**Supplementary Material**

**Table S1.** List of species recorded and trait category/value assigned (excluding specimens not identified to species level). Nomenclature follows Flora Iberica (Castroviejo et al. 1986–1999). Traits: Gramin. – graminoid growth form; N-fix – N fixing ability; Lcycle – life cycle; Height (cm); On_flow – onset of flowering (month); Dur_flow – duration of flowering (number of months); Anemoc. – Anemochorous dispersal mode; SLA – specific leaf area ($mm^2/mg$).

| Family | Species | Gramin. | N-fix | Lcycle | Height | On_flow | Dur_flow | Anemoc. | SLA |
|---|---|---|---|---|---|---|---|---|---|
| Apiaceae | *Daucus carota* | no | no | peren | 11.9 | 5 | 2 | no | 17.7 |
| Asteraceae | *Andryala intergrifolia* | no | no | peren | 26.3 | 3 | 10 | no | NA |
| | *Carlina corimbosa* | no | no | peren | 21.4 | 6 | 4 | yes | 15.3 |
| | *Carlina racemosa* | no | no | biennial | 16.4 | 8 | 3 | yes | 14.5 |
| | *Chamaemelum fuscatum* | no | no | annual | 7.2 | 10 | 8 | yes | NA |
| | *Chamaemelum mixtum* | no | no | annual | 28.2 | 2 | 10 | yes | 20.8 |
| | *Crepis capillaris* | no | no | biennial | 19.3 | 3 | 4 | yes | 28.1 |
| | *Crepis vesicaria* | no | no | biennial | 33.6 | 2 | 5 | yes | 18.8 |
| | *Hypochaeris glabra* | no | no | annual | 12.7 | 2 | 4 | yes | 34.1 |
| | *Leontodon taraxacoides* | no | no | annual | 17.1 | 3 | 4 | yes | 18.0 |
| | *Pulicaria odora* | no | no | peren | 36.5 | 5 | 7 | yes | NA |
| | *Pulicaria paludosa* | no | no | biennial | 36.5 | 5 | 7 | yes | NA |
| | *Tolpis barbata* | no | no | annual | 20.5 | 4 | 5 | no | 35.3 |
| Boraginaceae | *Echium plantagineum* | no | no | biennial | 33.8 | 2 | 5 | no | 32.9 |
| Campanulaceae | *Campanula lusitanica* | no | no | annual | 15.7 | 4 | 4 | no | NA |
| Caryophyllaceae | *Cerastium glomeratum* | no | no | annual | 5.2 | 1 | 6 | no | 21.8 |
| | *Illecebrum verticillatum* | no | no | annual | 2.9 | 2 | 5 | no | 57.9 |
| | *Polycarpon tetraphyllum* | no | no | annual | 4.8 | 4 | 4 | no | NA |
| | *Silene gallica* | no | no | annual | 15.7 | 2 | 9 | yes | 18.8 |
| | *Spergula arvensis* | no | no | annual | 7.2 | 2 | 4 | no | 15.0 |
| Cistaceae | *Tuberaria guttata* | no | no | annual | 16.2 | 2 | 6 | no | 21.6 |
| Cruciferae | *Capsella bursa-pastoris* | no | no | annual | 40.0 | 12 | 6 | yes | NA |
| | *Sisymbrium officinale* | no | no | annual | 24.1 | 4 | 4 | no | 26.7 |
| Fabaceae | *Lotus corniculatus* | no | yes | peren | 8.7 | 3 | 5 | no | 21.8 |
| | *Lotus hispidus* | no | yes | annual | 7.5 | NA | NA | no | NA |
| | *Lotus parviflorus* | no | yes | annual | 8.7 | 4 | 3 | no | NA |
| | *Medicago polymorpha* | no | yes | annual | 11.1 | 3 | 5 | no | 20.1 |
| | *Ornithopus compressus* | no | yes | annual | 19.8 | 2 | 5 | no | 33.1 |
| | *Trifolium angustifolium* | no | yes | annual | 16.9 | 3 | 6 | no | 19.6 |
| | *Trifolium bocconei* | no | yes | annual | 6.7 | 5 | 2 | no | 23.3 |
| | *Trifolium campestre* | no | yes | annual | 8.6 | 3 | 7 | no | 41.6 |
| | *Trifolium cernuum* | no | yes | annual | 4.5 | 6 | 1 | no | NA |
| | *Trifolium cherleri* | no | yes | annual | 4.7 | 3 | 5 | no | 24.4 |
| | *Trifolium dubium* | no | yes | annual | NA | 4 | 3 | no | 26.6 |
| | *Trifolium glomeratum* | no | yes | annual | 9.6 | 3 | 4 | no | 26.7 |
| | *Trifolium repens* | no | yes | peren | 12.5 | 3 | 10 | no | 28.2 |

| Family | Species | Gramin. | N-fix | Lcycle | Height | On_flow | Dur_flow | Anemoc. | SLA |
|---|---|---|---|---|---|---|---|---|---|
| | *Trifolium striatum* | no | yes | annual | 17.2 | 4 | 3 | no | 20.9 |
| | *Trifolium subterraneum* | no | yes | annual | 9.4 | 2 | 5 | no | 25.0 |
| | *Vicia benghalensis* | no | yes | annual | 16.4 | 4 | 3 | no | 22.9 |
| Gentianaceae | *Exaculum pusillum* | no | no | annual | 6.5 | 7 | 2 | no | NA |
| Geraneaceae | *Erodium botrys* | no | no | annual | 5.4 | 2 | 4 | no | NA |
| | *Geranium rotundifolium* | no | no | annual | 4.2 | 3 | 4 | no | 23.9 |
| Isoetaceae | *Isoetes* sp. | no | no | peren | NA | 2 | 4 | no | NA |
| Juncaceae | *Juncus buffonius* | yes | no | annual | 3.0 | 3 | 7 | yes | 17.9 |
| Lamiaceae | *Mentha pulegium* | no | no | peren | 45.0 | 6 | 5 | no | NA |
| Liliaceae | *Urginea maritima* | no | no | peren | 30.0 | 9 | 2 | no | NA |
| Lythraceae | *Lythrum junceum* | no | no | peren | NA | 4 | 3 | no | NA |
| Plantaginaceae | *Plantago coronopus* | no | no | biennial | 13.1 | 2 | 5 | yes | 19.6 |
| | *Plantago lagopus* | no | no | peren | 16.9 | 3 | 3 | yes | 21.3 |
| | *Plantago lanceolata* | no | no | peren | 22.4 | 4 | 3 | yes | 18.9 |
| Poaceae | *Agrostis pourretii* | yes | no | annual | 21.9 | 4 | 4 | yes | 36.7 |
| | *Avena barbata* | yes | no | annual | 61.1 | 2 | 5 | yes | 25.4 |
| | *Brachypodium distachyon* | yes | no | annual | 18.1 | 3 | 4 | yes | 32.8 |
| | *Briza maxima* | yes | no | annual | 24.9 | 3 | 5 | yes | 35.8 |
| | *Briza minor* | yes | no | annual | 6.0 | 3 | 5 | yes | NA |
| | *Bromus hordeaceus* | yes | no | annual | 17.8 | 3 | 4 | yes | 28.2 |
| | *Bromus lanceolatus* | yes | no | peren | 21.0 | 4 | 3 | yes | 26.8 |
| | *Bromus rubens* | yes | no | annual | 9.7 | 4 | 2 | yes | NA |
| | *Chaetopogon fasciculatus* | yes | no | annual | 19.2 | 4 | 3 | yes | NA |
| | *Cynosurus echinatus* | yes | no | annual | NA | 4 | 4 | yes | NA |
| | *Gastridium ventricosum* | yes | no | annual | 14.2 | 4 | 5 | yes | NA |
| | *Gaudinia fragilis* | yes | no | annual | 27.8 | 3 | 4 | yes | 20.2 |
| | *Holcus annuus* | yes | no | annual | 25.9 | 6 | 2 | yes | NA |
| | *Lolium rigidum* | yes | no | annual | 28.3 | 3 | 6 | yes | 25.3 |
| | *Molineriella laevis* | yes | no | annual | 10.2 | 3 | 3 | yes | 56.0 |
| | *Phalaris coerulescens* | yes | no | peren | 30.0 | 4 | 4 | yes | NA |
| | *Taeniatherum caput-medusae* | yes | no | annual | 33.8 | 4 | 2 | yes | 20.0 |
| | *Triticum aestivum* | yes | no | annual | NA | NA | NA | yes | 22.0 |
| | *Vulpia myuros* | yes | no | annual | 14.1 | 3 | 4 | yes | 18.1 |
| Polygonacea | *Rumex acetosella* | no | no | peren | 22.7 | 3 | 6 | yes | 14.1 |
| | *Rumex bucephalophorus* | no | no | annual | 11.5 | 2 | 5 | yes | NA |
| Primulaceae | *Anagallis arvensis* | no | no | annual | 12.1 | 3 | 4 | no | 29.2 |
| Rubiaceae | *Galium aparine* | no | no | annual | NA | 3 | 5 | no | 35.7 |
| | *Galium parisiense* | no | no | annual | 9.5 | 4 | 4 | no | 24.5 |
| Scrophulariaceae | *Linaria spartea* | no | no | annual | 50.0 | 3 | 4 | no | NA |

**Fig. S1**. Community-weighted mean (CWM) (Garnier et al. 2004), functional evenness (Villéger et al. 2008), and functional dispersion (Laliberté & Legendre 2010) for graminoid growth form and anemochorous dispersal mode (binary traits), life cycle, and flowering duration (semi-quantitative traits), in dry and wet locations. Methods: modified-Whittaker (diamonds); Dengler (triangles); point-intercept (circles). Different letters indicate significant differences between methods for a Bonferroni adjusted P<0.017 (N≥6).