**Supplementary Appendices**

**Appendix 3.** List of annual species under different grazing treatments (BG, before one week intense grazing; AG, after one week intense grazing) for each community.

|  |  |  |  |
| --- | --- | --- | --- |
|   | *A. henoniana* | *H. schmittianum* | *R. raetam* |
| Annual species | BG | AG | BG | AG | BG | AG |
| *Anacyclus clavatus* | + | - | + | - | + | - |
| *Anacyclus monanthos* | + | - | + | + | + | + |
| *Anchusa hispida* | - | - | - | - | - | - |
| *Arnebia decumbens* | - | - | + | + | - | - |
| *Asphodelus tenuifolius* | - | - | - | - | + | + |
| *Astragalus corrugatus* | - | - | + | - | - | - |
| *Atractylis carduus* | - | - | + | + | + | + |
| *Calendula arvensis*  | - | - | + | - | - | - |
| *Catananche arenaria* | - | - | - | - | - | - |
| *Centaurea furfuracea*  | - | - | + | - | + | - |
| *Convolvulus arvensis* | - | - | + | - | + | - |
| *Cuscuta epithymum* | + | - | - | - | + | - |
| *Cutandia dichotoma* | - | - | + | - | + | + |
| *Daucus sahariensis*  | - | - | + | + | + | + |
| *Diplotaxis harra* | + | + | - | - | - | - |
| *Echium humile*  | + | - | + | - | + | - |
| *Emex spinosa*  | - | - | - | - | + | - |
| *Erodium glaucophyllum* | + | + | - | - | + | + |
| *Erodium laciniatum*  | + | - | + | + | + | - |
| *Filago germanica* | - | - | - | - | + | + |
| *Hippocrepis areolata* | + | - | + | - | - | - |
| *Ifloga spicata* | - | - | + | + | + | + |
| *Koelpinia linearis*  | - | - | - | - | + | - |
| *Launaea angustifolia*  | + | + | + | - | + | - |
| *Launaea fragilis*  | - | - | + | - | + | + |
| *Launaea nudicaulis*  | + | - | - | - | + | - |
| *Launaea quercifolia*  | + | - | - | - | - | - |
| *Lobularia libyca*  | - | - | - | - | + | - |
| *Lotus halophilus* | - | - | - | - | - | - |
| *Matthiola longipetala*  | - | - | - | - | + | - |
| *Medicago laciniata* | + | - | + | - | - | - |
| *Medicago minima* | - | - | - | - | - | - |
| *Pallenis hierochuntica* | + | + | - | - | + | - |
| *Paronychia arabica*  | - | - | + | - | + | - |
| *Phalaris minor* | - | - | - | - | + | - |
| *Picris asplenioides*  | - | - | + | - | + | - |
| *Plantago coronopus*  | - | - | + | - | + | - |
| *Plantago ovata* | - | - | - | - | + | - |
| *Schismus barbatus* | - | - | + | - | + | + |
| *Stipa capensis* | + | + | + | - | + | - |
| *Volutaria lippii* | + | + | - | - | + | - |