**Table S3.** Traits and trait states analysed in the present study, description with data sources and references.

|  |  |  |  |
| --- | --- | --- | --- |
| Trait | Trait state | Description | Data source |
| Life span | Annual | Life span of each species | Pignatti (1982), Klotz et al. (2002); checked and supplemented by field observations |  |
| Perennial |  |
| Storage organ | Presence of belowground storage organs | Occurrence and type of storage organ identified following Krumbiegel (2002) and Klimešová & de Bello (2009). The presence of storage organs is in most cases closely related to the capacity for vegetative reproduction and spread. | Klotz et al. (2002), Klimešová and Klimeš (2006), checked and supplemented by field observations |  |
| Absence of belowground storage organs |  |
| Rhizome |  |
| Bulb |  |
| Root tuber/stem tuber/shoot tuber |  |
| Tap root |  |
| Vegetative propagation | Presence of vegetative propagation | Type of vegetative propagation, identified following Bell (1991), Krumbiegel (2002), and Klimešová & de Bello (2009) | Klotz et al. (2002), Klimešová & Klimeš (2006), checked and supplemented by field observations |  |
| Absence of vegetative propagation |  |
| Bulbils |  |
| Root tuber/stem tuber/root splitter |  |
| Runner |  |
| Rhizome |  |
| Leaf persistence | Persistent green leaves | Classification of how long a leaf persists on a plant from emergence until cast, according the categories indicated in Klotz & Kühn (2002) | Klotz et al. (2002); checked and supplemented by field observations made during the year |  |
| Summer green leaves |  |
| Spring green leaves |  |
| Overwintering green leaves |  |
| Leaf anatomy | Succulent leaves | Main structures within the leaves to fulfil specific tasks (e.g., aeration, supporting tissues, water storage), identified following Klotz & Kühn (2002) and Küster et al. (2010). Species may have more than one type of leaf anatomy (e.g. scleromorphic/ mesomorphic; mesomorphic/ hygromorphic). Each combination of leaf anatomy types was considered in statistical elaborations | Klotz et al. (2002); checked and supplemented by authors’ observations |  |
| Succulent/hygromorphic leaves |  |
| Mesomorphic/hygromorphic leaves |  |
| Mesomorphic leaves |  |
| Scleromorphic |  |
| Scleromorphic/mesomorphic leaves |  |
| Horizontal space occupation | Absence of horizontal architecture | Classification of horizontal growth form, according to the categories indicated in Krumbiegel (2002) | Pignatti (1982), Klotz et al. (2002); checked and supplemented by authors’ observations |  |
| Caespitose |  |
| Pleiocorm |  |
| Reptant |  |
| Rosulate |  |
| Vertical space  occupation | Sedge (no leafy stem, narrow basal leaves) | Classification based on the width of leaves and on their position along the stem (Liira & Zobel 2000 and Krumbiegel 2002, modified) | Pignatti (1982), Klotz et al. (2002); checked and supplemented by authors’ observations |  |
| Grass (leafy stem, narrow leaves) |  |
| Hemirosulate upright forb |  |
| Erosulate upright forb |  |
| Rosette forb (no leafy stem, broad basal leaves) |  |
| Prostrate forb |  |
| Plant height | ≤ 20 cm | Plant height categorized in five classes of the same amplitude. | Field measurements and measurements taken on specimens stored in *Herbarium Universitatis Camerinensis* (CAME) |  |
| 21-40 cm |  |
| 41-60 cm |  |
| 81-100 cm |  |
| Seed mass | ≤ 0.20 mg | Seed weight categorized in classes on a logarithmic scale (Hodgson et al. 1995, modified). |  |  |
| 0.21-0.50 mg |  |  |
| 0.51-1.00 mg |  |  |
| 1.01-2.00 mg | Grime et al. (1988); Klotz et al. (2002); collection and weighing of the seeds in the laboratory |  |
| 2.01-4.00 mg |  |  |
| 4.01-10.00 mg |  |  |
| > 10.00 mg |  |  |

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