

Supplementary material of 'A Floristic-ecological classification of gorse scrub communities with *Echinopartum ibericum* (Fabaceae) in the Iberian Peninsula', by Íñigo Pulgar Sañudo & José Manuel Herrera Rodríguez (2026). Mediterr. Bot. 47(1), e92111. <https://doi.org/10.5209/mbot.92111>

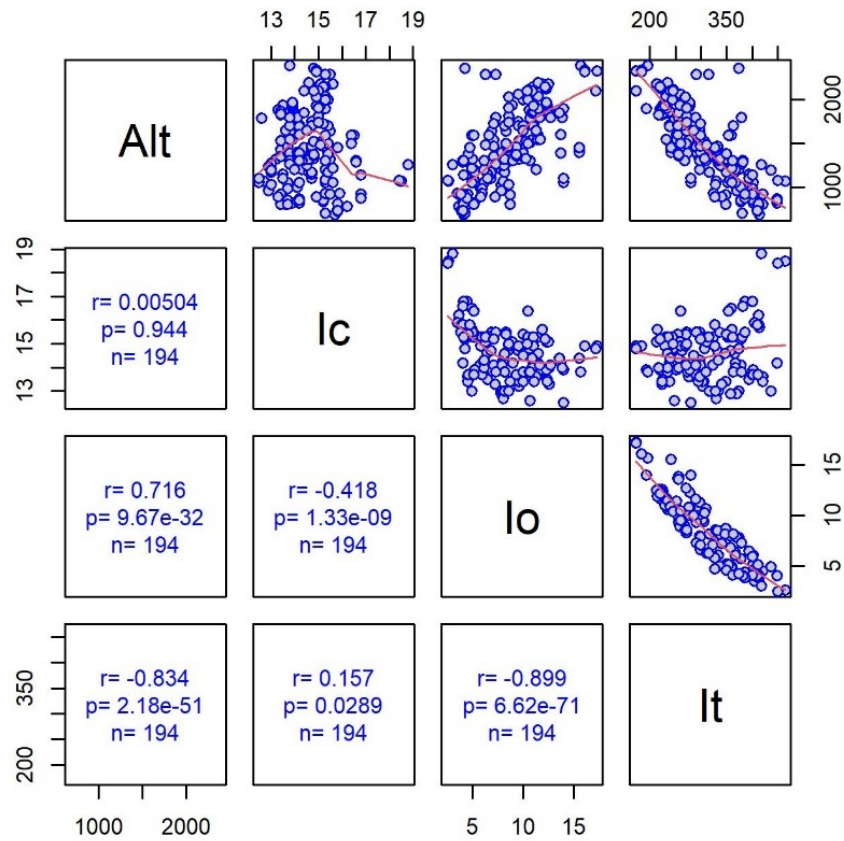


Figure S1. Pairwise correlation plots for all combinations of bioclimatic indices (It = thermicity index; Io = ombrothermic index; Ic = continentality index) and altitude (Alt = elevation), showing Spearman's rank correlation coefficient (r), the p-value (p), and the number of observations (n).

Table S1. Syntaxa, authors, and origin of analysed relevés.

Clusters	Accepted syntaxon	Nº. of relevé	Original syntax	Bibliographic references
1	Festuco summilusitanae-Echinospartetum iberici	1-17	New Relevés (New-Rel)	Made by the authors, see Table 1
		18-23	Comunidade de <i>E. ibericum</i> y <i>Amelanchier ovalis</i>	Honrado, J. 2003. pp. 372-373. s.n. rel. 1-6
		24-32	Festuco graniticolae-Echinospartetum pulviniformis	Costa Ten. et al. 1993. pp. 144-155, tb. 1, rel. 1-8, 10.
		64-67	Echinospartetum iberici	Costa et al. 2003. p. 61, tb. 6, rel. 2-5.
2	Genisto hystricis-Echinospartetum iberici	90-95	Genisto hystricis-Echinospartetum lusitanici	Navarro & Valle 1983. p 103, tb. 11, rel. 1-6.
3	Genisto hystricis-Echinospartetum iberici var. <i>Dianthus merinoi</i>	96-99	Genisto hystricis-Echinospartetum iberici	Penas et al. 1988. p. 694, tb. 5, rel. 1-4.
		100-107	Genisto hystricis-Echinospartetum lusitanici	Penas & Díaz-González 1985. p. 163, tb. 3, rel. 1-8
		108	Genisto hystricis-Echinospartetum iberici	Ortiz, S. 1986. Tb. 80, 1 rel.
		109-110	Genisto hystricis-Echinospartetum iberici	González de Paz 2012. p. 436, tb. 6.98, rel. 1,2.
4	Echinospartetum iberici var. <i>Erica arborea</i>	63	Echinospartetum iberici	Costa et al. 2003. p. 61, tb. 6, rel. 1
		68-72	Echinospartetum iberici	Costa et al. 2003. p. 61, tb. 6, rel. 6-10.
		73-83	Cytiso multiflori-Echinospartetum lusitanici	Rivas-Martínez 1981. pp. 435-480, tb.16, rel. 8-11. Type rel. 1.
5	Echinospartetum iberici	44-46	Cytiso multiflori-Echinospartetum lusitanici	Navarro & Valle 1983. p. 102, tb. 10, rel. 1-3.
		62	Echinospartetum lusitanici	Rivas-Martínez 1974. p. 70, rel. ind.
		73-79	Cytiso multiflori-Echinospartetum lusitanici	Rivas-Martínez 1981. pp. 435-480, tb.16, rel. 1-6. Type rel. 1.
		87-89	Echinospartetum iberici	Amor & Ávila 2012. p. 159, tb. 1, rel. 117, 136, 137.
6	Echinospartetum iberici var. <i>Halimium alyssoides</i>	47-53	Cytiso multiflori-Echinospartetum (<i>barnadesii</i>) <i>dorsisericei</i> <i>typicum</i>	Valdés-Franci 1984. pp. 210-211, tb. 11, rel. 1-7.
		84-86	Echinospartetum iberici	Amor & Ávila 2012. p. 159, tb. 1, rel. 109-111.

7	Cytiso oromediterranei-Echinospartetum pulviniformis	145-151	Echinosparto pulviniformis-Cytisetum oromediterranei	Rivas-Martínez et al. 1987. p. 122, tb. 8, rel. 1-7.
		152-188	Cytiso oromediterranei-Echinospartetum pulviniformis var. Echinospartum ibericum	Sardinero 2004. pp. 242-243, tb. 35.1, rel. 1-36.
		189	Cytiso-Echinospartetum barnadesii subass. echinospartetosum lusitanici	Rivas-Martínez 1970. pp. 165, rel. Ind.
8	Teucrio salviastris-Echinospartetum pulviniformis	61	Comunidad de Echinospartum lusitanicum	Rivas-Martínez 1974. p. 70, rel. ind.
		133-134	Teucrio salviastris-Echinospartetum lusitanici	Rivas-Martínez 1974. p. 71, 2 rel. ind.
		135-143	Teucrio salviastris-Echinospartetum lusitanici	Rivas-Martínez 1981. p. 471, tb.19, rel. 1-9.
		144	Teucrio salviastris-Echinospartetum pulviniformis	Amor & Ávila 2012. pp. 58-159, rel. 58
9	Genisto sanabrensis-Juniperetum alpinae subass. echinospartetosum iberici	111-112	Genisto sanabrensis-Juniperetum alpinae subass. echinospartetosum iberici	Penas et al. 1990. p. 230, tb. 5, rel. 8-9.
		113-115	Genisto sanabrensis-Juniperetum alpinae subass. echinospartetosum iberici	González de Paz 2012. pp. 456-457, tb. 6.109, rel. 18-20.
		116	Genisto sanabrensis-Juniperetum alpinae subass. echinospartetosum iberici	Ortiz, S.1986. tb. 85, 1 rel.
10	Armerio ciliatae-Echinospartetum iberici	33-43	Armerio ciliatae-Echinospartetum iberici	González de Paz 2012. p. 461, tb. 6.111, rel. 1-11.
11	Genisto cinerascens-Adenocarpum argyrophylli subass. echinospartetosum iberici	117-120	Genisto cinerascens-Adenocarpum argyrophylli subass. echinospartetosum iberici	Vicente-Orellana & Galán 2008. p. 195, tb. 14, rel. 10-13.
		190-193	Echinosparto iberici-Juniperetum lagunae partim	Cano et al. 2007. p. 90, tb. 1, rel. 4-7.
12	Cytiso oromediterranei-Genistetum cinerascens var. Echinospartum ibericum	121-126	Cytiso oromediterranei-Genistetum cinerascens var. Echinospartum ibericum	Sardinero 2004. pp. 222-223, tb. 32.3.1.3, rel. 9-14.
13	Cytiso oromediterranei-Echinospartetum pulviniformis (transitional unit)	54-60	Cytiso multiflori-Echinospartetum (barnadesii) dorsisericea subass. cytisetosum purgantis	Valdés-Franci 1984. pp. 210-211, tb. 11, rel. 8-14.
		127-132	Cytiso oromediterranei-Genistetum cinerascens var. Echinospartum pulviniformis	Sardinero 2004. pp. 222-223, tb. 32.3.1.3, rel. 15-20.
		194	Cytiso purgantis-Genistetum cinerascens subass. echinospartetosum barnadesii	Navarro et al. 1987. p 343. tb 4 rel 5

Table 2. Synoptic table of species constancy (%) by cluster. Taxa with constancy < 20% in all clusters are excluded. Values in parentheses indicate mean cover; * denotes dominant species; bold denotes diagnostic species (IndVal ≥ 0.4 ; $p \leq 0.01$); dark grey shading indicates constancy $\geq 50\%$ (including 50%); light grey shading indicates constancy $\geq 20\%$ and < 50%.

Clusters	1	2	3	4	5	6	7	8	9	10	11	12	13
Syntaxon	Fsu-Eib	Ghy-Eib	Ghy-Eib var. Dme	Eib var. Ear	Eib	Eib var. Hal	Cor-Epu	Tsa-Epu	Gsa-Jal suba s. epu	Ac-Eib	Gci-Aar suba s. eib	Cor-Gci var. Eib	Cor-Epu (tran)
Number of relevés	36	6	15	10	13	11	45	13	6	11	8	6	14
<i>Echinopartum ibericum</i> (mean cover)	(35) *	(58) *	(31)*	(60) *	(55) *	23	(54) *	(31) *	19	(60) *	15	(36) *	(32) *
Genisto hystricis-Echinopartum iberici (Typical)													
<i>Genista hystrix</i>	0	100	93	0	15	0	0	0	0	0	0	0	0
<i>Leucanthemopsis pulverulenta</i>	0	67	0	0	8	0	0	0	0	0	0	17	0
Genisto hystricis-Echinopartum iberici var. Dianthus laricifolius subsp. merinói													
<i>Dianthus laricifolius</i> subsp. merinói	0	0	40	0	0	0	0	0	0	0	0	0	0
Echinopartum iberici var. Erica arborea													
<i>Erica arborea</i>	25	0	27	70	8	9	22	62	0	18	13	0	50
Echinopartum iberici (Typical)													
<i>Cytisus multiflorus</i>	11	0	0	10	100	100	0	0	0	0	0	0	0
Echinopartum iberici var. Halimium lasianthum subsp. alyssoides													
<i>Halimium lasianthum</i> subsp. alyssoides	17	17	7	60	8	91	0	0	0	0	0	0	14
Teucrio salviastri-Echinopartum pulviniformis													
<i>Phalacrocarpum oppositifolium</i> subsp. oppositifolium	6	0	0	0	0	0	0	100	0	0	0	0	0
<i>Teucrium salviastrum</i>	0	0	0	0	0	0	0	77	0	0	0	0	0
Genisto sanabrensis-Juniperetum alpinae subas. echinopartetosum iberici													
<i>Genista sanabrensis</i>	0	0	0	0	0	0	0	0	100	18	0	0	0
Armerio ciliatae-Echinopartum iberici													
<i>Armeria ciliata</i>	0	0	0	0	0	0	0	0	0	100	0	0	0
Genisto cinerascens-Adenocarpum argyrophylli subas. echinopartetosum													
<i>Adenocarpus argyrophyllus</i>	0	0	0	0	0	9	0	0	0	0	75	0	0
<i>Dianthus lusitanicus</i>	0	0	0	0	0	9	0	38	0	0	100	0	0
<i>Halimium ocymoides</i>	0	0	0	0	0	0	0	0	0	0	50	0	0
<i>Quercus rotundifolia</i>	3	0	7	0	0	0	0	0	0	0	50	0	0
Cytiso oromediterranei-Genistetum cinerascens var. Echinopartum ibericum													
<i>Euphorbia oxyphylla</i>	0	0	0	0	0	0	0	0	0	0	0	83	0
<i>Thymus zygis</i>	0	0	7	0	0	0	0	0	0	0	0	83	0
<i>Corynephorus canescens</i>	0	0	7	0	0	9	0	0	0	0	0	100	21
<i>Lavandula pedunculata</i>	0	0	7	0	15	0	0	0	0	0	38	100	0
<i>Cytisus scoparius</i>	0	50	20	0	15	9	0	0	0	0	0	100	0
<i>Adenocarpus complicatus</i>	0	0	0	0	0	0	0	0	0	0	0	67	7
<i>Armeria trasmontana</i>	3	0	0	0	0	0	0	0	0	9	0	67	7
<i>Centaurea alba</i>	0	0	0	0	0	0	0	0	0	0	0	50	0
<i>Genista tournefortii</i>	0	0	0	0	0	0	0	0	0	0	0	50	0
<i>Quercus pyrenaica</i>	6	0	7	10	15	0	0	0	0	0	25	83	0
<i>Festuca elegans</i>	14	0	7	20	0	0	0	8	0	0	25	83	43
Other species													
<i>Ornithogalum concinnum</i>	44	67	0	10	0	0	0	0	0	0	0	0	0
<i>Pteridium aquilinum</i>	0	0	0	40	0	18	0	0	0	0	0	67	0
<i>Genista cinerascens</i>	0	0	0	0	54	0	0	31	0	0	25	83	29
<i>Juniperus communis</i> subsp. alpina	0	0	0	0	0	0	2	92	100 (42) *	18	0	0	0
<i>Sedum brevifolium</i>	83	0	13	20	0	9	27	23	0	55	50	0	21
<i>Digitalis thapsi</i>	0	33	0	0	62	9	0	0	0	0	0	67	0
<i>Arenaria quereioides</i>	3	0	0	0	0	64	7	0	0	0	0	83	50
<i>Arrhenatherum elatius</i>	0	0	0	0	0	0	47	8	0	0	75	0	29
<i>Neoschischkinia truncatula</i> subsp. truncatula	0	0	0	0	0	18	73	8	0	0	0	67	71
<i>Pterospartum tridentatum</i>	50	0	53	0	8	27	0	0	67	9	0	0	0
<i>Neoschischkinia truncatula</i> subsp. durieui	61	50	20	30	85	9	0	0	0	27	0	0	0

<i>Helictochloa marginata</i>	61	0	67	70	46	55	7	0	17	0	0	0	7
<i>Festuca yvesii</i> subsp. <i>summilusitana</i>	81	0	27	20	0	18	49	46	100	100	0	0	79
<i>Avenella flexuosa</i>	3	0	0	0	0	0	100	69	50	55	25	0	36
<i>Cytisus oromediterraneus</i>	0	0	0	10	0	0	89	38	0	45	0	100	93
<i>Juniperus oxycedrus</i> subsp. <i>badia</i> (<i>lagunae</i>)	0	0	0	0	0	0	0	0	0	0	50	17	0
<i>Allium paniculatum</i>	0	0	0	0	0	0	0	0	0	0	0	33	0
<i>Festuca lambinonii</i>	0	0	0	0	0	0	0	0	0	0	0	33	0
<i>Helianthemum apenninum</i>	0	0	0	0	0	0	0	0	0	0	0	33	0
<i>Leucanthemopsis boissieri</i>	0	0	0	0	0	0	33	0	0	0	0	0	0
<i>Santolina rosmarinifolia</i>	0	33	0	0	0	0	0	0	0	0	0	33	0
<i>Agrostis castellana</i>	0	0	33	0	0	27	0	0	0	0	0	67	21
<i>Dianthus langeanus</i>	36	0	0	0	0	0	0	0	17	27	0	0	0
<i>Reseda gredensis</i>	0	0	0	0	0	0	31	0	0	0	0	0	0
<i>Rumex angiocarpus</i>	25	0	7	10	0	0	53	0	0	0	0	17	14
<i>Jasione sessiliflora</i>	19	17	0	0	0	9	24	8	0	0	0	67	7
<i>Narcissus asturiensis</i>	0	0	0	0	0	0	0	31	0	0	0	0	0
<i>Stipa gigantea</i>	0	50	0	40	31	9	0	0	0	0	0	17	14
<i>Filago carpetana</i>	0	0	7	0	0	0	0	0	0	0	0	33	0
<i>Genista florida</i>	0	50	0	30	0	18	0	0	0	0	0	0	14
<i>Thymus caespitius</i>	28	0	0	0	0	0	0	0	0	0	0	0	0
<i>Umbilicus rupestris</i>	0	33	7	0	0	0	0	0	0	0	0	0	0
<i>Jasione montana</i>	0	0	13	0	0	0	0	0	0	0	38	0	0
<i>Viola langeana</i>	0	0	0	0	0	27	0	0	0	0	0	0	0
<i>Armeria caballeroi</i>	0	0	27	0	0	0	0	0	0	0	0	0	0
<i>Logfia minima</i>	25	0	7	0	0	0	2	0	0	0	0	50	7
<i>Halimium umbellatum</i> subsp. <i>viscosum</i>	3	33	20	0	15	9	0	0	0	0	0	50	0
<i>Cistus ladanifer</i>	0	0	0	0	0	0	0	0	0	0	25	0	0
<i>Conopodium subcarneum</i>	0	0	0	0	0	0	0	0	0	0	25	0	0
<i>Jasione crispa</i> subsp. <i>tomentosa</i>	0	0	0	0	0	0	0	0	0	0	25	0	0
<i>Cytisus striatus</i>	0	0	0	20	38	27	0	0	0	0	0	0	7
<i>Leucanthemopsis pallida</i>	0	0	0	0	0	0	4	0	0	0	0	33	21
<i>Silene foetida</i>	0	0	0	0	0	0	0	23	0	0	0	0	0
<i>Erica umbellata</i>	25	0	13	0	0	27	0	0	0	0	0	0	0
<i>Erica australis</i>	11	0	0	10	0	27	0	0	17	18	25	0	36
<i>Pilosella castellana</i>	0	0	0	0	0	9	0	0	0	0	0	33	7
<i>Aira carryophyllea</i>	0	0	20	0	0	0	0	0	0	0	0	0	0
<i>Erica cinerea</i>	0	0	20	0	0	0	0	0	0	0	0	0	0
<i>Minuartia recurva</i>	17	0	0	0	0	0	2	31	0	0	0	0	0
<i>Arnoseris minima</i>	6	0	7	0	0	0	4	0	0	0	0	33	14
<i>Teesdalia nudicaulis</i>	0	0	7	0	0	0	7	0	0	9	0	33	7
<i>Sedum hirsutum</i>	25	17	7	0	0	0	0	0	0	9	0	0	0
<i>Microphyrum tenellum</i>	22	0	13	0	0	0	4	0	0	0	38	0	7
<i>Cerastium ramossissimum</i>	0	0	0	0	0	0	16	0	0	0	0	33	7
<i>Jurinea humilis</i>	0	0	0	0	0	0	20	0	33	9	0	0	7
<i>Linaria saxatilis</i>	3	33	13	0	15	0	7	0	0	0	25	0	0
<i>Luzula lactea</i>	3	0	0	0	0	18	7	0	0	0	0	0	21
<i>Plantago holosteum</i>	6	0	20	0	0	0	0	0	0	9	0	17	0
<i>Ranunculus nigrecens</i>	8	0	20	0	0	0	0	0	0	0	0	0	0
<i>Calluna vulgaris</i>	6	0	20	0	0	9	0	0	17	9	13	0	0
<i>Koeleria crassipes</i>	3	0	13	0	0	9	9	0	0	0	0	17	21
<i>Festuca paniculata</i> s.l.	11	0	0	0	0	9	0	0	0	0	25	0	7