

On-line Supplement Tab. 1. Details of phytosociological relevés sampled for the study. Relevés are arranged according to the result of the cluster analysis of UPGMA. C – herb layer, D – moss layer, + – taxon of low abundance (a few individuals), – – taxon absent in the plot, I–V – constancy classes (after Westhoff and van der Maarel 1978), * – alien species, [*] – species with uncertain geographical-historical status in the Polish flora.

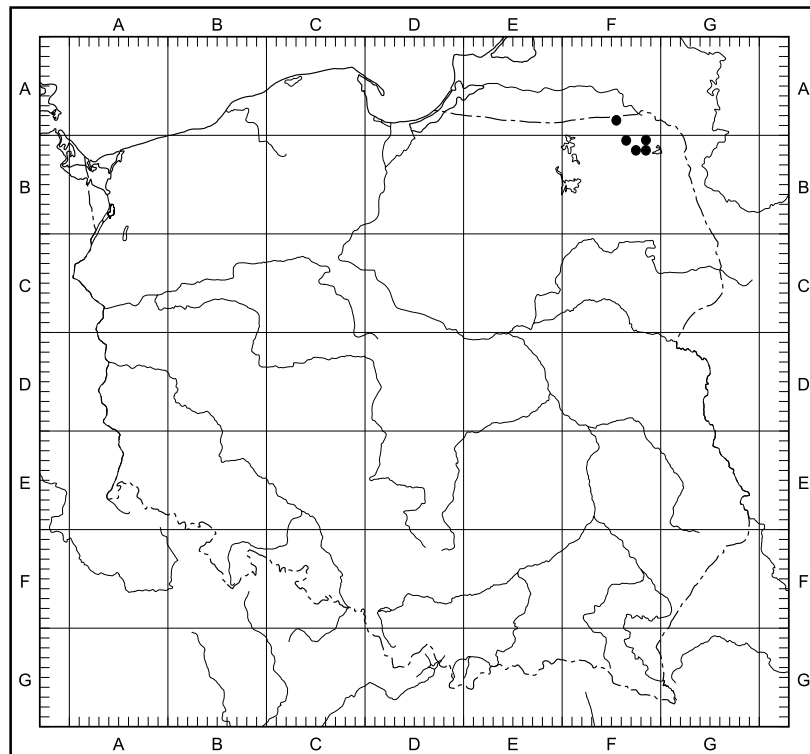
plot number	1	6	8	9	2	5	7	13	14	15	3	4	11	12	10	18	19	20	21	16	17	constancy	
plot size (m ²)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		25
herb cover (%)	60	60	40	30	60	50	50	30	40	30	80	90	80	90	80	80	80	80	80	80	80		80
moss cover (%)	30	20	70	25	20	20	50	40	30	20	–	10	5	–	–	–	–	–	–	5	5		
number of species	35	38	28	24	32	26	20	13	18	17	26	24	27	25	28	26	25	17	18	21	29		
*<i>Erigeron</i> × <i>huelsenii</i>	C	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	V
Ch.Cl. <i>Stellarietea mediae</i>																							
* <i>Erigeron canadensis</i>	C	+	1	2	1	1	+	2	1	2	1	1	1	2	2	1	2	2	2	1	1	+	V
* <i>Matricaria maritima</i> subsp. <i>inodora</i>	C	–	–	–	–	–	–	–	–	–	–	+	+	+	+	–	–	–	–	–	–	–	II
* <i>Anthemis arvensis</i>	C	–	–	–	–	–	–	–	–	–	–	+	+	–	–	–	–	–	–	–	–	–	I
<i>Cirsium arvense</i>	C	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	I
* <i>Consolida regalis</i>	C	–	–	–	–	–	–	–	+	–	–	–	–	–	–	+	–	–	–	–	–	–	I
<i>Convolvulus arvensis</i>	C	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
* <i>Corispermum leptopterum</i>	C	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
* <i>Vicia hirsuta</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	I
Ch.Cl. <i>Artemisietea vulgaris</i>																							
<i>Artemisia vulgaris</i>	C	+	+	–	–	+	1	–	+	+	+	+	+	+	1	–	–	–	+	+	+	+	IV
* <i>Erigeron annuus</i>	C	+	+	1	–	+	–	+	–	+	+	+	+	+	–	+	–	+	+	1	+	+	IV
<i>Anthemis tinctoria</i>	C	1	+	+	–	+	+	+	–	+	–	–	–	–	–	+	+	–	–	–	–	–	III
[*] <i>Oenothera biennis</i>	C	+	+	+	+	–	1	1	1	+	+	–	–	–	–	–	–	–	–	–	–	–	III
<i>Medicago lupulina</i>	C	–	–	+	+	–	–	–	–	–	–	–	–	+	–	–	–	+	–	–	–	+	II
* <i>Melandrium album</i>	C	–	+	–	–	–	–	–	–	–	–	–	+	+	+	+	–	–	–	–	+	–	II
<i>Poa compressa</i>	C	–	1	2	1	–	–	3	2	2	2	–	–	–	–	–	–	–	–	–	–	–	II
* <i>Artemisia absinthium</i>	C	+	+	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	I
[*] <i>Berteroa incana</i>	C	+	1	–	+	–	–	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	I
<i>Calamagrostis epigejos</i>	C	4	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
<i>Elymus repens</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	I
<i>Equisetum arvense</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	+	+	–	–	–	–	–	+	+	I
<i>Linaria vulgaris</i>	C	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
* <i>Medicago sativa</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	1	+	+	–	–	–	–	–	–	I
<i>Melilotus alba</i>	C	+	+	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
<i>Picris hieracioides</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	+	I
<i>Verbascum thapsus</i>	C	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
Ch.Cl. <i>Koelerio-Coryneporetea</i>																							
<i>Arenaria serpyllifolia</i>	C	+	+	1	+	–	+	–	+	–	–	–	–	+	–	+	–	–	–	–	–	–	III
<i>Sedum acre</i>	C	+	+	2	2	+	1	1	2	1	2	–	–	–	–	–	–	–	–	–	–	–	III
<i>Helichrysum arenarium</i>	C	+	–	–	–	–	–	2	1	1	+	–	–	–	–	–	–	–	–	–	–	–	II
<i>Potentilla argentea</i>	C	+	+	–	–	+	–	–	–	–	–	–	–	–	–	–	+	–	+	+	–	–	II
<i>Trifolium arvense</i>	C	+	+	1	+	–	+	–	–	–	–	–	–	–	–	1	+	+	–	–	–	–	II
<i>Acinos arvensis</i>	C	+	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
<i>Alyssum alyssoides</i>	C	+	1	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I
<i>Bromus hordeaceus</i>	C	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	I

On-line Supplement Tab. 1. – continued

plot number	1	6	8	9	2	5	7	13	14	15	3	4	11	12	10	18	19	20	21	16	17	constancy			
plot size (m ²)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		25		
herb cover (%)	60	60	40	30	60	50	50	30	40	30	80	90	80	90	80	80	80	80	80	80	80		80		
moss cover (%)	30	20	70	25	20	20	50	40	30	20	–	10	5	–	–	–	–	–	–	–	5		5		
number of species	35	38	28	24	32	26	20	13	18	17	26	24	27	25	28	26	25	17	18	21	29				
<i>Herniaria glabra</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I		
<i>Rumex acetosella</i>	C	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I		
<i>Ceratodon purpureus</i>	D	–	2	4	–	1	1	2	3	3	2	–	2	–	–	–	–	–	–	–	–	–	III		
<i>Brachythecium albicans</i>	D	–	–	2	1	2	+	–	–	+	+	–	–	–	–	–	–	–	–	–	–	–	II		
<i>Racomitrium canescens</i>	D	–	+	–	2	–	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I		
Ch.Cl. Molinio-Arrhenatheretea																									
<i>Achillea millefolium</i>	C	–	–	–	+	+	1	–	–	–	–	2	1	1	+	+	1	+	–	1	+	–	III		
<i>Dactylis glomerata</i>	C	–	2	–	–	1	–	–	–	–	–	3	1	3	4	1	1	1	–	1	3	2	III		
<i>Galium mollugo</i>	C	1	2	–	–	+	–	–	–	–	–	+	+	–	+	+	+	+	–	–	–	–	III		
<i>Plantago lanceolata</i>	C	+	+	–	–	–	–	–	–	–	–	1	1	1	1	1	+	–	2	2	2	+	III		
<i>Trifolium pratense</i>	C	–	–	–	–	–	–	–	–	–	–	2	3	1	1	2	2	1	2	2	+	1	III		
<i>Cerastium holosteoides</i>	C	–	–	–	–	–	–	–	–	–	–	–	+	+	–	+	+	+	+	–	–	+	II		
<i>Festuca rubra</i> s. l.	C	–	2	–	2	2	–	–	–	–	–	–	–	1	–	2	–	–	–	–	–	–	3	II	
<i>Knautia arvensis</i>	C	+	+	+	–	+	+	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	II	
<i>Lolium perenne</i>	C	–	–	–	–	–	–	–	–	–	–	+	–	2	1	–	–	–	–	–	–	1	+	II	
<i>Phleum pratense</i>	C	–	–	+	+	–	–	–	–	–	–	+	2	–	–	1	–	–	–	–	–	+	–	II	
<i>Arrhenatherum elatius</i>	C	–	–	–	1	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	1	–	–	I	
<i>Holcus lanatus</i>	C	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Leontodon autumnalis</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	+	–	+	–	–	–	–	I	
<i>Leontodon hispidus</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	+	–	I	
<i>Leucanthemum vulgare</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	–	–	I	
<i>Poa pratensis</i>	C	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Rumex crispus</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Tragopogon pratensis</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	+	–	–	–	–	–	–	I	
<i>Trifolium hybridum</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	I	
<i>Trifolium repens</i>	C	–	–	–	–	–	–	–	–	–	–	–	+	+	–	–	–	–	–	–	–	–	–	I	
<i>Veronica chamaedrys</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	+	I
<i>Vicia cracca</i>	C	–	–	+	–	+	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–	+	I	
Ch.Cl. Festuco-Brometea																									
<i>Artemisia campestris</i>	C	+	+	1	1	1	2	1	2	1	+	+	+	–	+	+	+	+	+	–	–	–	+	V	
<i>Senecio jacobaea</i>	C	+	–	–	–	+	+	–	–	–	–	–	–	+	–	–	+	+	–	+	+	–	–	III	
<i>Centaurea stoebe</i>	C	1	1	+	+	+	+	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	II	
<i>Hypericum perforatum</i>	C	+	1	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	II	
<i>Medicago falcata</i>	C	+	2	1	–	1	1	1	–	2	+	–	–	–	–	–	–	–	–	–	–	–	–	II	
<i>Pimpinella saxifraga</i>	C	+	–	–	–	2	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	II	
<i>Anthyllis vulneraria</i>	C	–	+	–	+	+	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Briza media</i>	C	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Centaurea scabiosa</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Galium verum</i>	C	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	

On-line Supplement Tab. 1. – continued

plot number	1	6	8	9	2	5	7	13	14	15	3	4	11	12	10	18	19	20	21	16	17	constancy	
plot size (m ²)	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		25
herb cover (%)	60	60	40	30	60	50	50	30	40	30	80	90	80	90	80	80	80	80	80	80	80		80
moss cover (%)	30	20	70	25	20	20	50	40	30	20	–	10	5	–	–	–	–	–	–	5	5		
number of species	35	38	28	24	32	26	20	13	18	17	26	24	27	25	28	26	25	17	18	21	29		
<i>Phleum phleoides</i>	C	–	–	–	2	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
Others																							
<i>Erigeron acris</i>	C	1	1	1	1	2	2	1	1	1	+	+	+	–	1	1	1	+	+	1	+	V	
<i>Agrostis capillaris</i>	C	–	1	–	–	–	–	–	–	–	2	3	1	1	2	3	3	3	3	–	–	III	
<i>Hieracium pilosella</i>	C	+	3	1	+	1	–	1	+	–	+	+	+	1	+	–	–	–	–	–	–	III	
<i>Echium vulgare</i>	C	+	+	+	+	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	II	
<i>Hypochoeris radicata</i>	C	–	–	–	–	–	–	–	–	–	1	+	+	–	+	+	+	1	1	–	–	II	
<i>Solidago virgaurea</i>	C	–	–	–	–	1	–	–	–	–	–	+	+	–	+	+	+	–	–	+	+	II	
<i>Taraxacum</i> sp.	C	–	–	–	–	–	–	–	–	–	+	+	1	1	+	+	+	–	–	–	+	II	
<i>Betula pendula</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Euphorbia esula</i>	C	+	1	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Fragaria vesca</i>	C	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	I	
<i>Gnaphalium sylvaticum</i>	C	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	+	–	–	+	+	I	
<i>Heracleum sibiricum</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	I	
<i>Hieracium umbellatum</i>	C	–	–	–	–	–	–	–	–	–	+	–	–	–	+	–	+	–	–	+	–	I	
* <i>Malus domestica</i>	C	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
* <i>Myosotis arvensis</i>	C	–	–	–	–	–	–	–	–	–	–	–	+	+	–	+	–	–	–	–	–	I	
<i>Pinus sylvestris</i>	C	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Populus tremula</i>	C	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
[*] <i>Rumex thyrsiflorus</i>	C	–	+	–	+	–	–	–	–	–	+	–	–	+	–	–	–	–	–	–	–	I	
<i>Sedum maximum</i>	C	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Silene vulgaris</i>	C	–	–	–	–	–	–	–	+	+	–	–	–	–	+	–	+	–	–	–	–	I	
* <i>Solidago canadensis</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	1	I	
* <i>Solidago</i> × <i>niederederi</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	I	
<i>Thymus pulegioides</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–	I	
<i>Trifolium medium</i>	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	I	
<i>Rhitiadelphus squarrosus</i>	D	2	2	2	+	1	1	–	–	–	–	–	–	1	–	–	–	–	–	–	+	+	III
<i>Cladonia cornuta</i>	D	2	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Cladonia fimbriata</i>	D	2	+	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Nostoc commune</i>	D	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	
<i>Peltigera canina</i>	D	–	–	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	I	



On-line Supplement Fig. 1. Location of studied sites within the ATPOL cartogram grid (Zajac 1978).