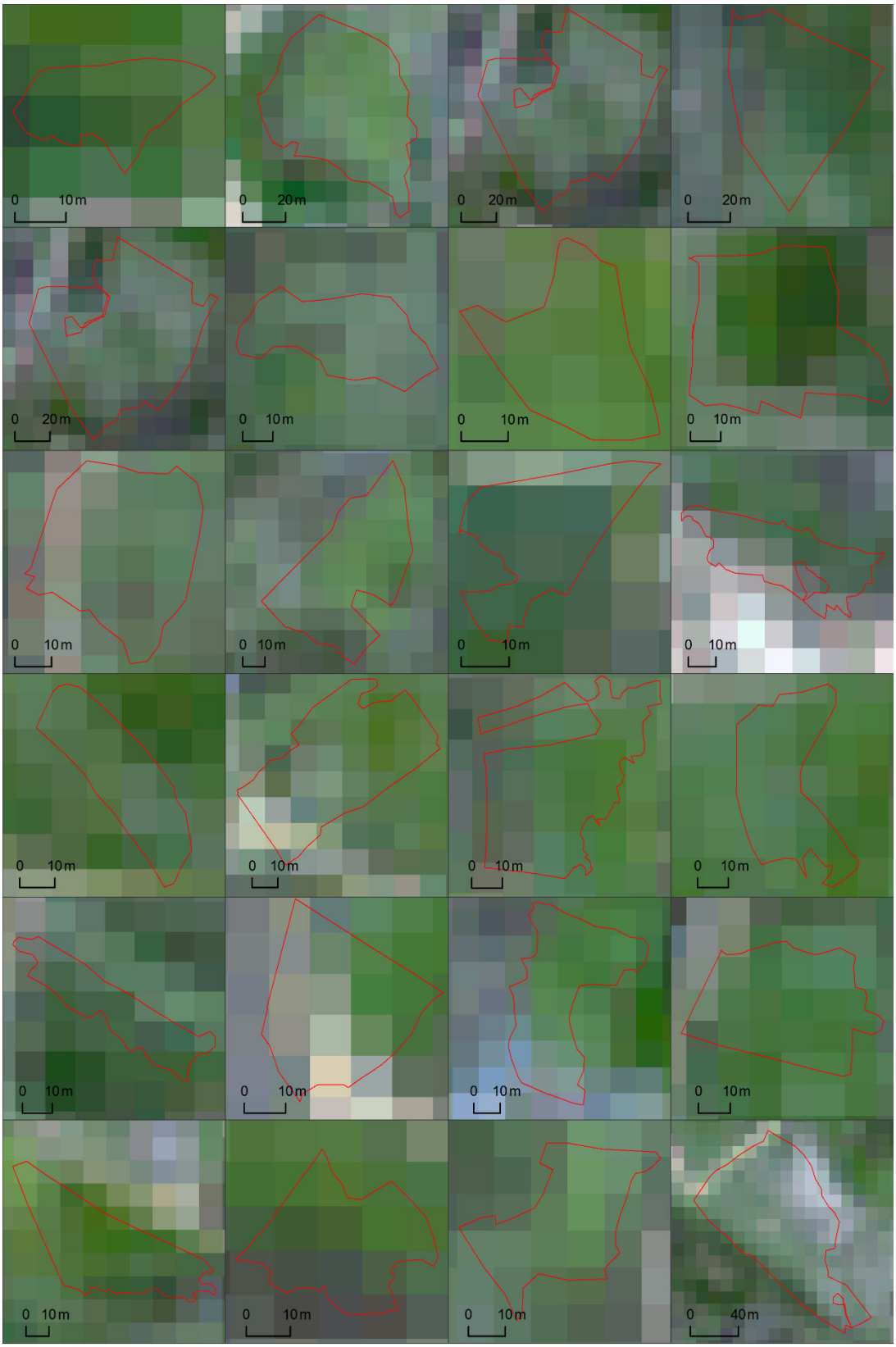

Figure S1. Grassland parcels (n=24) surveyed for species richness at Peneda-Gerês mountain range captured by the Sentinel-2 satellite imagery in April 2016 (red-green-blue composite).

Table S1. List of species recorded during the vegetation surveys in 24 grassland parcels in the Portuguese Peneda-Gerês National Park.

Achillea millefolium	*Dactylorhiza maculata*	*Ornithopus perpusillus*
Agrostis capillaris	*Danthonia decumbens*	*Paradisea lusitanica*
Agrostis commista	*Deschampsia subtriflora*	*Peucedanum lancifolium*
Allium scorzonerifolium	*Echium lusitanicum*	*Plantago lanceolata*
Angelica laevis	*Eriophorum angustifolium*	*Poa pratensis*
Anthemis arvenis	*Erodium cicutarium*	*Poa trivialis*
Anthoxanthum aristatum	*Festuca nigrescens*	*Polygala serpyllifolia*
Anthoxanthum odoratum	*Festuca rothmaleri*	*Potentilla erecta*
Aphanes australis	*Galium saxatile*	*Ranunculus flammula*
Arnica atlantica	*Helictochloa marginata*	*Ranunculus gallaecicus*
Arrhenatherum bulbosum	*Heracleum sphondylium*	*Raphanus raphanistrum*
Bellis perennis	*Holcus lanatus*	*Rhinanthus minor*
Bromus hordeaceus	*Holcus mollis*	*Rumex acetosa*
Calluna vulgaris	*Hyacinthoides paivae*	*Rumex angiocarpus*
Caltha palustris	*Hypericum elodes*	*Rumex obtusifolius*
Campanula lusitanica	*Hypericum linarifolium*	*Saxifraga granulata*
Carex binervis	*Hypochoeris radicata*	*Scilla verna*
Carex echinata	*Isolepis setacea*	*Senecio legionensis*
Carex laevigata	*Jasione montana*	*Sesamoides suffruticosa*
Carex leporina	*Juncus acutiflorus*	*Silene latifolia*
Carex pairae	*Juncus effusus*	*Spergularia capillacea*
Carex panicea	*Juncus squarrosus*	*Sphagnum auriculatum*
Carum verticillatum	*Leontodon saxatilis*	*Stellaria media*
Centaurea rivularis	*Linaria elegans*	*Teesdalia nudicaulis*
Cerastium glomeratum	*Lotus carpetanus*	*Trifolium dubium*
Cerastium pumilum	*Lotus pedunculatus*	*Trifolium pratense*
Cerastium ramosissimum	*Luzula campestris*	*Trifolium repens*
Cerastium vulgare	*Luzula multiflora*	*Tuberaria guttata*
Chamaemelum nobile	*Moenchia erecta*	*Ulex minor*
Cirsium filipendulum	*Molinia caerulea*	*Veronica arvensis*
Cirsium palustre	*Myosotis ramosissima*	*Veronica officinalis*
Conopodium pyrenaeum	*Myosotis stolonifera*	*Vicia cordata*
Crepis capillaris	*Narcissus bulbocodium*	*Vulpia bromoides*
Cytisus striatus	*Nardus stricta*	*Vulpia muralis*
Dactylis glomerata	*Ornithopus compressus*	

Table S2 Pairwise Spearman correlations between the candidate predictor variables selected to evaluate the statistical support of the three spatial pathways (P1, P2, P3) defined for the monitoring of plant species richness in the mountain grasslands parcels (n=24) of Peneda-Gerês, Portugal.

	Species richness	**Parcel area (ln)**	**NIR/Green$_{spring}$**	**NIR/Green$_{change}$**	**Slope(º)**	**Northness (cos_aspect)**	**Eastness (sin_aspect)**	**NIR$_{SDspring}$**	**NIR$_{SDsummer}$**	**Red$_{SDspring}$**	**Red$_{SDsummer}$**
Species richness	–										
Parcel area (ln)	0.03	–									
NIR/Green$_{spring}$	-0.62	-0.04	–								
NIR/Green$_{change}$	-0.55	-0.36	0.57	–							
Slope (º)	-0.23	-0.02	0.35	0.24	–						
Northness (cos_aspect)	0.34	-0.21	-0.10	-0.05	-0.30	–					
Eastness (sin_aspect)	0.06	-0.02	0.14	-0.12	0.01	0.24	–				
NIR$_{SDspring}$	0.22	0.16	0.06	-0.30	0.46	-0.21	0.31	–			
NIR$_{SDsummer}$	0.04	0.18	0.12	-0.04	0.56	-0.28	0.06	0.56	_		
Red$_{SDspring}$	-0.19	0.29	0.06	0.05	-0.23	0.09	-0.26	-0.23	0.01	_	
Red$_{SDsummer}$	-0.02	-0.10	0.27	-0.49	0.31	0.08	0.26	-0.10	0.35	-0.39	–