp. <i>vulgaris</i>	0.603	0.0018	**	
<i>Plantago major</i> L.	0.570	0.0102	*	

<i>Cynosurus cristatus</i> L.	0.535	0.0001	***	
<i>Colchicum alpinum</i> DC.	0.535	0.0381	*	
<i>Dipsacus fullonum</i> L. subsp. <i>fullonum</i>	0.535	0.0302	*	
<i>Pimpinella major</i> (L.) Huds.	0.535	0.0393	*	
<i>Taraxacum</i> F.H.Wigg. sect. <i>Taraxacum</i>	0.511	0.0191	*	
Grassland Type: 17.Alo_ren				
<i>Indicator species</i>				
species with stat>0.5: 16	stat	p.value		<i>Dominant species</i>
species with stat>0.7: 12				
<i>Alopecurus rendlei</i> Eig	0.965	0.0001	***	<i>Alopecurus rendlei</i> Eig (25.8±13.9)
<i>Trifolium resupinatum</i> L.	0.935	0.0001	***	<i>Trifolium resupinatum</i> L. (22.7±15.9)
<i>Persicaria lapathifolia</i> (L.) Delarbre	0.913	0.0002	***	<i>Elymus repens</i> (L.) Gould subsp. <i>repens</i> (19.2±9.2)
<i>Elymus repens</i> (L.) Gould subsp. <i>repens</i>	0.880	0.0001	***	<i>Carex hirta</i> L. (15.0±13.8)
<i>Ranunculus repens</i> L.	0.825	0.0001	***	<i>Deschampsia cespitosa</i> (L.) P.Beauv. (13.0±6.6)
<i>Scorzoneroideis autumnalis</i> (L.) Moench	0.746	0.0005	***	<i>Trifolium repens</i> L. (12.3±6.1)
<i>Carex hirta</i> L.	0.730	0.0003	***	<i>Ranunculus acris</i> L. (11.0±7.0)
<i>Alopecurus pratensis</i> L. subsp. <i>pratensis</i>	0.730	0.0001	***	
<i>Ranunculus acris</i> L.	0.729	0.0001	***	
<i>Caltha palustris</i> L.	0.707	0.0020	**	
<i>Carex vulpina</i> L.	0.707	0.0032	**	
<i>Deschampsia cespitosa</i> (L.) P.Beauv.	0.706	0.0001	***	
<i>Poa trivialis</i> L.	0.678	0.0007	***	
<i>Bromus hordeaceus</i> L.	0.602	0.0017	**	
<i>Carex acuta</i> L.	0.577	0.0091	**	
<i>Phalaris arundinacea</i> L.	0.537	0.0066	**	

[illegible]

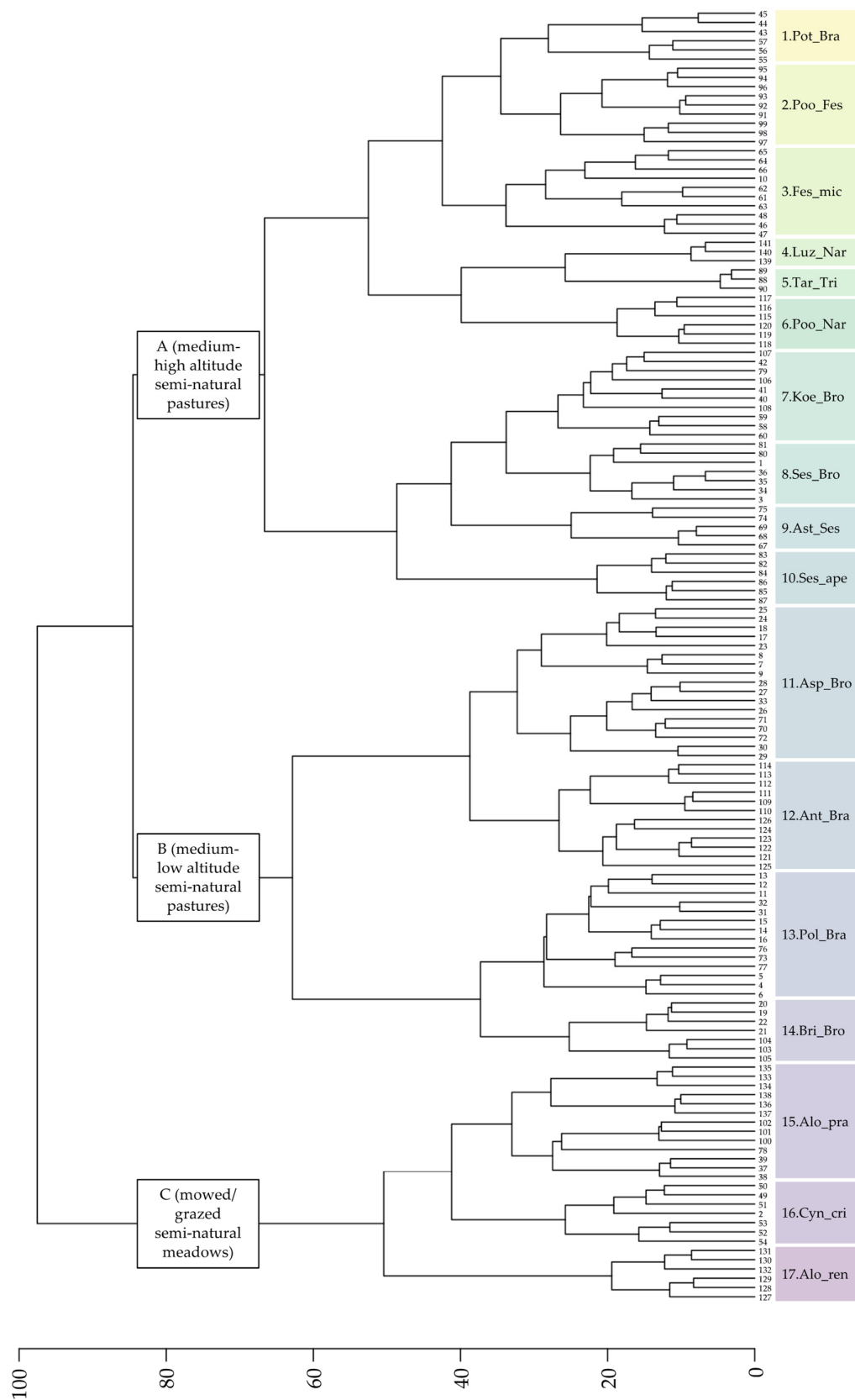


Figure S1. Dendrogram resulting from the hierarchical cluster analysis.

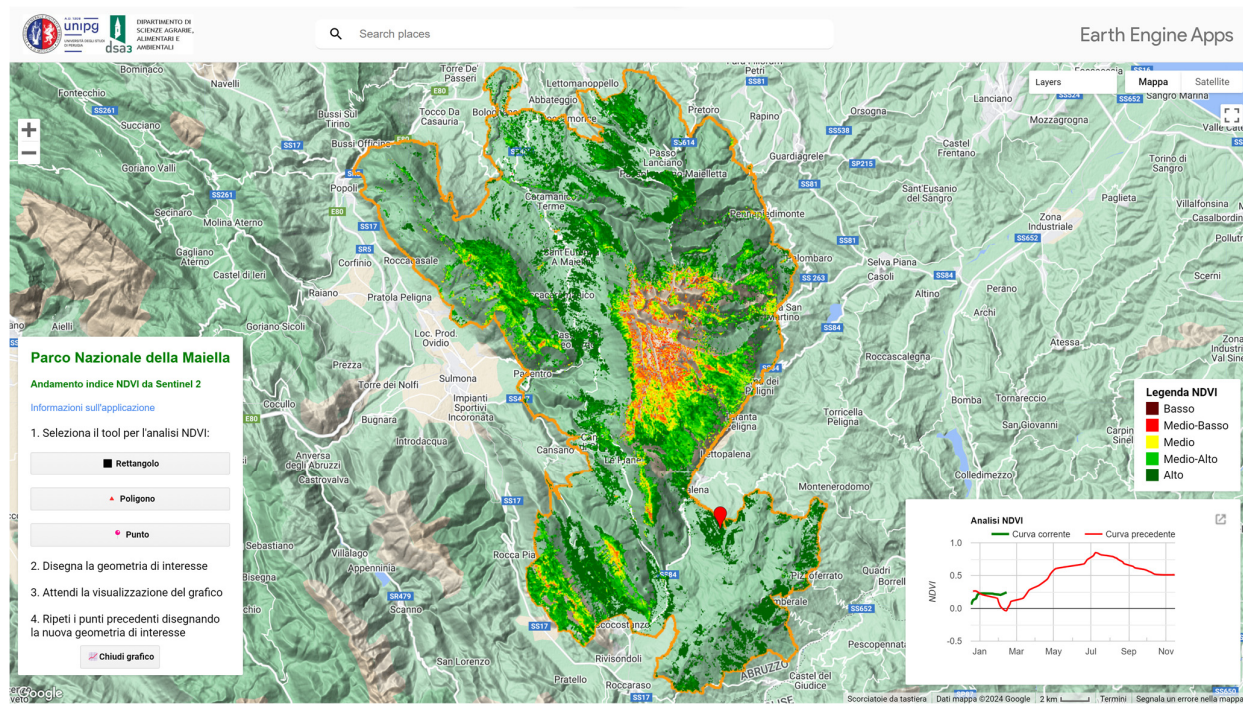


Figure S2. The interface of the 'Maiella Park GEE app' developed in this study.