Appendix 1

Tabel I – Synoptic table with percentage frequencies of species in each alliance of Artemisietea class. Groups: 1 - *Onopordion acanthii*, 2 - *Matricario-Chenopodion*, 3 - *Dauco-Melilotion,* 4 - *Arction lappae,* 5 -  *Convolvulo arvensis-Elytrigion repentis*. P = Absolute frequency in the whole table; K = species constancy. Diagnostic species are considered those with fidelity *phi* > 0.20. Non-diagnostic species are shown only if their relative frequency > 10% in at least one column.

| **Group No.** | **1** | **2** | **3** | **4** | **5** | **P** | **K** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No. of relevés | 111 | 27 | 85 | 106 | 55 |  |  |
| **Diagn. sp. for group 1** |  |  |  |  |  |  |  |
| *Lappula squarrosa* | 28 | . | 1 | 8 | 2 | 42 | I |
| *Torilis arvensis* | 23 | . | 1 | 6 | . | 32 | I |
| *Hordeum murinum* | 23 | 7 | . | 5 | 2 | 34 | I |
| *Geranium pusillum* | 21 | . | 2 | 2 | 9 | 32 | I |
| *Cynanchum acutum* | 9 | . | . | . | . | 10 | I |
| *Petasites spurius* | 9 | . | . | . | . | 10 | I |
| *Bromus squarrosus* | 14 | . | 5 | . | . | 19 | I |
| *Carduus acanthoides* | 52 | 37 | 21 | 16 | 22 | 115 | II |
| *Onopordum tauricum* | 10 | . | . | 3 | . | 14 | I |
| *Bromus tectorum* | 24 | 4 | 7 | 6 | 11 | 46 | I |
| *Marrubium vulgare* | 13 | . | 1 | 4 | 2 | 20 | I |
| *Centaurea calcitrapa* | 7 | . | . | 1 | . | 9 | I |
| *Sisymbrium loeselii* | 23 | 4 | 7 | 9 | 7 | 47 | I |
| *Carduus nutans* | 13 | . | 4 | 3 | 2 | 21 | I |
| *Xeranthemum annuum* | 8 | . | 2 | . | . | 11 | I |
| *Argusia sibirica* | 5 | . | . | . | . | 6 | I |
| *Centaurea iberica* | 5 | . | . | . | . | 6 | I |
| *Berteroa incana* | 25 | 4 | 14 | 5 | 13 | 53 | I |
| **Diagn. sp. for group 2** |  |  |  |  |  |  |  |
| *Ambrosia artemisiifolia* | 1 | 52 | . | . | . | 15 | I |
| *Iva xanthiifolia* | . | 48 | . | 2 | . | 15 | I |
| *Brachyactis ciliata* | . | 33 | . | . | . | 9 | I |
| *Tripleurospermum inodorum* | 6 | 48 | 1 | 2 | 11 | 29 | I |
| *Amaranthus blitoides* | . | 26 | . | . | . | 7 | I |
| *Trifolium fragiferum* | 2 | 26 | 1 | . | . | 10 | I |
| *Artemisia annua* | 4 | 44 | 4 | 22 | 2 | 43 | I |
| *Mentha pulegium* | . | 19 | . | . | . | 5 | I |
| *Puccinellia distans* | . | 19 | . | . | . | 5 | I |
| *Polygonum persicaria* | 3 | 33 | 1 | 5 | 9 | 23 | I |
| *Digitaria sanguinalis* | 3 | 19 | . | . | . | 8 | I |
| *Conyza canadensis* | 24 | 59 | 14 | 23 | 18 | 89 | II |
| *Xanthium strumarium* | 8 | 41 | 6 | 12 | 13 | 45 | I |
| *Lotus tenuis* | 1 | 15 | . | . | . | 5 | I |
| *Eragrostis minor* | 1 | 15 | . | . | . | 5 | I |
| *Setaria glauca* | 6 | 37 | 7 | 8 | 15 | 39 | I |
| *Amaranthus albus* | 2 | 19 | . | 4 | . | 11 | I |
| *Achillea collina* | 7 | 22 | 1 | . | 2 | 16 | I |
| *Cichorium intybus* | 24 | 59 | 29 | 8 | 29 | 93 | II |
| *Polygonum aviculare* | 28 | 59 | 11 | 28 | 25 | 100 | II |
| *Centaurea diffusa* | 3 | 15 | . | . | . | 7 | I |
| *Althaea cannabina* | . | 11 | . | . | . | 3 | I |
| *Heleochloa schoenoides* | . | 11 | . | . | . | 3 | I |
| *Abutilon theophrasti* | . | 11 | . | . | . | 3 | I |
| *Poa annua* | 5 | 30 | 6 | 4 | 13 | 30 | I |
| *Chenopodium urbicum* | 3 | 19 | . | 5 | 2 | 14 | I |
| *Galinsoga parviflora* | . | 22 | . | 5 | 11 | 17 | I |
| *Atriplex prostrata* | 3 | 15 | . | 3 | . | 10 | I |
| *Bunias orientalis* | 1 | 15 | . | 3 | 2 | 9 | I |
| *Echinochloa crus-galli* | 8 | 30 | . | 16 | 11 | 40 | I |
| *Aster tripolium* | . | 7 | . | . | . | 2 | I |
| *Bidens cernua* | . | 7 | . | . | . | 2 | I |
| *Gratiola officinalis* | . | 7 | . | . | . | 2 | I |
| *Lepidium virginicum* | . | 7 | . | . | . | 2 | I |
| *Chenopodium album* | 28 | 48 | 11 | 37 | 16 | 101 | II |
| *Plantago indica* | 1 | 7 | . | . | . | 3 | I |
| **Diagn. sp. for group 3** |  |  |  |  |  |  |  |
| *Tussilago farfara* | . | . | 42 | 6 | 2 | 43 | I |
| *Tanacetum vulgare* | 10 | 4 | 41 | 5 | 2 | 53 | I |
| *Melilotus alba* | 6 | . | 22 | . | . | 26 | I |
| *Equisetum arvense* | 1 | . | 19 | 2 | 4 | 21 | I |
| *Equisetum telmateia* | . | . | 12 | . | . | 10 | I |
| *Eupatorium cannabinum* | . | . | 18 | 7 | . | 22 | I |
| *Hypericum perforatum* | . | . | 19 | 2 | 11 | 24 | I |
| *Achillea millefolium* | 10 | . | 28 | 8 | 15 | 51 | I |
| *Plantago media* | . | 7 | 18 | 1 | 4 | 20 | I |
| *Rorippa pyrenaica* | . | . | 7 | . | . | 6 | I |
| *Dorycnium pentaphyllum s.herbaceum* | . | . | 7 | . | . | 6 | I |
| *Geranium robertianum* | . | . | 7 | . | . | 6 | I |
| *Mycelis muralis* | . | . | 7 | . | . | 6 | I |
| *Leontodon autumnalis* | 1 | . | 9 | . | 2 | 10 | I |
| *Echium vulgare* | 14 | . | 33 | 7 | 27 | 66 | I |
| *Rosa canina* | 1 | . | 7 | . | . | 7 | I |
| *Origanum vulgare* | 1 | . | 7 | . | . | 7 | I |
| *Petasites albus* | . | . | 6 | . | . | 5 | I |
| *Epilobium montanum* | . | . | 6 | . | . | 5 | I |
| *Petasites hybridus* | . | . | 6 | . | . | 5 | I |
| *Melilotus officinalis* | 11 | 15 | 27 | 6 | 5 | 48 | I |
| *Dactylis glomerata* | 3 | . | 20 | 11 | 7 | 36 | I |
| *Mentha longifolia* | 9 | . | 20 | 1 | 13 | 35 | I |
| **Diagn. sp. for group 4** |  |  |  |  |  |  |  |
| *Conium maculatum* | 11 | 4 | 1 | 41 | 2 | 58 | I |
| *Ballota nigra* | 26 | 15 | 20 | 53 | 2 | 107 | II |
| *Leonurus cardiaca* | 4 | 26 | 4 | 38 | . | 54 | I |
| *Helianthus tuberosus* | . | . | . | 11 | . | 12 | I |
| *Urtica dioica* | 23 | 22 | 16 | 48 | 7 | 100 | II |
| *Lycium barbarum* | . | . | . | 12 | 2 | 14 | I |
| *Lamium maculatum* | . | . | . | 8 | . | 9 | I |
| *Malva sylvestris* | 10 | 7 | 5 | 25 | 2 | 45 | I |
| *Arctium tomentosum* | 10 | 15 | 11 | 31 | 2 | 58 | I |
| *Arctium lappa* | 17 | 11 | 4 | 35 | 16 | 71 | I |
| *Cruciata laevipes* | . | . | 2 | 8 | . | 11 | I |
| *Amaranthus retroflexus* | 6 | 11 | . | 24 | 11 | 41 | I |
| *Aegopodium podagraria* | . | . | . | 6 | . | 6 | I |
| *Parietaria officinalis* | . | . | . | 6 | . | 6 | I |
| *Lapsana communis* | . | . | 4 | 10 | 2 | 15 | I |
| **Diagn. sp. for group 5** |  |  |  |  |  |  |  |
| *Cardaria draba* | 10 | 7 | 2 | 11 | 49 | 54 | I |
| *Stellaria media* | 6 | . | 4 | 6 | 33 | 34 | I |
| *Cerastium glomeratum* | . | . | . | . | 18 | 10 | I |
| *Lamium amplexicaule* | 1 | . | 1 | 3 | 22 | 17 | I |
| *Lamium purpureum* | . | . | . | 1 | 13 | 8 | I |
| *Euphorbia helioscopia* | . | . | . | 1 | 11 | 7 | I |
| *Sherardia arvensis* | . | . | . | . | 9 | 5 | I |
| *Ceratocephala orthoceras* | . | . | . | . | 9 | 5 | I |
| *Veronica persica* | 2 | . | . | 2 | 13 | 11 | I |
| *Vicia grandiflora* | 1 | . | . | . | 9 | 6 | I |
| *Hypochoeris radicata* | 1 | . | . | . | 9 | 6 | I |
| *Lepidium campestre* | 3 | . | 2 | 2 | 15 | 15 | I |
| *Erophila verna* | . | . | 1 | . | 9 | 6 | I |
| *Campanula rapunculoides* | . | . | 1 | . | 9 | 6 | I |
| *Campanula patula* | . | . | 2 | . | 9 | 7 | I |
| *Sonchus asper* | . | . | 7 | . | 13 | 13 | I |
| *Anchusa ochroleuca* | 1 | . | . | . | 7 | 5 | I |
| *Thlaspi arvense* | 1 | . | . | . | 7 | 5 | I |
| *Anthemis cotula* | 3 | . | . | . | 9 | 8 | I |
| *Filago vulgaris* | . | . | . | 1 | 7 | 5 | I |
| *Leucanthemum vulgare* | . | . | 11 | . | 15 | 17 | I |
| *Convolvulus arvensis* | 39 | 37 | 29 | 29 | 60 | 142 | II |
| *Galeopsis tetrahit* | . | . | . | 6 | 11 | 12 | I |
| *Rumex crispus* | 5 | . | 6 | 1 | 15 | 19 | I |
| *Scabiosa ochroleuca* | . | . | . | . | 5 | 3 | I |
| *Centaurium erythraea* | . | . | . | . | 5 | 3 | I |
| *Scrophularia scopolii* | . | . | . | . | 5 | 3 | I |
| *Allium scorodoprasum* | . | . | . | . | 5 | 3 | I |
| *Holosteum umbellatum* | . | . | . | . | 5 | 3 | I |
| *Senecio vernalis* | . | . | . | 4 | 9 | 9 | I |
| *Erodium cicutarium* | 7 | . | . | 2 | 13 | 17 | I |
| **Other frequent species** |  |  |  |  |  |  |  |
| *Agropyron repens* | 32 | 37 | 31 | 25 | 42 | 121 | II |
| *Artemisia absinthium* | 36 | 11 | 41 | 21 | 16 | 109 | II |
| *Capsella bursa-pastoris* | 32 | 22 | 15 | 27 | 42 | 107 | II |
| *Cirsium arvense* | 14 | 41 | 27 | 26 | 27 | 92 | II |
| *Daucus carota* | 23 | 41 | 39 | 6 | 24 | 88 | II |
| *Artemisia vulgaris* | 9 | 7 | 34 | 33 | 13 | 83 | II |
| *Lolium perenne* | 32 | 37 | 16 | 11 | 16 | 80 | II |
| *Plantago lanceolata* | 16 | 26 | 29 | 2 | 38 | 73 | I |
| *Taraxacum officinale* | 13 | 26 | 27 | 8 | 15 | 60 | I |
| *Onopordum acanthium* | 30 | 22 | 2 | 11 | 13 | 60 | I |
| *Cirsium vulgare* | 18 | 4 | 6 | 13 | 27 | 55 | I |
| *Plantago major* | 14 | 30 | 19 | 6 | 13 | 53 | I |
| *Trifolium repens* | 10 | 22 | 22 | 6 | 18 | 52 | I |
| *Atriplex tatarica* | 19 | 26 | 2 | 15 | 5 | 49 | I |
| *Lactuca serriola* | 14 | 15 | 15 | 10 | 9 | 49 | I |
| *Linaria vulgaris* | 4 | 7 | 24 | 6 | 24 | 45 | I |
| *Medicago lupulina* | 15 | 22 | 15 | 4 | 5 | 43 | I |
| *Matricaria perforata* | 10 | 11 | 15 | 8 | 9 | 41 | I |
| *Poa pratensis* | 5 | 19 | 14 | 3 | 24 | 39 | I |
| *Sambucus ebulus* | 2 | . | 8 | 18 | 18 | 38 | I |
| *Lotus corniculatus* | 7 | 15 | 16 | 1 | 16 | 36 | I |
| *Bromus sterilis* | 12 | 19 | 4 | 6 | 16 | 36 | I |
| *Solanum nigrum* | 8 | 15 | 6 | 13 | 7 | 36 | I |
| *Trifolium pratense* | 6 | 15 | 14 | 5 | 15 | 36 | I |
| *Xanthium spinosum* | 14 | 15 | . | 12 | . | 33 | I |
| *Achillea setacea* | 13 | 4 | 12 | . | 15 | 33 | I |
| *Matricaria chamomilla* | 15 | 4 | 1 | 9 | 7 | 33 | I |
| *Sonchus arvensis* | 5 | 11 | 12 | 8 | 11 | 33 | I |
| *Lepidium ruderale* | 12 | 15 | 1 | 6 | 13 | 31 | I |
| *Reseda lutea* | 13 | 4 | 8 | 4 | 9 | 31 | I |
| *Erigeron annuus* | . | . | 15 | 8 | 11 | 28 | I |
| *Galium aparine* | 2 | 11 | 7 | 15 | 2 | 28 | I |
| *Cirsium lanceolatum* | 12 | 4 | . | 9 | 4 | 26 | I |
| *Rumex obtusifolius* | 4 | . | 4 | 12 | 9 | 25 | I |
| *Descurainia sophia* | 11 | . | 2 | 4 | 13 | 25 | I |
| *Verbena officinalis* | 11 | 11 | 2 | 7 | 2 | 25 | I |
| *Crepis foetida s. rhoeadifolia* | 8 | . | 13 | . | 7 | 24 | I |
| *Glechoma hederacea* | . | 7 | 5 | 12 | 9 | 24 | I |
| *Agrostis tenuis* | 5 | . | 11 | . | 15 | 22 | I |
| *Cynodon dactylon* | 5 | 15 | 4 | 7 | 4 | 21 | I |
| *Prunella vulgaris* | 1 | . | 14 | 3 | 9 | 21 | I |
| *Salvia nemorosa* | 8 | . | 5 | 1 | 13 | 21 | I |
| *Potentilla argentea* | 13 | . | 4 | . | 7 | 21 | I |
| *Bidens tripartita* | . | 11 | 8 | 4 | 11 | 20 | I |
| *Fallopia convolvulus* | 5 | 4 | 4 | 4 | 11 | 20 | I |
| *Arctium minus* | 6 | 15 | 1 | 3 | 9 | 20 | I |
| *Festuca pratensis* | . | . | 9 | 4 | 13 | 19 | I |
| *Medicago falcata* | 5 | . | 7 | 1 | 13 | 19 | I |
| *Agrostis stolonifera* | 1 | 15 | 7 | 7 | 2 | 19 | I |
| *Salvia verticillata* | 1 | . | 12 | 2 | 9 | 18 | I |
| *Euphorbia cyparissias* | 5 | . | 6 | 1 | 11 | 17 | I |
| *Cynoglossum officinale* | 10 | . | 4 | 2 | 2 | 17 | I |
| *Verbascum phlomoides* | 10 | . | 2 | 1 | 4 | 16 | I |
| *Centaurea solstitialis* | 11 | 11 | . | . | . | 15 | I |
| *Setaria viridis* | 3 | 11 | . | 5 | 5 | 14 | I |
| *Inula britannica* | 2 | 11 | 6 | . | 5 | 13 | I |