

Syntaxonomic revision of the Pannonian grasslands of Austria – Part III: Danube and March-Thaya floodplain (including the Slovak side of the river March/Morava)

Syntaxonomische Revision der pannonischen Rasengesellschaften in Österreich – Teil III: Donau- und March-Thayaauen (einschließlich der slowakischen Seite der March)

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Abstract

The floodplain of the rivers Danube, March/Morava and Thaya/Dyje in eastern Austria and western Slovakia harbours a great diversity of meadows, reed swamps and sedge-bed communities. However, the grasslands along the Danube have not been adequately addressed by any study up to now, and a transnational revision of the alluvial grasslands is completely lacking. In this third part of a series focusing on the syntaxonomy of the Pannonian grasslands of Austria, we present a detailed classification of the grassland and marsh vegetation of the Danube and March-Thaya floodplain. We compiled all available relevés from the study area belonging to the classes *Phragmito-Magnocaricetea*, *Molinio-Arrhenatheretea* and *Festuco-Brometea*. In total, our data set comprised 2119 relevés, of which 355 were from Slovakia. We conducted a TWINSpan classification and, based on a provisional syntaxonomic interpretation of the clusters, assigned all relevés to classes, orders, alliances and associations using the total cover of the diagnostic species in each relevé as the assignment criterion. We identified 42 associations and five provisional communities belonging to 14 alliances. Our revision includes substantial changes to previous overviews, in particular regarding the alluvial grasslands of the March-Thaya floodplain. We merge *Lathyro palustris-Gratioletum*, *Gratiolo-Caricetum suzae*, *Cnidio-Violetum pumilae*, *Serratulo-Plantaginietum altissimae* and “*Silaetum pratensis*” into only two associations (*Gratiolo-Caricetum suzae* and *Cnidio-Violetum pumilae*, alliance *Deschampsion*), which are differentiated along the moisture gradient. The *Ophioglosso-Caricetum tomentosae* is revealed as a geographical vicariant of the *Cnidio-Violetum pumilae*, replacing the latter along the Danube. The *Agropyro-Alopecuretum pratensis* is newly reported for Austria. The mesic *Festuca rupicola* grasslands along the March/Morava (previously named “*Serratulo-Festucetum commutatae*”) are included in the *Colchico-Festucetum rupicolae* (*Cirsio-Brachypodion*). *Ranunculo bulbosi-Arrhenatheretum*, *Pastinaco-Arrhenatheretum*, *Festuco rupicolae-Brometum* and *Polygalo-Brachypodietum* (the latter in a new

subass. *selaginellitosum helveticae*) are confirmed as widespread grassland types in the Danube floodplain, and the *Teucrio botryos-Andropogonetum* (*Festucion valesiacae*) is split into two sub-associations. Moreover, we report four grassland types dominated by *Elymus repens* and *Calamagrostis epigejos*, provisionally treated as rankless communities, which have been neglected by all previous authors.

Keywords: Austria, *Festuco-Brometea*, grasslands, *Molinio-Arrhenatheretea*, *Phragmito-Magnocaricetea*, phytosociology, Slovakia, syntaxonomy

Erweiterte deutsche Zusammenfassung am Ende des Artikels

1. Introduction

The floodplain of the rivers Danube, March (Morava in Slovak and Czech) and Thaya (Dyje in Czech) is one of the most important grassland areas of eastern Austria and western Slovakia, harbouring a great diversity of wet and dry meadows, reed swamps and sedge-bed vegetation that form a mosaic with alluvial forests and water bodies (LAZOWSKI 1997, ŠEPPER & STANOVÁ 1999, RUŽIČKOVÁ et al. 2003, SUSKE et al. 2003). It is a wetland area of international significance, comprising a national park, several nature reserves, as well as Natura 2000 and Ramsar sites.

Phytosociological studies of these floodplains have focused on small areas and/or particular vegetation types so far, while a comprehensive study of their grasslands is still lacking. In the Danube floodplain, most studies focused on the Lobau within the political borders of Vienna (SAUBERER 1942, MARGL 1973, ROTTER 1999, 2002, WIEDERMANN et al. 2000). WAGNER (1950) and WENDELBERGER-ZELINKA (1952) described the vegetation of the Danube floodplain at the border between Lower and Upper Austria (Machland). Alluvial grasslands of the Tullner Feld northwest of Vienna were studied by STRAKA & ELLMAUER (1990), STRAKA (1992), ESSL (1999), STARK (2010) and KURMANN (2013). A detailed study on the wet meadows and marsh vegetation of the March-Thaya floodplain was presented by BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974), and a more local study of the same vegetation type was done by PLENK (1991). Finally, dry grasslands in the March-Thaya floodplain were studied by CHYTRÝ et al. (1997) and PAUER (2005).

The marsh and grassland vegetation of the Slovak part of the Morava floodplain was studied by ŠMARDÁ (1951), KLIKA (1958), BALÁTOVÁ-TULÁČKOVÁ (1968, 1976) and BOSÁČKOVÁ (1970, 1975). More intensive research of the flora and vegetation of this territory began in the 1990s after the political changes in Czechoslovakia and the opening of the border area to Austria. Important studies from this period were published by OŤAHELOVÁ & ZLINSKÁ (1993), BANÁSOVÁ et al. (1994), OŤAHELOVÁ et al. (1994), RUŽIČKOVÁ (1994), OŤAHELOVÁ (1996), ZLINSKÁ (1999) and STANOVÁ & VICENÍKOVÁ (2003).

The grasslands of the National Park “Donau-Auen” between Vienna and the Slovak border have not been adequately addressed by any study up to now. BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) included a few relevés from the Danube floodplain, but only from a single locality. However, a huge number of unpublished relevés has been accumulated in the course of several projects since 1991, both inside and outside the national park. Therefore, the time is ripe for a synthesis. This is the third part of a series focusing on the syntaxonomy of the Pannonian grasslands of Austria (for parts one and two, see WILLNER et al. 2013a, b). The preliminary numerical classification presented in the first part showed that the Danube and March-Thaya floodplain harbours a quite peculiar set of grassland types not found in other parts of the Pannonian region of Austria. Our present study is based on a strongly enlarged

data set, which also goes beyond the geographical and ecological coverage of the former one: To provide a more complete picture of the grasslands in the March/Morava floodplain, we also include the Slovak side of the river. Moreover, unlike WILLNER et al. (2013a), we include the reed and sedge-bed communities of the class *Phragmito-Magnocaricetea*, as they are in close spatial and successional contact with wet grasslands, and some of them are regularly mown.

The aim of this study is to present a detailed syntaxonomic classification of the grassland and marsh vegetation of the area including distribution maps and a description of the site conditions.

2. Study area

The study area comprises the floodplains of the rivers Danube, March/Morava and Thaya/Dyje in Eastern Austria, as well as the Morava floodplain in Slovakia (Fig. 1). From west to east, the study area can be divided into the following parts: (1) Machland. This floodplain lies at the border between the federal states of Upper and Lower Austria, between the confluence of the Danube and its tributary Enns in the west and the narrow Danube valley of Strudengau in the east. Biogeographically, it is already outside the Pannonian region (NIKLFIELD 1993). However, we included it in our analysis because of the monographic study of WAGNER (1950) who described several alluvial grassland associations from this region. Downstream, the Danube flows for about 80 km within or along the Bohemian Massif, with the valleys of Strudengau and Wachau being the narrowest sections. We don't have plot data from these regions as there are hardly any floodplains in these areas.

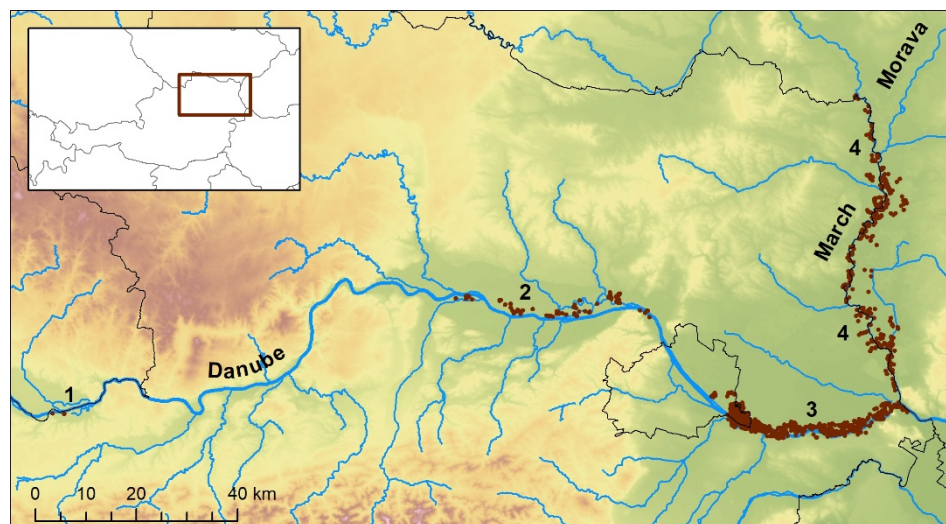


Fig. 1. The study area (1: Machland, 2: Tullnerfeld, 3: National Park “Donau-Auen”, 4: March-Thaya floodplain). Brown dots represent the relevé locations. The borders of the federal states of Austria are indicated as black lines.

Abb. 1. Untersuchungsgebiet (1: Machland, 2: Tullnerfeld, 3: Nationalpark „Donau-Auen“, 4: March-Thaya-Auen). Die braunen Punkte stellen die Aufnahmeloalitäten dar. Die schwarzen Linien sind die Grenzen der österreichischen Bundesländer.

At the town of Krems, the Danube reaches the Pannonian lowland, and here our main study area starts with the (2) Tullnerfeld. This floodplain, named after the town Tulln, is confined by the Wachau valley in the west and the water gap of Vienna (Wiener Pforte) in the east, where the Danube cuts through the flysch zone of the Alps and reaches the Vienna Basin. East of Vienna, the Danube floodplain forms the (3) National Park “Donau-Auen” (NP “Donau-Auen” in the following), which geographically belongs to the Vienna Basin. Most of the alluvial grasslands in the national park are located north of the Danube due to a steep slope bordering the southern shore of the river, which restricts the southern part of the alluvial plain to a narrow strip. At the Austrian-Slovak border, east of the mouth of the river March, the Danube passes another water gap (Hainburger Pforte = Devínska brána = Porta Hungarica) which cuts through the western end of the Carpathians. Beyond this gap, at the city of Bratislava, the Danube enters the Little Hungarian Plain. To the north lies the (4) March-Thaya floodplain. Geologically part of the Vienna Basin, the alluvial lowland along the river March and its tributary Thaya is markedly different from the Danube floodplain. While most of the sediments of the Danube come from the Northern Alps and are calcareous, the catchment area of the March River is the Bohemian Massif and the flysch zone of the Carpathians. Therefore, the sediments are relatively acidic and clay-rich, while gravel is completely absent. The March has a very low height of fall in the study area, leading to a meandering river bed that is in strong contrast to the still alpine character of the Danube.

The altitude ranges from 240 m a.s.l. in the Machland to 140 m a.s.l. at the mouth of the river March. The mean annual temperature shows only little variation within the study area, with a range between 9.5 °C and 10 °C, while the mean annual rainfall has a clear gradient from ca. 800 mm in the Machland to 500–600 mm along the Pannonian part of the Danube and only 460 mm at the confluence of March and Thaya (ZAMG 2012). BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) report for the latter location 560 mm for the period 1901–1960, which indicates a strong decrease of annual precipitation over the last century. The most important ecological factor in the study area is the (ground)water level and its periodic fluctuation, including floodings. The Danube reaches its maximum water level in late spring to mid-summer (i.e., during snow melt in the Alps), but floods caused by heavy rainfall can occur in all seasons. The river March has its maximum in early spring, mainly during the snow-melting period in March and April, and floods occur more regularly (JAROLÍMEK et al. 2018). However, flooding also occurs irregularly in summer and autumn and rarely even in winter. Moreover, due to its low height of fall, the last few kilometres of the March floodplain are also affected by backwater of Danube floods (LAZOWSKI 1997, ZULKA & LAZOWSKI 1999).

All three rivers have been straightened – the Danube in the 19th century, the March and Thaya in the 20th century. As a consequence, the natural river dynamic is lost and flooding regimes are strongly altered. A chain of hydroelectric power plants transformed most of the Danube into a rather artificial channel, Wachau and NP “Donau-Auen” being the last remaining free-flowing stretches. The National Park was implemented in 1996. Most of the study area is part of the Natura 2000 network. The March-Thaya floodplain is also protected by the Ramsar-Convention on both the Austrian and Slovak side. Rewilding efforts in the National Park and in the March-Thaya floodplain have aimed at improving the hydrological situation. Nevertheless, a substantial part of the NP “Donau-Auen” as well as of the March-Thaya-Auen is cut off from natural floodings by dams built in the course of the river regulations. Thus, open gravel banks with pioneer vegetation, which covered huge areas

along the Danube until the 19th century, are now restricted to small fragments, and many oxbows have disappeared due to natural succession (SCHRATT-EHRENDORFER & ROTTER 1999). In the Tullner Feld, an artificial stream (called “Gießgang”) was built north of the dammed main channel in order to inundate the remaining alluvial plain (ESSL 1999). In the March-Thaya-Auen, the regulations mainly led to a drop in the groundwater level, especially in the peripheral parts of the floodplain, and suppressed the initialisation of new waterbodies in the course of regular alterations of the river stretch.

The area and extent of grasslands along the river Danube was higher before the regulation in the 19th century, but their spatial arrangement was much more dynamic. Many grasslands were grazed and not mown. Some areas between the city of Vienna and the Slovakian border were closed for the public and used as hunting areas for the nobility. After the regulation, the position of the meadows was more and more fixed, and their extent decreased. The meadows were partly intensified with chemical fertilisers, but with the implementation of the National Park, the use of fertilisers has been abandoned. Today, ca. 10% of the NP “Donau-Auen” are meadows. The biggest problem for the vegetation in the National Park is currently the incision of the Danube, which leads to significant effects of drying due to lowering of the groundwater level (SCHÖPFER 2017).

The alluvial grasslands of the March-Thaya floodplain are mown twice a year (usually at the end of May and in late summer). In the past, they were also grazed (LAZOWSKI 1997), and several small-scale grazing projects have been initiated again since 1995. After a strong decline caused by transformation into arable fields and forests, only 9% of the Austrian, but still 22% of the Slovak March-Thaya floodplain are covered by grasslands (ZUNA-KRATKY et al. 2000).

3. Material and methods

3.1 Data set

We compiled all available relevés from the study area belonging to the classes *Phragmito-Magnocaricetea*, *Molinio-Arrhenatheretea* and *Festuco-Brometea*. To exclude relevés of other classes, we calculated the total cover of the character species of all classes (following MUCINA et al. 1993 and GRABHERR & MUCINA 1993), and each relevé was assigned to the class with the highest cover value. Grasslands dominated by *Elymus repens* and *Calamagrostis epigejos* were also included, although they are usually classified within the class *Artemisietea vulgaris*. Pioneer vegetation of the class *Koelerio-Corynephoretea*, which occurs on some sand dunes along the river March, is not included as it will be treated together with the sand vegetation of the adjacent Marchfeld in a later part of the series.

We excluded relevés with a plot size < 4 m² or > 40 m². These limits were chosen to include as many data as possible and, at the same time, not exceed a ratio of 1:10 between the smallest and the largest plots. Relevés without plot size information (403 = 19%) were maintained. However, we did not include the swamp and reed relevés of WENDELBERGER-ZELINKA (1952) because they were obviously too complex, each one comprising several communities. In total, our data set comprised 2119 relevés, of which 355 were from Slovakia (Fig. 1). Species taxonomy and nomenclature of vascular plants was unified, following FISCHER et al. (2008). Some species had to be merged into aggregates which follow FISCHER et al. (2008), too. Occurrences in different layers were merged, using the formula of FISCHER (2015). Taxa only identified on the genus level were excluded. Bryophytes and lichens were excluded because they were recorded only in a small subset of the relevés.

All data used are available from the Austrian Vegetation Database (EU-AT-001; WILLNER et al. 2012) and the Slovak Vegetation Database (EU-SK-001; ŠIBÍK 2012) as well as the European Vegetation Archive (CHYTRÝ et al. 2016).

3.2 Data analysis and table work

In a first step, we conducted a TWINSpan classification (HILL 1979) using three pseudospecies cutlevels (0%, 5%, 25%), six levels of division and a minimum groups size for division of two. After a provisional syntaxonomic interpretation of the TWINSpan clusters, relevés were manually rearranged into classes, orders, alliances and associations following the hierarchical approach of WILLNER (2011) and WILLNER et al. (2019) and using the total cover of the diagnostic species in each relevé as assignment criterion. The diagnostic species of classes, orders and alliances were adopted from MUCINA et al. (1993) and GRABHERR & MUCINA (1993). In case of doubt (due to similar cover values for two or more syntaxa), we maintained the TWINSpan classification. For the associations of the *Phragmito-Magnocaricetea*, we mostly followed the recent pan-European revision of LANDUCCI et al. (2020). For the other classes, we did additional TWINSpan classifications of smaller data sets including only the relevés of one alliance in order to identify the main floristic gradients, evaluate previous association concepts and determine the diagnostic species of associations.

It is important to note that the term “diagnostic species” is used here in a slightly different sense than in CHYTRÝ et al. (2002) and the majority of recent phytosociological studies. We consider only those species as diagnostic which we used to assign relevés to syntaxa, i.e. the character and differential species that would be used in a formal definition of the vegetation units (see WILLNER et al. 2019). While optimally these are the species with the highest fidelity to the syntaxon within the data set, we did not rely on a certain fidelity threshold. Our final selection of diagnostic species was also informed by external information about the habitat requirements and distribution of the species. This supervised approach seemed more robust than relying merely on the information contained in our regional data set.

All calculations and table manipulations were done with JUICE 7.1 (TICHÝ 2002).

4. Results and Discussion

4.1 TWINSpan classification

At the first and second level of division, reed swamps and sedge beds (*Phragmito-Magnocaricetea*; clusters 1–28) were separated from meadows (*Molinio-Arrhenatheretea*; clusters 29–44) and dry grasslands (*Festuco-Brometea*; clusters 45–60). However, temporarily flooded meadows (*Potentillion anserinae* and the wetter part of *Deschampsion cespitosae*) were nested within the *Phragmito-Magnocaricetea*. Alliances were mostly well separated from each other, with three notable exceptions: the *Phragmition*, *Potentillion anserinae* and *Deschampsion cespitosae* were split into several non-adjacent parts. Three alliances accepted by us in the final classification (*Glycerio-Sparganion*, *Convolvulo-Agropyrion*, *Rubo-Calamagrostion epigeji*) were not reproduced, which might be attributed to their marginal and non-representative occurrence in the data set.

A comparison of the TWINSpan result and our supervised classification is given in Supplement E1.

4.2 Syntaxonomic overview

Syntaxon names derived from incorrect taxon names have been corrected in accordance with article 44 of the ICPN, 4th ed. (THEURILLAT et al. 2021). Synonyms in brackets refer to names adopted in MUCINA et al. (1993) and GRABHERR & MUCINA (1993).

Class *Phragmito-Magnocaricetea* Klika 1941

Order *Phragmitetalia* Koch 1926

All. (1) *Phragmition australis* Koch 1926 nom. corr.

- (1.1) *Scirpetum lacustris* Chouard 1924
- (1.2) *Typhetum angustifoliae* Pignatti 1953
- (1.3) *Typhetum latifoliae* Nowiński 1930
- (1.4) *Phragmitetum australis* Savič 1926 nom. corr.
- (1.5) *Glycerietum maximae* Nowiński 1930 nom. corr.
- (1.6) *Sparganietum erecti* Roll 1938
- (1.7) *Equisetetum fluviatilis* Nowiński 1930 nom. corr.
- (1.8) *Acoretum calami* Dagys 1932
- (1.9) *Phalarido-Bolboschoenetum laticarpi* Passarge 1999 corr. Krumbiegel 2006

All. (2) *Phalaridion arundinaceae* Kopecký 1961

- (2.1) *Phalaridetum arundinaceae* Libbert 1931 (incl. *Rorippo-Phalaridetum* Kopecký 1961)

All. (3) *Magnocaricion* Koch 1926

- (3.1) *Caricetum acutae* Savič 1926 nom. corr. ("*Caricetum gracilis*")
- (3.2) *Caricetum vesicariae* Chouard 1924
- (3.3) *Caricetum distichae* Steffen 1931 nom. corr. ("*Caricetum intermediae*")
- (3.4) *Caricetum vulpinae* Nowiński 1927
- (3.5) *Caricetum ripariae* Máthé et Kovács 1959 (= *Galio palustris*-*Caricetum ripariae* Balátová-Tuláčková et al. 1993)
- (3.6) *Caricetum acutiformis* Eggler 1933
- (3.7) *Caricetum elatae* Koch 1926
- (3.8) *Calamagrostietum canescentis* Simon 1960
- (3.9) *Iridetum pseudacori* Eggler ex Brzeg et Wojterska 2001

Order *Nasturtio-Glycerietalia* Pignatti 1953

All. (4) *Glycerio-Sparganion* Br.-Bl. et Sissingh 1942

- (4.1) *Glycerietum fluitantis* Nowiński 1930

Order *Oenanthetalia aquaticae* Hejný 1965 nom. inval.

[Remark: The nomenclature of this order needs further study.]

All. (5) *Eleocharito-Sagittarion* Passarge 1964 (= *Oenanthion aquaticae* auct.)

- (5.1) *Sagittario-Sparganietum emersi* Tx. 1953 nom. corr.
- (5.2) *Oenanthero-Rorippetum amphibiae* Lohmeyer 1950
- (5.3) *Butometum umbellati* Philippi 1973
- (5.4) *Eleocharitetum palustris* Savič 1926 nom. corr.

Class *Molinio-Arrhenatheretea* Tx. 1937

Order *Potentillo-Polygonetalia* Tx. 1947

All. (6) *Potentillion anserinae* Tx. 1947

- (6.1) *Rorippo-Agrostietum stoloniferae* Oberd. et Müller 1961 ("*Rumici crispi-Agrostietum*")
- (6.2) *Ranunculetum repentis* Knapp ex Oberd. 1957
- (6.3) *Ranunculo repentis-Alopecuretum geniculati* Tx. 1937
- (6.4) *Dactylido-Festucetum arundinaceae* Tx. ex Lohmeyer 1953

Order Molinietalia Koch 1926

All. (7) *Deschampsion cespitosae* Horvatić 1930 (incl. *Cnidion dubii* Balátová-Tuláčková 1966)

- (7.1) *Gratiolo-Caricetum suzae* Balátová-Tuláčková 1966 (incl. *Lathyro palustris-Gratioletum* Balátová-Tuláčková 1966)
- (7.2) *Poa palustris-Alopecurus pratensis* comm.
- (7.3) *Gratiolo-Caricetum nigrae* Wagner 1950 nom. corr. ("*Gratiolo-Caricetum fuscae*")
- (7.4) *Cnidio-Violetum pumilae* Balátová-Tuláčková 1969
- (7.5) *Ophioglosso-Caricetum tomentosae* Wagner 1950 nom. invers.
- (7.6) *Agropyro-Alopecuretum pratensis* Moravec 1965

All. (8) *Molinion caeruleae* Koch 1926

- (8.1) *Molinietum caeruleae* Koch 1926 (*Selino-Molinietum* Kuhn 1937)

Order Arrhenatheretalia Tx. 1931

All. (9) *Arrhenatherion* Koch 1926

- (9.1) *Ranunculo bulbosi-Arrhenatheretum* Ellmauer 1993
- (9.2) *Pastinaco-Arrhenatheretum* Passarge 1964

All. (10) *Cynosurion* Tx. 1947

- (10.1) *Plantagini-Lolietum* Beger 1932 (= *Lolietum perennis* Gams 1927 nom. inval.)

Class *Artemisietea vulgaris* Lohmeyer et al. ex von Rochow 1951

Order *Agropyretalia intermedio-repentis* Müller et Görs 1969 (= *Agropyretalia repentis* Oberd. et al. 1967 nom. inval.)

All. (11) *Convolvulo-Agropyrion repentis* Görs 1967

- (11.1) *Ranunculus repens-Elymus repens* comm.
- (11.2) *Dactylis-Elymus repens* comm.

All. (12) *Rubio caesii-Calamagrostion epigeji* (Dengler 1997) Dengler et Wollert 2003

- (12.1) *Deschampsia cespitosa-Calamagrostis epigejos* comm.
- (12.2) *Colchicum-Calamagrostis epigejos* comm.

Class *Festuco-Brometea* Br.-Bl. et Tx. ex Klika et Hadač 1944

Order *Brometalia erecti* Koch 1926 (= *Brachypodietalia pinnati* Korneck 1974 nom. cons. propos.)

[Remark: A formal proposal to conserve the name *Brachypodietalia pinnati* Korneck 1947 is under preparation.]

All. (13) *Cirsio-Brachypodion* Hadač et Klika 1944

- (13.1) *Colchico-Festucetum rupicolae* Lengyel et al. 2016
- (13.2) *Festuco rupicolae-Brometum* Zielonkowski 1973 (= *Onobrychido viciifoliae-Brometum* auct.)
- (13.3) *Polygalo majoris-Brachypodietum* Wagner 1941

Order *Festucetalia valesiacae* Br.-Bl. et Tx. ex Br.-Bl. 1950 nom. cons. propos.

[Remark: See Willner et al. (2021) for details on the proposal to conserve this order name.]

All. (14) *Festucion valesiacae* Klika 1931

- (14.1) *Peucedano oreoselini-Festucetum rupicolae* Vicherek et al. 1997
- (14.2) *Teucro botryos-Andropogonetum* Sauberer et Wagner in Sauberer 1942 nom. invers.

4.3 Description and syntaxonomic discussion of the vegetation units

A shortened synoptic table is provided in Supplement S1, the full version of the same table in Supplement E2. Photos of selected associations are given in Figure 2–3. The geographical distribution of the relevé locations of individual associations is shown in Figure 4–7 and Supplement E3. The detailed data sources for each community are provided in Supplement E4.

(1) *Phragmition australis*

(1.1) *Scirpetum lacustris*

Reed vegetation with dominant *Schoenoplectus lacustris* (= *Scirpus lacustris*) has only been documented from Untere Lobau in Vienna and the Slovak side of the March/Morava River, but it has also been observed in other places of the study area. According to the personal observations of one of us (L.S.-E.), the community has decreased in recent decades. It is a pioneer community reaching the deepest water levels of all studied associations. The *Scirpetum lacustris* occurs in oxbows with very little water movement.

(1.2) *Typhetum angustifoliae*

This association was observed along the Gießgang in Tullnerfeld and in Untere Lobau. It replaces the *Scirpetum lacustris* in areas where the gravel is covered by a silt layer of > 15 cm (ROTTER 1999). Transitions between the two communities are quite frequent.

(1.3) *Typhetum latifoliae*

Reeds with dominant *Typha latifolia* are very rare in the study area. The only larger patch of this community was found near Devínska Nová Ves on the Slovak side of the March/Morava River (ZLINSKÁ 1999). In the single relevé from Untere Lobau (ROTTER 1999), *T. angustifolia* is co-dominant. One relevé of WENDELBERGER-ZELINKA (1952) from Machland includes *T. latifolia* with higher cover. According to BALÁTOVÁ-TULÁČKOVÁ et al. (1993), the *Typhetum latifoliae* prefers more eutrophic sites than the *Typhetum angustifoliae*.

(1.4) *Phragmitetum australis*

This is by far the most frequent association of the alliance. It mainly occurs along oxbows with stagnating or slowly flowing water, but can also be found in wet depressions with a balanced water regime. The silt layer is well developed and usually deeper than 20 cm (ROTTER 1999, ZLINSKÁ 1999). Stands in deeper water, either following one of the pioneer communities described above or directly adjacent to the open water, are species-poor and almost monodominant, while landward stands often contain some *Magnocaricion* species, *Rubus caesius* and tall-herb fringe vegetation. On the Austrian side of the March/Morava River, the *Phragmitetum australis* is relatively rare (see next association). BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) did not mention it at all.

(1.5) *Glycerietum maximae*

Reeds dominated by *Glyceria maxima* are very frequent along the March/Morava. In the Danube floodplain, they are rare and restricted to small patches in muddy oxbows. The predominance of *G. maxima* and the corresponding paucity of *Phragmites australis* along the March/Morava may be related to the strong annual fluctuation of the water level and the different substrate.

(1.6) *Sparganietum erecti*

This community, which is dominated by *Sparganium erectum*, has been documented from Untere Lobau in Vienna and the Slovak side of the March/Morava River. It is a rare community in the study area, forming only small patches and strips in oxbows (OŤAHELOVÁ 1996). In the Lobau, the *Sparganietum erecti* occurs mostly at disturbed places within the *Phragmites* belt (ROTTER 1999).

(1.7) *Equisetetum fluviatilis*

A single relevé from the Gießgang in Tullnerfeld dominated by *Equisetum fluviatile* can perhaps be assigned to this association. The *Equisetetum fluviatilis* prefers cooler climate and acidic bedrock (BALÁTOVÁ-TULÁČKOVÁ et al. 1993, ŠUMBEROVÁ et al. 2011). Therefore, this is a rather untypical community for the study area, where *E. fluviatile* mostly occurs as a minor companion in the *Magnocaricion*. In the single relevé from Tullnerfeld, *Carex acutiformis* is subdominant.

(1.8) *Acoretum calami*

The neophyte *Acorus calamus* has been observed at several places along the Danube and March/Morava, but in most cases, it is not forming a community. There is one relevé with dominant *Acorus* from the Slovakian March/Morava floodplain, and another location on the Austrian side of the river near Schlosshof is known where the species has become dominant. This patch has been increasing in size for several years (L.S.-E., personal observation).

(1.9) *Phalarido-Bolboschoenetum laticarpi*

This community has only been documented from the Slovak side of the March/Morava River, but occurrences in Austria are likely. In the original relevés, *Bolboschoenus maritimus* was recorded. However, the complete absence of halophytic species and the other species composition suggest that this is not *B. maritimus* s.str. but *B. laticarpus*, a species typical for river banks, oxbow lakes and other water bodies connected with river systems (HROUDOVÁ et al. 2009).

LANDUCCI et al. (2020) classified the *Phalarido-Bolboschoenetum laticarpi* in the *Eleocharito-Sagittarion*. However, despite the floristic affinities to the latter alliance (which are probably due to the regular spatial contact in the natural vegetation mosaic), we follow HROUDOVÁ et al. (2009) and ŠUMBEROVÁ et al. (2011) in including this association in the *Phragmiton australis*, where it fits better from a functional-physiognomic point of view.

(2) *Phalaridion arundinaceae*

(2.1) *Phalaridetum arundinaceae*

This community includes stands strongly dominated by *Phalaris arundinacea*. It is widespread throughout the study area. Similarly to *Phragmites*, *Phalaris* has a broad ecological amplitude and frequently occurs in other communities of the class, and also in *Molinio-Arrhenatheretea* grasslands (Supplement S1). Therefore, the *Phalaridetum arundinaceae* is defined by the dominance of the name-giving species rather than by a unique species composition. In comparison to the *Phragmitetum australis* it prefers the more dynamic parts of the floodplain with higher water velocity and strong fluctuation of the water level. It is the only reed community occurring directly at the shore of the Danube. In the March-Thaya floodplain, the *Phalaridetum* can be found in depressions and along

oxbows where it occupies higher levels than the *Glycerietum maximae*. It also follows wetter *Deschampsion* meadows after abandonment. Along the rivers, the *Phalaridetum* prefers the accreting banks.

We follow LANDUCCI et al. (2020) in uniting *Phalaridetum arundinaceae* and *Rorippo-Phalaridetum* in a single association (cf. BALÁTOVÁ-TULÁČKOVÁ et al. 1993, ŠUMBEROVÁ et al. 2011). However, we prefer to keep the *Phalaridetum* in a separate alliance *Phalaridion* because of its peculiar ecology and ambiguous floristic affinity to the other alliances of the class.

(3) *Magnocaricion*

(3.1) *Caricetum acutae*

The *Caricetum acutae* (better known as *Caricetum gracilis*) is a frequent community in the March-Thaya floodplain, where it can be found in regularly flooded depressions in the centre of meadow complexes or close to streams, rarely also along river oxbows. According to BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974), it occupies here the same position in the relief as the *Phalaridetum arundinaceae* and the main differentiating ecological factor is the water velocity during flooding. However, management may also play a role, as the *Caricetum acutae* is regularly mown, in contrast to the *Phalaridetum*. In the Danube floodplain, the *Caricetum acutae* is rare and only forms small patches in wet places not affected by strong floods.

(3.2) *Caricetum vesicariae*

This is a very rare community in the study area. It has been documented from the Machland, and from three locations in the March/Morava floodplain. *Carex vesicaria* is the dominant species, but *Carex acuta* is also present in all relevés. WAGNER (1950) uses the name “*Caricetum vesicariae-gracilis*” for this community. Likewise, ZAHLHEIMER (1979) mentions the high similarity between *Caricetum vesicariae* and *Caricetum acutae* along the Danube in Bavaria. *Carex vesicaria* prefers deeper and longer inundation than *C. acuta* (BALÁTOVÁ-TULÁČKOVÁ & HÜBL 1974, ZAHLHEIMER 1979, BALÁTOVÁ-TULÁČKOVÁ et al. 1993). According to ŠUMBEROVÁ et al. (2011), the *Caricetum vesicariae* is most common in precipitation-rich areas. Therefore, its rarity in the study area is not surprising.

(3.3) *Caricetum distichae*

The *Caricetum distichae* is another relatively rare community, closely related to the *Caricetum acutae*. In contrast to the previous association, it prefers warmer climate and occurs on sites with shallower and shorter inundation (BALÁTOVÁ-TULÁČKOVÁ & HÜBL 1974, BALÁTOVÁ-TULÁČKOVÁ et al. 1993, ŠUMBEROVÁ et al. 2011). While *Carex disticha* is not rare in the study area, it only occasionally forms an independent community between the *Caricetum acutae* and the alluvial meadows of the *Deschampsion* alliance, which follow on the next higher level. *Lathyrus palustris* seems to have its optimum in this community, as already reported by ZAHLHEIMER (1979) for Bavaria.

(3.4) *Caricetum vulpinae*

This association was only found at a few places in the March/Morava floodplain. These small patches are characterised by heavy soils and short-term floods with low water levels, rapidly decreasing below the soil surface (BALÁTOVÁ-TULÁČKOVÁ et al. 1993, ZLINSKÁ 1999).

(3.5) *Caricetum ripariae*

The *Caricetum ripariae* occurs on eutrophic sites with high water level for most of the vegetation period (BALÁTOVÁ-TULÁČKOVÁ et al. 1993). Along the Danube, it only forms small patches in deep, muddy depressions (ROTTER 1999). In the March/Morava floodplain, it is mostly found at the margin or outside of the alluvial zone proper, especially in depressions within meadows, where there is only moderate fluctuation of the water level (ZLINSKÁ 1999).

(3.6) *Caricetum acutiformis*

Stands attributable to the *Caricetum acutiformis* were almost exclusively observed in the Danube floodplain, where they form small fringe-like communities along oxbows, between the *Phragmitetum australis* and the adjacent forest (ROTTER 1999).

(3.7) *Caricetum elatae*

This association is currently concentrated in two areas: Untere Lobau in the NP “Donau-Auen”, and the national nature reserve “Abrod” near the village Závod in the Slovak part of the March/Morava floodplain just outside the regular floodings. In general, the *Caricetum elatae* is a typical community of the zonation of mesotrophic still waters, usually positioned landwards of the *Phragmitetum australis* (ELLENBERG & LEUSCHNER 2010). After the Danube regulation, the gravelly shores of cut-off river branches were quickly colonised by *Carex elata*, and the *Caricetum elatae* became the most wide-spread sedge-bed community in the Danube floodplain east of Vienna (ROTTER 1999). In the meanwhile, however, *Phragmites australis* has outcompeted *Carex elata* in most places, and the *Caricetum elatae* is becoming increasingly rare.

(3.8) *Calamagrostietum canescentis*

In parts of the *Caricetum elatae*, which mostly developed after the Danube regulation (see previous association), the absence of strong water level fluctuations led to the accumulation of peat and, in consequence, to a succession towards mire conditions. Thus, *Calamagrostis canescens* has become dominant in many places while *Carex elata* is decaying. Floristic records from the 19th century show that *C. canescens* was extremely rare in the Danube floodplain before the regulation (ROTTER 1999). Therefore, the presence of this association in the NP “Donau-Auen” is a direct consequence of the strongly altered hydrological conditions. Besides Untere Lobau, the *Calamagrostietum canescentis* is only documented from the nature reserve “Abrod” in Slovakia by a single relevé.

(3.9) *Iridetum pseudacori*

Iris pseudacorus is a frequent companion of sedge-bed vegetation and can be considered as a character species of the *Magnocaricion* (BALÁTOVÁ-TULÁČKOVÁ et al. 1993). In rare cases, it forms almost monodominant patches that can be interpreted as a kind of basal community of the alliance. In accordance with LANDUCCI et al. (2020), we classify such stands as association *Iridetum pseudacori*. However, the latter authors included this association in the *Phragmition*, even though their own synoptic tables show that the species is more frequent in the *Magnocaricion*.

The *Iridetum pseudacori* has been documented from Untere Lobau and the Slovak side of the March/Morava River. Further monodominant stands of *I. pseudacorus* have been observed in the northern part of the Austrian March-Thaya floodplain.

(4) *Glycerio-Sparganion*

(4.1) *Glycerietum fluitantis*

Communities of the alliance *Glycerio-Sparganion* are rare in the study area. In Lobau, small stands dominated by *Glyceria fluitans* occur in shallow oxbow lakes, usually accompanied by *Alopecurus aequalis* (ROTTER 1999). The community was also observed in the Slovak March/Morava floodplain (OŤAHELOVÁ 1996, ZLINSKÁ 1999).

(5) *Eleocharito-Sagittarion*

(5.1) *Sagittario-Sparganietum emersi*

This is a rare community in the study area. It has been observed in the Tullnerfeld and in the March/Morava floodplain. Several relevés from Machland (WENDELBERGER-ZELINKA 1952) might include this association, but they are too complex to be classified with certainty. The *Sagittario-Sparganietum* occurs at eutrophic, muddy sites with fluctuating water level, usually at the shore of oxbow lakes (ZLINSKÁ 1999). *Sagittaria sagittifolia* is more frequent than *Sparganium emersum*, the latter being absent in more than half of the relevés.

(5.2) *Oenantherorippetum amphibiae*

The *Oenantherorippetum* is more widespread in the study area than the previous association. It has been observed in all parts of the Danube floodplain and is even more frequent along the March/Morava. The site conditions are similar to the *Sagittario-Sparganietum*, but the *Oenantherorippetum* seems to prefer sites with less hydrological dynamics. The stands are mostly dominated by *Rorippa amphibia*, in a few cases also by *Oenanthe aquatica*. However, deviating from ŠUMBEROVÁ et al. (2011) and LANDUCCI et al. (2020), we refrain from recognising a separate *Oenantheretum aquaticae*.

(5.3) *Butometum umbellati*

This association includes stands dominated by *Butomus umbellatus*. It is only documented from the Slovak side of the March/Morava floodplain, although small stands of *B. umbellatus* have also been observed on the Austrian side. The site conditions are similar to the previous two associations. The ecological differences between *Sagittario-Sparganietum*, *Oenantherorippetum* and *Butometum umbellati* seem rather small and need further investigation (see also HROUDOVÁ & ZÁKRAVSKÝ 1994).

(5.4) *Eleocharitetum palustris*

The only recent observation of this community in the Austrian part of the study area is a disturbed shore of a river oxbow in Untere Lobau (ROTTER 1999). One relevé of WAGNER (1950) from the Machland, originally classified as “*Ranunculus repens-Alopecurus geniculatus*-Ass.”, can also be included here. In the Slovak part of the March/Morava floodplain, the *Eleocharitetum palustris* is a relatively frequent community. It forms small-scale stands in depressions of alluvial meadows with heavy clay soils and on the margins of sandy and gravel depressions (ZLINSKÁ 1999).

BALÁTOVÁ-TULÁČKOVÁ et al. (1993) classified this association within the *Magnocaricion*. Here, we follow OŤAHELOVÁ et al. (2001), ŠUMBEROVÁ et al. (2011) and LANDUCCI et al. (2020) who assign the *Eleocharitetum palustris* to the *Eleocharito-Sagittarion*.



Fig. 2. Examples of *Phragmito-Magnocaricetea* and *Potentillion anserinae* communities: **a)** *Glycerietum maximae* near Schlosshof; **b)** *Phalaridetum arundinaceae* near Orth an der Donau; **c)** *Caricetum acutae* near Devínska Nová Ves; **d)** *Oenantho-Rorippetum amphibiae* near Moravský sv. Ján; **e)** *Rorippo-Agrostietum stoloniferae* near Orth an der Donau; **f)** *Dactylido-Festucetum arundinaceae* near Orth an der Donau (Photos a: W. Willner, May 2021; b, e, f: M. Staudinger, May 2010; c, d: K. Hegedúšová Vantarová, 2004).

Abb. 2. Beispiele von *Phragmito-Magnocaricetea* und *Potentillion anserinae*: **a)** *Glycerietum maximae* bei Schlosshof; **b)** *Phalaridetum arundinaceae* bei Orth an der Donau; **c)** *Caricetum acutae* bei Devínska Nová Ves; **d)** *Oenantho-Rorippetum amphibiae* bei Moravský sv. Ján; **e)** *Rorippo-Agrostietum stoloniferae* bei Orth an der Donau; **f)** *Dactylido-Festucetum arundinaceae* bei Orth an der Donau (Fotos a: W. Willner, Mai 2021; b, e, f: M. Staudinger, Mai 2010; c, d: K. Hegedúšová Vantarová, 2004).



Fig. 3. Examples of *Deschampsion*, *Molinion*, *Arrhenatherion* and *Festuco-Brometea* communities: **a)** *Cnidio-Violetum pumilae* near Schlosshof; **b)** *Ophioglosso-Caricetum tomentosae* between Eckartsau and Stopfenreuth; **c)** *Molinietum caeruleae* in the nature reserve "Abrod"; **d)** *Ranunculo bulbosi-Arrhenatheretum* NW of Wolfsthal; **e)** *Festuco rupicolae-Brometum* E of Stopfenreuth; **f)** *Teucrio botryos-Andropogonetum* in Schüttlau near Schönau an der Donau (Photos a: T. Zuna-Kratky, August 2010; b, d, e: M. Staudinger, May 2010; c: I. Škodová, August 2020; f: N. Sauberer, June 2019).

Abb. 3. Beispiele von *Deschampsion*, *Molinion*, *Arrhenatherion* und *Festuco-Brometea*: **a)** *Cnidio-Violetum pumilae* bei Schlosshof; **b)** *Ophioglosso-Caricetum tomentosae* zwischen Eckartsau und Stopfenreuth; **c)** *Molinietum caeruleae* im Naturreservat „Abrod“ (Slowakei); **d)** *Ranunculo bulbosi-Arrhenatheretum* NW von Wolfsthal; **e)** *Festuco rupicolae-Brometum* E von Stopfenreuth; **f)** *Teucrio botryos-Andropogonetum* in der Schüttlau bei Schönau an der Donau (Fotos a: T. Zuna-Kratky, August 2010; b, d, e: M. Staudinger, Mai 2010; c: I. Škodová, August 2020; f: N. Sauberer, Juni 2019).

(6) *Potentillion anserinae*

(6.1) *Rorippo sylvestris-Agrostietum stoloniferae*

This association is almost exclusively found along the Danube, where it is quite frequent, both directly at the shore of the main river and along oxbows having a stronger flooding dynamics. It also occurs on dirt roads. The *Rorippo-Agrostietum* is a pioneer community on gravel and sand, usually forming only small patches. In the study area, the *Rorippo-Agrostietum* is a kind of central association of the alliance, being mainly negatively differentiated from the following associations. The dominant species is *Agrostis stolonifera*. Positive differential species are *Rorippa amphibia* and several *Bidentetea* species, such as *Persicaria dubia*, *P. hydropiper*, *P. lapathifolia* and *Rorippa palustris*.

(6.2) *Ranunculetum repentis*

The *Ranunculetum repentis* usually occupies shallow depressions in the centre of periodically flooded meadows. In Untere Lobau, the community also occurs in the higher parts of former river beds. The main differential species against the other associations of the alliance are *Alopecurus pratensis*, *Cardamine pratensis*, *Galium palustre* agg., *Lysimachia nummularia* and *Poa palustris*. The dominant species are *Agrostis stolonifera*, *Ranunculus repens* and *Potentilla reptans*.

Although the *Ranunculetum repentis* is a well differentiated vegetation unit, it has often been neglected in the literature (see also ZLINSKÁ 1999). BALÁTOVÁ-TULÁČKOVÁ et al. (1993) mentioned it under the name “*Ranunculus repens*-(*Potentillion anserinae*)-Gesellschaft”. The “*Ranunculus repens-Alopecurus geniculatus*-Ass.” of WAGNER (1950) also belongs here. ZAHLHEIMER (1979) reported the association from the Danube valley in Bavaria.

(6.3) *Ranunculo repentis-Alopecuretum geniculati*

Grasslands with dominant *Alopecurus geniculatus* are only documented from the Slovak part of the March/Morava floodplain, although the species has also been observed on the Austrian side of the river. The association usually occurs in contact with the *Gratiolo-Caricetum suzae* (see below) and seems to be related to trampling (ZLINSKÁ 1999). The stands are periodically flooded, but none of them is directly adjacent to the river.

(6.4) *Dactylido-Festucetum arundinaceae*

Meadows with dominant *Festuca arundinacea* have been frequently observed in the NP “Donau-Auen”, but the ecological peculiarities of these sites are not well studied. DIERSCHKE (2012) mentions compressed soil and disturbance by trampling and driving as potential factors. Indeed, personal observations suggest that the abundance of *Festuca arundinacea* has been increasing in recent years, which might be a result of heavier tractors. Apart from the Danube floodplain east of Vienna, the *Dactylido-Festucetum arundinaceae* has also been recorded from two localities in the northern March-Thaya floodplain. No observations of this association are known from the Slovak side of the river.

From our data alone, the syntaxonomic position of this association seems doubtful. It hardly contains any *Potentillion* species, but has strong floristic affinities to the *Arrhenatherion*. In the TWINSpan classification, this unit was not reproduced (Supplement E1). However, the stands in our study area are probably not typical for the association as a whole (see DIERSCHKE 2012).

(7) *Deschampsion cespitosae* (incl. *Cnidion dubii*)

In our analysis, two clearly separated association groups were revealed within the alliance *Deschampsion*: (i) a **wetter group** (associations 7.1–7.3), mainly differentiated by *Phragmito-Magnocaricetea* species (*Carex acuta*, *C. disticha*, *C. riparia*, *C. vulpina* agg., *Eleocharis palustris*, *Galium palustre* agg., *Iris pseudacorus*, *Phalaris arundinacea*) as well as *Caltha palustris* and *Poa palustris*; and (ii) a **drier group** (associations 7.4–7.6), differentiated by *Molinio-Arrhenatheretea* species having an optimum in the alliances *Molinion* (*Carex tomentosa*, *Galium boreale*, *Inula salicina*, *Ophioglossum vulgatum*, *Silaum silaus*) and *Arrhenatherion* (*Colchicum autumnale*, *Festuca pratensis*, *Leucanthemum vulgare* agg., *Ranunculus acris*, *Trifolium pratense*) as well as *Galium verum* and *Viola pumila*.

Within both groups, a marked geographical differentiation between the March-Thaya floodplain on the one hand and the Danube floodplain on the other hand can be observed. The grasslands along the March/Morava and Thaya are characterised by the presence of several species, mostly with eastern or southeastern distribution, which are rare or completely absent along the Danube: *Carex melanostachya*, *Clematis integrifolia*, *Cerastium dubium*, *Gratiola officinalis*, *Lythrum virgatum*, *Plantago altissima*, *Scutellaria hastifolia* and *Selinum venosum*. *Leucosium aestivum* has a similar overall distribution, but it has no diagnostic value in our data set because it occurs with relatively high constancy in the eastern part of the NP “Donau-Auen”, where the majority of our relevés comes from.

(7.1) *Gratiolo-Caricetum suzae* (incl. *Lathyro palustris-Gratioletum*)

This association includes the *Deschampsion* meadows in the March-Thaya floodplain where spring floods may last for several weeks and summer droughts are less pronounced. It therefore occupies shallow depressions, in a position between the various *Phragmito-Magnocaricetea* communities and the *Cnidio-Violetum pumilae* (association 7.4).

The here adopted concept of the *Gratiolo-Caricetum suzae* differs from both the original one (BALÁTOVÁ-TULÁČKOVÁ 1966, 1969, BALÁTOVÁ-TULÁČKOVÁ & HÜBL 1974) and that used in more recent overviews from the Czech Republic (HÁJKOVÁ et al. 2007) and Slovakia (HÁJKOVÁ et al. 2014). BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) distinguished three associations within the *Cnidion* (= *Deschampsion*) (see also ELLMAUER & MUCINA 1993): *Lathyro palustris-Gratioletum* (wettest), *Gratiolo-Caricetum suzae* (middle position) and *Cnidio-Violetum pumilae* (driest). In accordance with HÁJKOVÁ et al. (2007, 2014), we think that only two associations can be distinguished along this gradient. However, the latter authors use the name *Lathyro palustris-Gratioletum* for the wetter community while the *Gratiolo-Caricetum suzae* is considered as a syntaxonomic synonym of the *Cnidio dubii-Deschampsietum cespitosae* Passarge 1960, the name adopted for the drier community. According to the diagnostic species listed above, the nomenclatural type of the *Gratiolo-Caricetum suzae* clearly belongs to the wet group. Therefore, as the *Lathyro palustris-Gratioletum* and *Gratiolo-Caricetum suzae* were described in the same publication, one of the two names has to be selected for the united association (Art. 25 ICPN). Here we select the name *Gratiolo-Caricetum suzae* [orig. “*Gratiola officinalis-Carex praecox-suzae*-Assoziation”, named after *Carex praecox* var. *suzae*] because *Carex praecox* is much more frequent in the community than *Lathyrus palustris*, and the majority of the included relevés were originally assigned to the *Gratiolo-Caricetum suzae*.

The single relevé published by BALÁTOVÁ-TULÁČKOVÁ (1987) under the name *Serratulo tinctoriae-Plantaginetum altissimae* also belongs to this community. *Plantago altissima* is known from only a few localities in the March/Morava floodplain, but it occurs in both

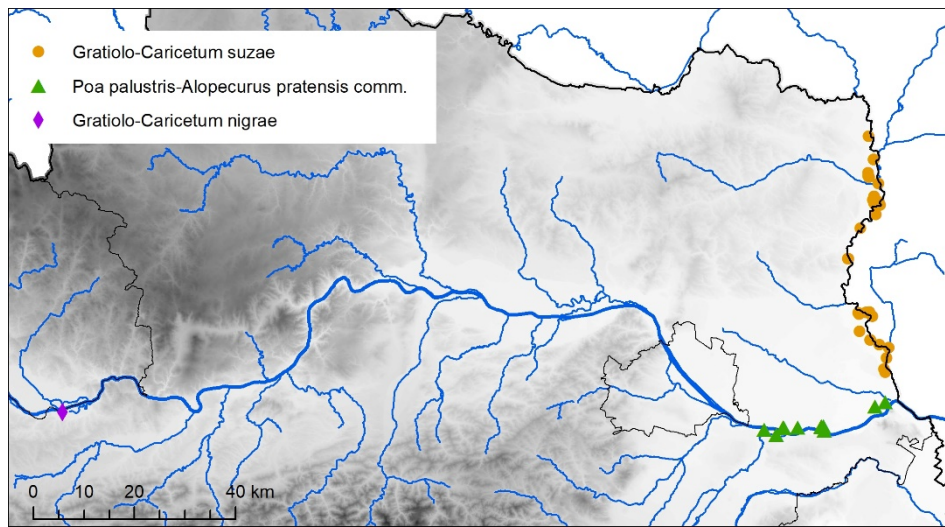


Fig. 4. Distribution of the wet association group of the *Deschampsion* in the study area.

Abb. 4. Verbreitungskarte der feuchten Assoziationsgruppe des *Deschampsion* im Untersuchungsgebiet.

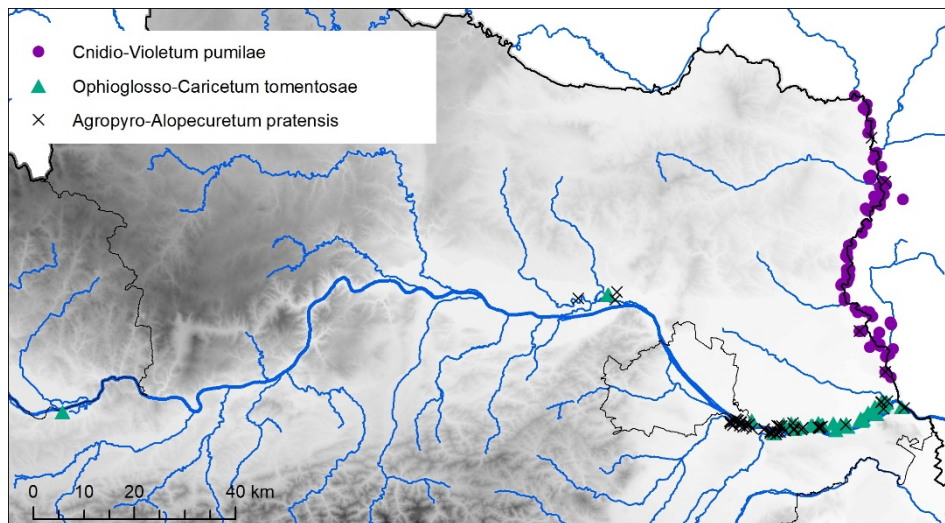


Fig. 5. Distribution of the drier association group of the *Deschampsion* in the study area.

Abb. 5. Verbreitungskarte der trockeneren Assoziationsgruppe des *Deschampsion* im Untersuchungsgebiet.

the wetter and drier community. The *Serratulo tinctoriae-Plantaginetum altissimae* was originally described from the Drava floodplain in northeastern Croatia (ILIJANIĆ 1968) and probably represents a southern Pannonian vicariant of the *Cnidio-Violetum pumilae*. Splitting the *Deschampsion* communities along the March/Morava River merely according to the presence or absence of *Plantago altissima* is hardly justified.

(7.2) *Poa palustris*-*Alopecurus pratensis* community

This community replaces the *Gratiolo-Caricetum suzae* in the Danube floodplain. Compared to the latter, it is only negatively differentiated, and its overall species composition is quite similar to the *Ranunculetum repentis*. However, it is dominated by *Alopecurus pratensis* and therefore included in the *Deschampsion*. It corresponds to the “Wet *Alopecurus pratensis* meadows with *Poa palustris* of the Danube floodplain” (clusters 43–44) in WILLNER et al. (2013a). We are not aware of a valid association name for this unit, and its syntaxonomic status can only be evaluated by a broad-scale revision. ZAHLHEIMER (1979) reports similar grasslands under the name *Sanguisorbo-Silaetum myosotidetosum palustris*. He also mentions that this grassland type has developed from the *Caricetum distichae* after management intensification, a statement that might also be true for our study area.

(7.3) *Gratiolo-Caricetum nigrae*

This community was described by WAGNER (1950) from Machland and has not been found anywhere else in the study area so far. It is similar to the *Cnidio-Deschampsietum juncetosum effusi* described by BURKART et al. (2004).

(7.4) *Cnidio-Violetum pumilae*

The *Cnidio-Violetum pumilae* occupies the higher levels in the *Deschampsion* meadows of the March-Thaya floodplain. Spring floods usually last for only a few days and summer droughts are more pronounced than in the *Gratiolo-Caricetum suzae*. Judging from the number of relevés, it seems to be the more widespread of the two communities.

Our concept of this association is slightly broader than in BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) because we also include the *Gratiolo-Caricetum suzae filipenduletosum vulgaris* and the “*Silaetum pratensis*” of the latter authors. On the other hand, the *Cnidio-Violetum pumilae caricetosum tomentosae* of the Danube floodplain must be transferred to the following association. As mentioned above, HÁJKOVÁ et al. (2007, 2014) included this community in the *Cnidio-Deschampsietum cespitosae* described from the Elbe floodplain (PASSARGE 1960, BURKART et al. 2004). In our opinion, the merging of these associations is premature and can only be evaluated by a broad-scale revision of the alliance. In any case, several of the species found along the March/Morava River are absent in eastern Germany (*Clematis integrifolia*, *Leucojum aestivum*, *Lythrum virgatum*, *Plantago altissima*), and others are very rare (*Carex melanostachya*, *Viola pumila*).

(7.5) *Ophioglosso-Caricetum tomentosae*

This association is closely related to the *Cnidio-Violetum pumilae*, replacing the latter along the Danube. It corresponds to the “*Alopecurus pratensis* meadows with *Ophioglossum vulgatum* of the Danube floodplain” (clusters 41–42) in WILLNER et al. (2013a). *Ophioglossum vulgatum* and *Carex tomentosa*, which are rare along the March/Morava, have a high constancy in this community, while *Carex melanostachya*, *Clematis integrifolia*, *Cerastium dubium*, *Galium boreale*, *Gratiola officinalis* and *Selinum venosum* are (almost) absent.

The *Ophioglosso-Caricetum tomentosae* was originally described by WAGNER (1950) from the Machland and later also reported from Upper Austria (STOCKHAMMER 1955) and from the Tullnerfeld (ELLMAUER & MUCINA 1993). Here, we extend the association further to the east, including the *Cnidio-Violetum pumilae caricetosum tomentosae* and the *Molinietum coeruleae violetosum pumilae* of BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974). Towards the west, the “*Molinietum coeruleae*” of ZAHLHEIMER (1979) partly corresponds to

the *Ophioglosso-Caricetum tomentosae* as well. Thus, the distribution of this association seems to extend at least from Bavaria in the west to the confluence of Danube and March/Morava in the east.

(7.6) *Agropyro-Alopecuretum pratensis*

This vegetation unit is mainly distributed along the Danube, although there are also some records from the March-Thaya floodplain. It corresponds to the “*Alopecurus pratensis* meadows with *Silaum silaus* of the Danube floodplain” (cluster 39) in WILLNER et al. (2013a). The community differs from the *Cnidio-Violetum pumilae* and *Ophioglosso-Caricetum tomentosae* by the lack of all “better” *Deschampsion* and *Molinion* species (*Carex tomentosa*, *Galium boreale*, *Inula salicina*, *Ophioglossum vulgatum*, *Selinum venosum*, *Serratula tinctoria*, *Viola pumila*). In some locations, it might have developed from these grassland types due to management intensification, but it probably also occurs naturally on sites strongly effected by flooding (“natural eutrophication”).

HÁJKOVÁ et al. (2007, 2014) adopted the name *Poa trivialis-Alopecuretum pratensis* Regel 1925 for this association. However, there are two problems with this name: (i) In the single relevé of the original diagnosis (i.e., the holotype), *Poa trivialis* is dominant, and the correct name would be *Alopecuro pratensis-Poetum trivialis* nom. invers. (Art. 42 ICPN), unless the name is conserved in a different way. (ii) A broad-scale revision proving that the grassland described by REGEL (1925) from Lithuania is really the same association as this Central European unit is lacking. Thus, for the time being, we prefer the name *Agropyro-Alopecuretum pratensis* Moravec 1965. A similar community was reported by ZAHLHEIMER (1979) under the name *Sanguisorbo-Silaetum galietosum veri*.

(8) *Molinion caeruleae*

In accordance with the recent revisions from Germany, the Czech Republic and Slovakia (BURKART et al. 2004, HÁJKOVÁ et al. 2007, 2014), we unite all *Molinion* meadows on base-rich soils in a broadly defined *Molinietum caeruleae*. The “*Silaetum pratensis*” and “*Serratulo-Festucetum commutatae*”, reported by BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974) within this alliance (see also ELLMAUER & MUCINA 1993), are transferred to the *Cnidio-Violetum pumilae* (*Deschampsion*) and *Colchico-Festucetum rupicolae* (*Cirsio-Brachypodion*), respectively.

(8.1) *Molinietum caeruleae* (s.l.)

The single record from the Austrian part of the study area (“Nanni-Au” near Marchegg; BALÁTOVÁ-TULÁČKOVÁ & HÜBL 1974) is historical, as this site has been completely overgrown by shrubs. At present, the *Molinietum* is well preserved only in the nature reserve “Abrod” in Slovakia.

(9) *Arrhenatherion*

(9.1) *Ranunculo bulbosi-Arrhenatheretum* (s.l.)

Mesic meadows of the *Arrhenatherion* alliance are quite frequent along the Danube. Most of them have probably developed from semi-dry grasslands after fertilisation. The less nutrient-rich ones, which still contain some *Festuco-Brometea* species (e.g., *Briza media*, *Bromus erectus*, *Festuca rupicola*, *Ranunculus polyanthemus*, *Salvia pratensis*), are united in this association, while those without *Festuco-Brometea* species belong to the next unit.

The dominant grass is usually *Arrhenatherum elatius*. In the March/Morava floodplain, this association mostly occurs on the slopes of dams, where the conditions are much drier compared to the surrounding alluvial habitats.

This unit mostly corresponds to the “Mesic meadows of the Danube floodplain” (cluster 33) in WILLNER et al. (2013a). Here, we include it in a broadly conceived *Ranunculo bulbosi-Arrhenatheretum*. However, in comparison to the Vienna Woods (WILLNER et al. 2013b), several diagnostic species of the association are absent or rare (e.g., *Centaurea scabiosa*, *Ranunculus bulbosus*). On the other hand, there are species that normally do not occur in the *Ranunculo bulbosi-Arrhenatheretum* (e.g. *Cirsium arvense*, *Equisetum arvense*). We were not able to distinguish between *Ranunculo bulbosi-Arrhenatheretum* and *Filipendulo vulgaris-Arrhenatheretum* in our study area, although differential species of both associations are present in the data set. This might be a hint that these two associations should only be separated at the subassociation level, as already suggested in WILLNER et al. (2013b).

(9.2) *Pastinaco-Arrhenatheretum*

This unit includes the *Arrhenatherion* meadows with higher nutrient, and perhaps also better water supply. It corresponds to the “Moist *Arrhenatherum* meadows of the Danube floodplain” (clusters 37–38) in WILLNER et al. (2013a). Inclusion in the *Pastinaco-Arrhenatheretum* seems to be a reasonable solution. The association is equally frequent as the *Ranunculo bulbosi-Arrhenatheretum* along the Danube, but it is almost absent along the March/Morava. We suspect that this is mainly a result of the different land-use history, as all sites in the March-Thaya floodplain potentially suitable for the *Pastinaco-Arrhenatheretum* are covered by arable fields. As in the previous association, the dominant grass is usually *Arrhenatherum elatius*, but *Festuca pratensis* or *Poa trivialis* can be dominant as well.

(10) *Cynosurion*

(10.1) *Plantagini-Lolietum*

This association is characterised by the co-dominance of *Lolium perenne*, *Plantago major* and *Poa annua*. It has only been documented from the Tullnerfeld, but it is more widespread in the study area. Typical sites are median strips of dirt roads.

(11) *Convolvulo-Agropyron*

Stands with dominant *Elymus repens* (= *Agropyron repens*) are united in this alliance, although they did not form separate clusters in the TWINSPAN classification (Supplement E1). According to their floristic affinity to the *Deschampsion* or *Arrhenatherion*, respectively, we distinguish two provisional communities. They are probably a product of abandonment and/or site deterioration (accumulation of sediments after flooding, eutrophication, burning). *Elymus repens* has creeping rhizomes which enable it to rapidly colonise disturbed sites.

(11.1) *Ranunculus repens-Elymus repens* community

This community seems to have developed from *Deschampsion* meadows, or perhaps in some cases from *Potentillion* communities. It was found both along the Danube and March/Morava River. Similar communities have been described under the names *Rorippo austriacae-Agropyretum repentis* (TÜXEN 1950, Soó 1964), *Ranunculo repentis-Agropyretum repentis* (TÜXEN 1977) and *Ranunculus repens-Elymus repens*-Gesellschaft (DIERSCHKE 2012) and usually were assigned to the *Potentillion anserinae*. In our study area,

the community could be seen as an *Elymus* facies of the *Agropyro-Alopecuretum pratensis*. However, the strong dominance of *Elymus repens* might also justify inclusion in the *Convolvulo-Agropyron*, as preliminarily proposed here.

(11.2) *Dactylis glomerata-Elymus repens* community

This unit has been documented only from the NP “Donau-Auen” so far. It lacks the *Potentillion* and *Molinietalia* species, which differentiate the previous community and, therefore, is floristically close to the *Arrhenatherion*. Due to the high constancy of *Bromus inermis* the inclusion in the *Convolvulo-Agropyron* seems well justified.

(12) *Rubo-Calamagrostion epigeji*

Stands with strong dominance of *Calamagrostis epigejos* are probably a product of late or irregular mowing in combination with a reduced groundwater level. Like the *Elymus repens* communities, they did not form separate clusters in the TWINSpan classification (Supplement E1), but their inclusion in any of the other alliances is unsatisfying. We therefore adopt the alliance *Rubo-Calamagrostion epigeji* to accommodate these communities (DENGLE 1997, DENGLE et al. 2003).

(12.1) *Deschampsia cespitosa-Calamagrostis epigejos* community

This is a rare community in the study area. In the Untere Lobau, it occurs adjacent to the *Calamagrostietum canescentis* on drier, sandy slopes of river oxbows. Other stands near the confluence of March/Morava and Danube have probably developed from *Deschampsion* meadows.

(12.2) *Colchicum autumnale-Calamagrostis epigejos* community

This unit includes the majority of stands dominated by *Calamagrostis epigejos*. They are differentiated from the previous community by species indicating mesic or semi-dry conditions and, therefore, are floristically most similar to the *Ranunculo bulbosi-Arrhenatheretum*, with which they formed a common TWINSpan cluster (Supplement E1). Stands might have developed from *Arrhenatherion* or *Cirsio-Brachypodion* grasslands, or in some cases even from *Deschampsion* where the water level dropped very fast within a few years. *Calamagrostis epigejos* is able to colonise such sites very quickly, outcompeting *Arrhenatherum elatius*, *Bromus erectus* and other grasses. The community has been documented from the Tullnerfeld and the NP “Donau-Auen”.

(13) *Cirsio-Brachypodion*

(13.1) *Colchico-Festucetum rupicolae*

This association occupies sites in the March-Thaya floodplain that are not regularly flooded, but relatively moist in spring due to capillary water transport. The stands have a peculiar combination of *Potentillion*, *Molinietalia*, *Arrhenatheretalia* and *Festuco-Brometea* species, reflecting the fluctuation between moist and dry phases. *Arabidopsis thaliana*, *Luzula campestris* agg. and others indicate slightly acidic conditions.

The community was included in the “*Serratulo-Festucetum commutatae*” (recte: *Serratulo-Festucetum rubrae*) by BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974), even though *Festuca rubra* is completely absent and replaced by *F. rupicola*. ZLINSKÁ (1999) classified it as *Serratulo-Festucetum commutatae festucetosum rupicolae*. In our opinion, the *Serratulo-Festucetum rubrae* does not occur in Austria (or at least not in the study area). Instead, these

semi-dry grasslands correspond to the *Colchico-Festucetum rupicolae* described from Hungary (LENGYEL et al. 2016, see also WILLNER et al. 2019). The assignment to the *Cirsio-Brachypodion* is justified by the dominance of *F. rupicola*.

(13.2) *Festuco rupicolae-Brometum*

Semi-dry grasslands are among the most widespread communities in the Danube floodplain, occupying the higher levels that are not affected by flooding. They are usually dominated by *Bromus erectus*, while *Festuca rupicola* can also reach high cover. We distinguish two associations which differ in their moisture supply. The more mesic one corresponds to the “*Bromus erectus* meadows of the Danube floodplain” (cluster 31) in WILLNER et al. (2013a). According to the revision of WILLNER et al. (2019), they belong to the *Festuco rupicolae-Brometum*. Differential species against the following association are *Arrhenatherum elatius*, *Colchicum autumnale*, *Trifolium pratense* and *Leucanthemum vulgare* agg., among others. The community is widespread along the Danube, but has also been found in two localities along the March/Morava.

(13.3) *Polygalo majoris-Brachypodietum*

This association is similar to the previous one, but occurs on drier soils, as indicated by differential species such as *Potentilla verna* agg. (mostly *P. pusilla*), *Helianthemum nummularium*, *Dorycnium germanicum*, *Euphorbia seguieriana* and *Stipa pennata* (= *S. joannis*). The community is common along the Danube, but seems to be absent from the March-Thaya floodplain. It was included in the “Dry grasslands on base-rich sandy soils” (cluster 21) in WILLNER et al. (2013a). The species composition is somewhat different from the typical *Polygalo majoris-Brachypodietum* on hard limestone and dolomite, e.g. along the eastern margin of the Alps (WAGNER 1941, WILLNER et al. 2013b). We therefore describe a new subassociation for the stands in the Danube floodplain:

Polygalo majoris-Brachypodietum selaginellatosum helveticae subass. nov.

Differential species against the *Polygalo majoris-Brachypodietum typicum*: *Selaginella helvetica*, *Carex liparocarpos*, *Thesium ramosum*, *Calamagrostis epigejos*, *Orchis coriophora*.

Nomenclatural type: see chapter 4.4.

(14) *Festucion valesiacae*

(14.1) *Peucedano oreoselini-Festucetum rupicolae*

The highest and driest sites in the March-Thaya floodplain are occupied by this community, which is dominated by *Festuca rupicola*. In comparison to the *Colchico-Festucetum rupicolae*, *Potentillion* and *Molinietalia* species are completely absent. Important diagnostic species are *Potentilla argentea*, *Rumex acetosella*, *Trifolium arvense*, *Vicia lathyroides* and *Armeria elongata*. The name-giving *Peucedanum oreoselinum* has only a low constancy, but it is also a good differential species against the following association. The sites are sandy ridges with relatively deep and acidic soils.

Inclusion in the *Festucion valesiacae* is preliminary. In the original description, CHYTRÝ et al. (1997) classified this association into the *Koelerio-Phleion*. CHYTRÝ et al. (2007) merged it with an association described from the Central Bohemian Uplands (*Potentillo heptaphyllae-Festucetum rupicolae*) within the same alliance.

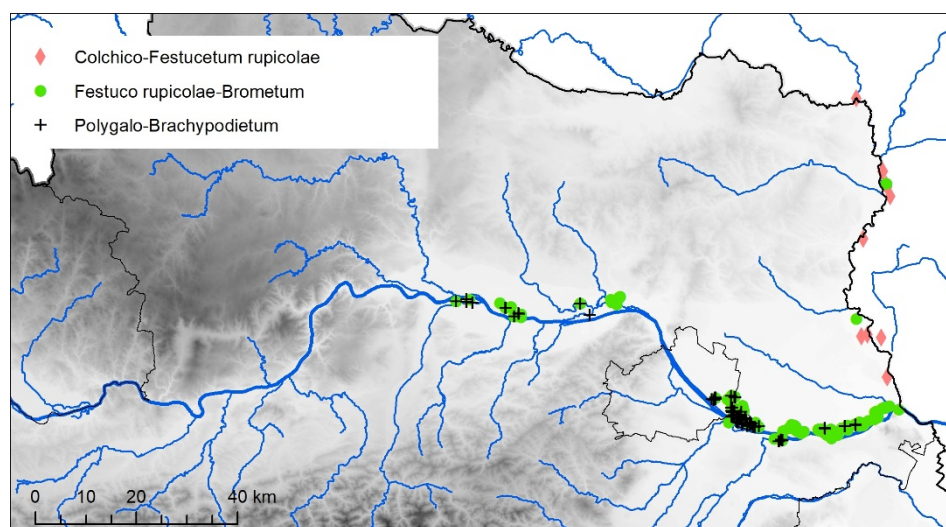


Fig. 6. Distribution of the *Cirsio-Brachypodium* communities in the study area.

Abb. 6. Verbreitungskarte der *Cirsio-Brachypodium*-Gesellschaften im Untersuchungsgebiet.

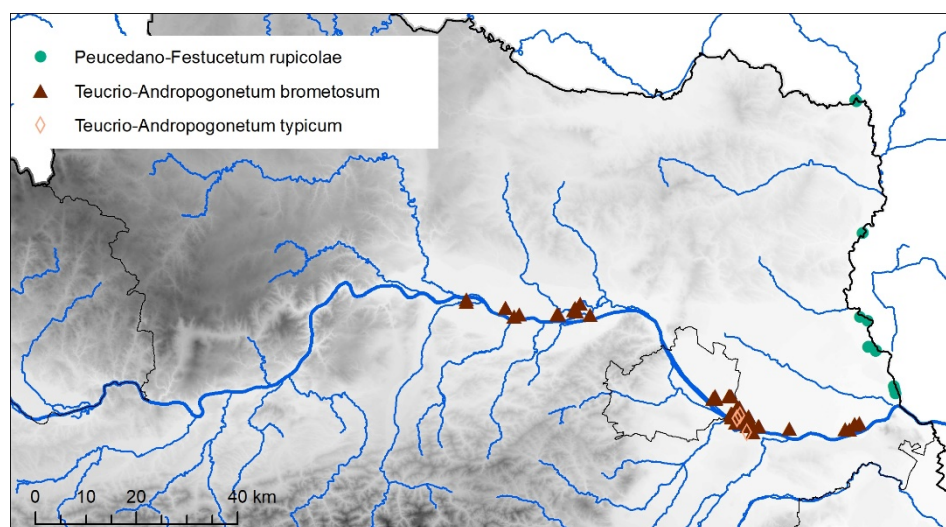


Fig. 7. Distribution of the *Festucion valesiacae* communities in the study area.

Abb. 7. Verbreitungskarte der *Festucion valesiacae*-Gesellschaften im Untersuchungsgebiet.

(14.2) *Teucrio botryos-Andropogonetum*

This association is found on gravel and sand banks (called “Heißländen”) in the Danube floodplain. It corresponds to the “Dry grasslands on alluvial gravel soils” (clusters 17–18) and partly also to the “Dry grasslands on base-rich sandy soils” (cluster 21) in WILLNER et al. (2013a). Two subassociations can be distinguished:

Teucrio botryos-Andropogonetum typicum

The typical subassociation, corresponding to the original description of the association from Untere Lobau (SAUBERER 1942), includes the early successional stages with low cover of the herb layer and many annuals. The dominant grass is *Bothriochloa ischaemum* (= *Andropogon ischaemum*), while *Festuca valesiaca* is present with low cover and constancy. Differential species against the following subassociation are *Melica ciliata*, *Apera interrupta*, *Teucrium botrys* and lichens (*Cladonia* sp.). Today, this subassociation has become very rare, as no new gravel banks are being formed, and it is mostly replaced by grasslands with denser herb layer, dominated by *Bromus erectus* and *Festuca rupicola*, which are transitional towards the *Cirsio-Brachypodion* and belong to the following subassociation.

Teucrio botryos-Andropogonetum brometosum erecti subass. nov.

Differential species against the *Teucrio botryos-Andropogonetum typicum*: *Bromus erectus*, *Festuca rupicola*, *Carex liparocarpus*, *Elymus hispidus*, *Selaginella helvetica*.

Nomenclatural type: see chapter 4.4.

4.4 Type relevés

In the following, we select neo- and lectotypes for the associations described in the study area, and present the type relevés of the new subassociations. WAGNER (1950) only published a synoptic table, but with the help of Paul Heiselmayer (Salzburg) we were able to retrieve the original hand-written relevé table that was the basis for the published one. The following neotypes are taken from this original table. All of Wagner's unpublished relevés have been computerised and are available via the Austrian Vegetation Database and the European Vegetation Archive (see also Supplement E4). The species nomenclature has been adopted according to FISCHER et al. (2008).

(7.3) *Gratiolo-Caricetum nigrae* Wagner 1950 nom. corr.

(original form of the name: "*Gratiola officinalis*-*Carex fusca*-Ass."; WAGNER 1950, p. 10)

Neotypus hoc loco: H. Wagner, ca. 1947, Machland, between Mauthausen and Ardagger, Austria. Vascular plants: *Carex nigra* 4, *Carex disticha* 2, *Gratiola officinalis* 2, *Phragmites australis* 2, *Potentilla reptans* 2, *Ranunculus repens* 2, *Stachys palustris* 2, *Agrostis stolonifera* 1, *Caltha palustris* 1, *Deschampsia cespitosa* 1, *Equisetum palustre* 1, *Galium palustre* 1, *Iris pseudacorus* 1, *Lythrum salicaria* 1, *Mentha aquatica* 1, *Phalaris arundinacea* 1, *Carex acuta* +, *Carex vesicaria* +, *Centaurea jacea* +, *Lysimachia nummularia* +, *Mentha verticillata* +, *Persicaria amphibia* +, *Plantago major* +, *Sanguisorba officinalis* +, *Symphytum officinale* +, *Thalictrum lucidum* +, *Valeriana dioica* +. Bryophytes: *Drepanocladus sendtneri* 3, *Calliergonella cuspidata* 2.

(7.5) *Ophioglosso-Caricetum tomentosae* Wagner 1950 nom. invers.

(original form of the name: "*Carex tomentosa*-*Ophioglossum vulgatum*-Assoziation"; WAGNER 1950, p. 11)

Neotypus hoc loco: H. Wagner, ca. 1947, Machland, between Mauthausen and Ardagger, Austria. Vascular plants: *Carex tomentosa* 3, *Deschampsia cespitosa* 3, *Sanguisorba officinalis* 3, *Colchicum autumnale* 2, *Festuca rubra* 2, *Lysimachia nummularia* 2, *Ophioglossum vulgatum* 2, *Poa pratensis* 2, *Potentilla reptans* 2, *Prunella vulgaris* 2, *Ranunculus repens* 2, *Taraxacum officinale* agg. 2, *Agrostis stolonifera* 1, *Elymus repens* 1, *Festuca*

pratensis 1, *Symphytum officinale* 1, *Trifolium pratense* 1, *Trifolium repens* 1, *Viola stagnina* 1, *Bellis perennis* +, *Cardamine pratensis* +, *Carex caryophylla* +, *Carex hirta* +, *Centaurea jacea* +, *Equisetum arvense* +, *Galium verum* +, *Glechoma hederacea* +, *Lotus corniculatus* +, *Pimpinella major* +, *Ranunculus acris* +, *Silaum silaus* +, *Vicia cracca* +. Bryophytes: *Thuidium delicatulum* 3, *Calliergonella cuspidata* 2, *Eurhynchium speciosum* 1, *Abietinella abietina* +, *Brachythecium mildeanum* +, *Drepanocladus sendtneri* +.

(13.3) *Polygalo majoris-Brachypodietum* Wagner 1941

Polygalo majoris-Brachypodietum selaginellatosum helveticae subass. nov. hoc loco

Holotypus: L. Schratt-Ehrendorfer, 5 June 1996, Untere Lobau, Vienna, Austria (16.55239°E, 48.15923°N), plot size 30 m², cover herb layer: 100%, field number: F069, Turboveg ID: 317606. Vascular plants: *Bromus erectus* 5, *Dorycnium germanicum* 2b, *Festuca rupicola* 2a, *Teucrium chamaedrys* 2a, *Dianthus pontederiae* 1, *Euphorbia cyparissias* 1, *Koeleria macrantha* 1, *Selaginella helvetica* 1, *Achillea collina* +, *Arenaria serpyllifolia* +, *Brachypodium pinnatum* +, *Carex caryophylla* +, *Dactylis glomerata* +, *Elymus hispidus* +, *Eryngium campestre* +, *Galium verum* +, *Helianthemum ovatum* +, *Hieracium piloselloides* +, *Ligustrum vulgare* +, *Linum catharticum* +, *Orchis coriophora* +, *Orchis militaris* +, *Orchis ustulata* +, *Polygala comosa* +, *Potentilla pusilla* +, *Rhinanthus minor* +, *Scabiosa ochroleuca* +, *Securigera varia* +, *Silene vulgaris* +, *Stipa joannis* +, *Thymus kosteleckyanus* +.

(14.2) *Teucrio botryos-Andropogonetum* Sauberer et Wagner in Sauberer 1942 nom. invers. (original form of the name: “*Andropogoneto-Teucrietum botrydis*”; SAUBERER 1942, p. 25)

Lectotypus hoc loco: SAUBERER 1942, Tab. 8, Aufnahme 2.

Since the original publication might not be easily available to everyone, we provide here the type relevé in full (species nomenclature updated): A. Sauberer, 1936, Untere Lobau, Austria, on gravel, total vegetation cover 70%, plot size 4 m². Vascular plants: *Bothriochloa ischaemum* (orig. *Andropogon ischaemum*) 3, *Erophila verna* 1, *Teucrium chamaedrys* 1, *Asperula cynanchica* +, *Cerastium pumilum* +, *Cruciata pedemontana* +, *Helianthemum ovatum* +, *Hypericum perforatum* +, *Melica ciliata* +, *Petrorhagia saxifraga* +, *Sanguisorba minor* +, *Saxifraga tridactylites* +, *Scabiosa columbaria* (more likely *S. triandra*) +, *Sedum sexangulare* +, *Teucrium botrys* +, *Veronica arvensis* +. Bryophytes: *Tortella inclinata* 1, *Abietinella abietina* +, *Racomitrium canescens* +, *Tortula ruralis* +. Lichens: *Cladonia pyxidata* +, *Toninia sedifolia* +.

Teucrio botryos-Andropogonetum brometosum erecti subass. nov. hoc loco

Holotypus: L. Schratt-Ehrendorfer, 2 June 1996, Fuchshäufel, Obere Lobau, Vienna, Austria (16.48239°E, 48.19645°N), plot size 18 m², cover herb layer: 97%, cover moss layer: 3%, field number: F050, Turboveg ID: 317587. Vascular plants: *Koeleria macrantha* 3, *Carex liparocarpos* 2b, *Euphorbia cyparissias* 2b, *Euphorbia seguieriana* 2b, *Festuca rupicola* 2b, *Thymus kosteleckyanus* 2b, *Dorycnium germanicum* 2a, *Acinos arvensis* 1, *Bromus erectus* 1, *Eryngium campestre* 1, *Helianthemum ovatum* 1, *Orchis coriophora* 1, *Orchis morio* 1, *Potentilla pusilla* 1, *Selaginella helvetica* 1, *Teucrium chamaedrys* 1, *Arabis hirsuta* +, *Arenaria serpyllifolia* +, *Cerastium pumilum* +, *Elymus hispidus* +, *Hypericum perforatum* +, *Rhinanthus minor* +, *Stipa joannis* +, *Thesium ramosum* +, *Verbascum lychnitis* +, *Veronica arvensis* +, *Veronica prostrata* +.

5. Conclusions

This study presents the first comprehensive overview of the grassland diversity in the Danube and March-Thaya floodplain of Austria, including also the Slovak side of the March/Morava River. It is an important piece in the syntaxonomic revision of the Pannonian grasslands of Austria, and we expect that it will become a valuable tool for mapping and monitoring in nature conservation.

In comparison to previous works, in particular those of BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974), ELLMAUER & MUCINA (1993) and MUCINA & KOLBEK (1993), our revision includes the following main changes: (1) we accept the *Ranunculetum repentis* as a floristically well-defined association within the *Potentillion anserinae*; (2) we merge the four *Cnidion* (*Deschampsion*) associations of the March-Thaya floodplain (*Lathyro palustris-Gratioletum*, *Gratiolo-Caricetum suzae*, *Cnidio-Violetum pumilae*, *Serratulo-Plantaginetum altissimae*) into two (*Gratiolo-Caricetum suzae* and *Cnidio-Violetum pumilae*); (3) the *Ophioglossocaricetum tomentosae* is revealed as a geographical vicariant of the *Cnidio-Violetum pumilae*, replacing the latter along the Danube; (4) the “*Silaetum pratensis*” and “*Serratulo-Festucetum commutatae*”, previously included in the *Molinion*, are transferred to the *Cnidio-Violetum pumilae* (*Deschampsion*) and *Colchico-Festucetum rupicolae* (*Cirsio-Brachypodion*), respectively; (5) the *Agropyro-Alopecuretum pratensis* is newly recognised for Austria; (6) *Ranunculo bulbosi-Arrhenatheretum*, *Pastinaco-Arrhenatheretum*, *Festuco rupicolae-Brometum* (= *Onobrychido-Brometum* sensu MUCINA & KOLBEK 1993) and *Polygalo-Brachypodietum* (with a new subass. *selaginellitosum helveticae*) are confirmed as widespread grassland types in the Danube floodplain; (7) the *Teucrio botryos-Andropogonetum* (*Festucion valesiaca*) is split into two subassociations. Moreover, we document four grassland types dominated by *Elymus repens* and *Calamagrostis epigejos* which have been neglected by all previous authors. The syntaxonomic status of these communities needs further study.

Given the regional scope of our study, the alliance assignment of some associations/communities is preliminary and can only be clarified by a broad-scale comparison. However, we are confident that the basic units presented here are floristically and ecologically well-defined and will hold in future revisions using data sets from larger geographical areas.

Erweiterte deutsche Zusammenfassung

Einleitung – Die Flussniederungen der Donau, March und Thaya stellen eines der bedeutendsten Wiesengebiete im Osten Österreichs dar. Gemeinsam mit dem slowakischen Anteil der March-Auen ist es ein Feuchtgebiet von internationaler Bedeutung, beherbergt neben Feuchtwiesen aber auch Frischwiesen und Trockenrasen (LAZOWSKI 1997, ŠEJFER & STANOVÁ 1999, RUŽIČKOVÁ et al. 2003, SUSKE et al. 2003). Pflanzensoziologische Studien beschränkten sich bislang auf Teilgebiete oder spezielle Gesellschaften (z. B. SAUBERER 1942, WAGNER 1950, BALÁTOVÁ-TULÁČKOVÁ & HÜBL 1974, ESSL 1999, ROTTER 1999 in Österreich; ŠMARD 1951, BALÁTOVÁ-TULÁČKOVÁ 1976, ZLINSKÁ 1999 in der Slowakei), während ein zusammenfassender Vergleich fehlte. In diesem dritten Teil der Serie „Syntaxonomische Revision der pannonischen Rasengesellschaften in Österreich“ (vgl. WILLNER et al. 2013a, b) geben wir zum ersten Mal einen umfassenden Überblick über die Röhrichte, Großseggenrieder, Feucht- und Frischwiesen und Trockenrasen der Donau- und March-Thaya-Auen.

Untersuchungsgebiet – Das untersuchte Gebiet lässt sich in vier Teilgebiete untergliedern (Abb. 1): (1) Machland. Diese an der Grenze zwischen Ober- und Niederösterreich gelegene Niederung befindet sich biogeographisch schon außerhalb des pannonischen Raums. Sie wurde hauptsächlich

wegen der monographischen Studie von WAGNER (1950) inkludiert, welche die Erstbeschreibung einiger Wiesengesellschaften enthält. (2) Tullnerfeld, zwischen Wachau und Wiener Pforte gelegen. (3) Donau-Auen östlich von Wien (seit 1996 Nationalpark „Donau-Auen“). (4) March-Thaya-Auen. Während die Donau durch karbonatische Sedimente und ein alpines Abflussregime (mit Hochwässern besonders während der alpinen, sommerlichen Schneeschmelze) gekennzeichnet ist, führt die March fast ausschließlich silikatisches Material mit sich und erreicht den Höchststand meist im zeitigen Frühjahr. Die Seehöhe im Untersuchungsgebiet beträgt zwischen 240 m ü. Adria im Machland und 140 m ü. Adria am Zusammenfluss von March und Donau. Die mittlere Jahrestemperatur zeigt nur geringe Variation (9,5–10 °C), während die Jahresniederschläge einen deutlichen West-Ost-Gradienten aufweisen, mit ca. 800 mm im Machland, 500–600 mm im pannonischen Abschnitt der Donau und lediglich 460 mm am Zusammenfluss von March und Thaya (ZAMG 2012).

Die Donauregulierung im 19. Jahrhundert und die Regulierung der March und Thaya im 20. Jahrhundert bedeuteten schwerwiegende Eingriffe in die Gewässerdynamik, welche auch durch die Renaturierungsbemühungen der letzten Jahrzehnte nur zum kleinen Teil rückgängig gemacht werden konnten. So sind Teile des Gebiets durch Dämme von den jährlichen Überflutungen abgeschnitten, und neue Flächen mit Pioniervegetation entstehen nur in sehr beschränktem Ausmaß. Die Ausdehnung der Wiesen hat seit den Regulierungen stark abgenommen. Im Nationalpark „Donau-Auen“ machen Wiesen heute ca. 10 % der Fläche aus. In den österreichischen March-Thaya-Auen liegt der Wiesenanteil bei 9 %, auf der slowakischen Seite hingegen bei 22 %. Manche Wiesen wurden in der Vergangenheit durch Kunstdünger intensiviert, an der March wurde ein Großteil der Wiesen in Ackerland umgewandelt. Die meisten Wiesen werden zweimal jährlich gemäht. An der March wurde an einigen Stellen wieder eine traditionelle Beweidung eingeführt. Im Nationalpark „Donau-Auen“ stellt gegenwärtig die Eintiefung der Donau, bedingt durch fehlende Sedimentzufuhr aufgrund der zahlreichen stromaufwärts gelegenen Kraftwerke, und die daraus resultierende Austrocknung das größte Problem dar.

Methoden – In einem ersten Schritt wurden sämtliche Vegetationsaufnahmen der Klassen *Festuco-Brometea*, *Molinio-Arrhenatheretea* und *Phragmito-Magnocaricetea* aus dem Untersuchungsgebiet recherchiert und in eine Datenbank eingepflegt. Von *Elymus repens* und *Calamagrostis epigejos* dominierte Bestände wurden ebenfalls inkludiert. Für die Auswertung wurden Aufnahmen mit Flächengrößen < 4 m² oder > 40 m² ausgeschlossen, Aufnahmen ohne Angabe der Flächengröße (403 = 19 %) aber behalten. Damit umfasste unser Datensatz 2119 Aufnahmen (davon 355 aus der Slowakei; Abb. 1). Die Taxonomie und Nomenklatur der Arten folgt FISCHER et al. (2008). Moose und Flechten wurden exkludiert, da sie nur in einem kleinen Teil der Aufnahmen erfasst sind. Der gesamte Datensatz wurde zunächst mit TWINSPAN (HILL 1979) klassifiziert und die resultierenden Gruppen wurden syntaxonomisch interpretiert. Jeder Cluster wurde provisorisch einem Verband (und, wenn möglich, auch einer Assoziation) zugeordnet. Die endgültige Klassifikation der Aufnahmen erfolgte manuell und hierarchisch, beginnend mit der Klasse, entsprechend der Deckungssumme der diagnostischen Arten (siehe WILLNER 2011 und WILLNER et al. 2019 für eine ausführliche Darstellung der Methode). Die diagnostischen Arten der Klassen, Ordnungen und Verbände wurden weitgehend von MUCINA et al. (1993) und GRABHERR & MUCINA (1993) übernommen. Im Zweifelsfall (d. h., wenn die Deckungssummen von zwei oder mehr Syntaxa nahe beieinander lagen) wurde die Position im TWINSPAN-Ergebnis beibehalten. Bei den Assoziationen der *Phragmito-Magnocaricetea* folgten wir größtenteils LANDUCCI et al. (2020). In den übrigen Klassen wurden innerhalb jedes Verbands separate TWINSPAN-Klassifikationen durchgeführt, um die Assoziationen genauer abzugrenzen und deren diagnostische Arten zu eruieren.

Ergebnisse und Diskussion – In der TWINSPAN-Klassifikation zeigte sich ein klarer Gradient von Röhrichten und Großseggenriedern (*Phragmito-Magnocaricetea*; Cluster 1–28) über Feucht- und Frischwiesen (*Molinio-Arrhenatheretea*; Cluster 29–44) zu Trockenrasen (*Festuco-Brometea*; Cluster 45–60). Allerdings kamen die Flutrasen (*Potentillion anserinae*) und der feuchtere Teil der Überschwemmungswiesen (*Deschampsion cespitosae* p.p.) innerhalb der *Phragmito-Magnocaricetea* zu liegen. Insgesamt konnten wir 14 Verbände mit 42 Assoziationen und fünf ranglosen Gesellschaften

unterscheiden (siehe syntaxonomischen Überblick in Kap. 4.2). Ein Vergleich zwischen TWINSpan-Ergebnis und finaler Zuordnung der Aufnahmen ist in Anhang E1 wiedergegeben. Beilage S1 stellt eine gekürzte Stetigkeitstabelle dar (für die vollständige Version, siehe Anhang E2).

Im Vergleich zu früheren Übersichten, insbesondere jenen von BALÁTOVÁ-TULÁČKOVÁ & HÜBL (1974), ELLMAUER & MUCINA (1993) und MUCINA & KOLBEK (1993), weist unsere Revision einige Neuerungen auf. (1) Das *Ranunculetum repentis* wird als floristisch gut definierte Assoziation des *Potentillion anserinae* anerkannt. (2) Die vier in den March-Thaya-Auen unterschiedenen *Deschampsion-* (bzw. *Cnidion-*) Assoziationen *Lathyro palustris-Gratioletum*, *Gratiolo-Caricetum suzae*, *Cnidio-Violetum pumilae* und *Serratulo-Plantaginetum altissimae* werden auf zwei, entlang des Feuchtegradienten klar getrennte Assoziationen reduziert (feuchter, länger überschwemmt: *Gratiolo-Caricetum suzae*; trockener, kürzer überschwemmt: *Cnidio-Violetum pumilae*). (3) Das *Ophioglossa-Caricetum tomentosae* ersetzt das *Cnidio-Violetum pumilae* entlang der Donau an standörtlich analogen Standorten (Abb. 5). (4) Die bisher im *Molinion* untergebrachten Einheiten „*Silaetum pratensis*“ und „*Serratulo-Festucetum commutatae*“ werden ins *Cnidio-Violetum pumilae* (*Deschampsion*) bzw. *Colchico-Festucetum rupicolae* (*Cirsio-Brachypodion*) überstellt. (5) Das *Agropyro-Alopecuretum pratensis* wird erstmals für Österreich nachgewiesen. Es handelt sich um Fuchsschwanz-Wiesen, denen *Deschampsion-* und *Molinion*-Arten weitgehend fehlen. Sie dürften einerseits durch Intensivierung, andererseits aber auch durch natürliche Eutrophierung an häufig überfluteten Standorten bedingt sein. (6) *Ranunculo bulbosi-Arrhenatheretum*, *Pastinaco-Arrhenatheretum*, *Festuco rupicolae-Brometum* (= *Onobrychido-Brometum* sensu MUCINA & KOLBEK 1993) und *Polygalo-Brachypodietum* (in einer neuen Subass. *selaginellotum helveticae*) werden erstmals als in den Donau-Auen weitverbreitete Wiesengesellschaften dokumentiert. (7) Die Trockenrasen der Heißländer (*Teucrio botryos-Andropogonetum*, Verband *Festucion valesiacae*) werden in zwei Subassoziationen untergliedert, welche im Wesentlichen unterschiedlich weit fortgeschrittenen Sukzessionsstadien entsprechen (Subass. *typicum*: Pionierstadien, Subass. *brometosum erecti*: reifere, zu Halbtrockenrasen überleitende Stadien). Darüber hinaus dokumentieren wir vier bislang kaum beachtete, von *Elymus repens* bzw. *Calamagrostis epigejos* dominierte Wiesengesellschaften, deren syntaxonomischer Status vorläufig offenbleiben muss. *Elymus repens* ist wohl in erster Linie ein Störungszeiger (Überlandung, Brand), während *Calamagrostis epigejos* durch späte oder ausbleibende Mahd in Kombination mit sinkendem Grundwasserspiegel gefördert wird.

Schlussfolgerungen – Mit der vorliegenden Studie liegt erstmals ein umfassender und grenzüberschreitender Überblick über die Vielfalt der Rasengesellschaften in den Donau- und March-Thaya-Auen in Ost-Österreich und der West-Slowakei vor. Es handelt sich nicht nur um einen wichtigen Mosaikstein in der syntaxonomischen Revision der pannonischen Rasengesellschaften Österreichs, sondern auch um eine wesentliche Grundlage für künftige Kartierungen und künftiges Monitoring im Naturschutz.

Author contributions

W.W. conceived the idea of this study and led the data analysis and writing. M.S., N.S., K.H.V., I.Š., T.Z.-K. and L.S.-E. contributed a substantial part of the relevé data, G.K. prepared the data set and assisted with the data analysis. All co-authors contributed to the writing and revised the manuscript.

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Supplements

Supplement S1. Shortened synoptic table.

Beilage S1. Gekürzte synoptische Tabelle.

Additional supporting information may be found in the online version of this article.

Zusätzliche unterstützende Information ist in der Online-Version dieses Artikels zu finden.

Supplement E1. Comparison of TWINSpan result and supervised classification of the relevés.

Anhang E1. Vergleich von TWINSpan-Ergebnis und nachbearbeiteter Klassifikation der Aufnahmen.

Supplement E2. Synoptic table (full version).

Anhang E2. Synoptische Tabelle (ungekürzte Version).

Supplement E3. Distribution maps of the associations and rankless communities.

Anhang E3. Verbreitungskarten der Assoziationen und ranglosen Gesellschaften.

Supplement E4. Data sources.

Anhang E4. Herkunft der Aufnahmen.

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Supplement S1. Shortened synoptic table. Values are percentage constancy. Frames indicate character species of associations and higher syntaxa, grey shading differential and character species of associations (and association groups) used for the assignment of relevés within alliances. Bold values: species has an average cover >20%. Columns with less than 5 relevés are omitted. For the full version of the table, see Supplement E2.

Beilage S1. Gekürzte synoptische Tabelle. Die Werte stellen die Stetigkeit in % dar. Rahmen: Charakterarten von Assoziationen und höheren Syntaxa. Graue Schattierung: Charakter- und Differentialarten der Assoziationen (und Assoziationsgruppen), welche für die Zuordnung der Aufnahmen innerhalb der Verbände verwendet wurden. Fette Stetigkeitswerte zeigen an, dass die Art in dieser Einheit > 20 % mittlere Deckung aufweist. Spalten mit weniger als 5 Aufnahmen sind nicht dargestellt. Für die vollständige Tabelle siehe Anhang E2.

Alliance	1	1	1	1	1	1	2	3	3	3	3	3	3	3	5	5	5	5	6	6	6	6	7	7	7	7	7	8	9	9	10	11	11	12	12	13	13	13	14	14	14
Association	1	2	4	5	6	9	1	1	2	3	5	6	7	8	1	2	3	4	1	2	3	4	1	2	4	5	6	1	1	2	1	1	2	1	2	1	2	3	1	2	3
Number of relevés	15	13	96	31	10	6	139	89	9	22	56	17	71	62	7	35	6	11	71	79	5	32	66	15	160	60	62	61	118	111	8	26	15	15	36	20	132	142	17	139	14
Phragmition																																									
Schoenoplectus lacustris	100	46	1	3	20	.	.	8	.	9	11	.	37	.	.	.	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Typha angustifolia	.	100	.	.	.	.	.	4	.	.	4	.	6	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phragmites australis	13	46	100	13	40	17	32	18	22	55	29	59	62	89	.	3	.	13	15	.	3	12	7	7	10	10	36	.	1	.	12	.	20	3	.	.	.	.	.	.	
Glyceria maxima	53	.	2	100	.	17	14	33	33	9	32	.	3	.	29	29	33	36	.	3	.	3	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sparganium erectum	20	15	.	19	100	.	4	.	.	.	13	.	4	.	14	14	17	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bolboschoenus cf. laticarpus	.	.	.	.	.	100	.	.	.	.	.	1	.	.	.	3	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phalaridion																																									
Phalaris arundinacea	7	.	34	45	30	83	100	61	67	41	48	82	39	39	29	20	17	18	77	61	40	6	76	27	29	12	16	.	.	3	.	38	7	20	.	.	.	.	.	.	.
Magnocaricion																																									
Carex acuta	13	8	20	39	10	17	32	100	100	59	34	18	31	21	.	14	.	45	27	35	.	.	52	20	31	10	5	13	.	1	.	12	.	.	.	.	.	.	.	.	
Carex vesicaria	7	8	10	13	.	10	37	100	23	21	6	37	.	.	6	.	.	11	20	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Carex disticha	.	.	.	3	.	4	20	33	100	7	.	24	24	.	.	.	.	20	.	.	.	21	13	2	2	.	5	.	.	.	20	.	.	.	.	.	.	.	.		
Carex vulpina agg.	.	.	1	10	.	4	16	.	5	13	.	.	.	.	3	.	.	1	23	40	.	56	.	13	.	2	2	.	.	8	.	7	.	.	.	.	.	.	.		
Carex riparia	.	8	34	32	20	17	14	19	22	36	100	24	21	32	.	3	.	4	14	.	.	11	20	3	5	.	.	.	.	.	7	.	.	.	1	.	.	.	.		
Carex acutiformis	.	.	17	6	10	12	8	.	27	9	100	3	40	.	.	.	.	13	5	.	3	13	8	8	5	16	.	.	8	.	13	6	.	.	.	.	.	.	.		
Carex elata	.	15	16	3	20	9	12	22	50	9	29	100	81	.	.	9	1	4	.	.	2	.	1	.	2	15	.	.	.	.	7	.	.	.	.	.	.	.	.		
Calamagrostis canescens	.	8	4	.	.	4	2	.	18	5	24	46	100	.	.	.	.	9	.	.	.	.	.	2	.	.	.	.	.	.	7	.	.	.	.	.	.	.	.		
Iris pseudacorus	27	.	28	48	70	17	35	73	67	68	70	35	61	34	.	6	50	18	3	35	.	3	45	27	6	10	10	2	.	8	.	7	.	.	.	.	.	.	.		
Poa palustris	.	.	5	3	.	1	18	34	22	55	5	24	18	23	.	11	.	9	1	49	.	.	53	93	7	7	3	7	.	54	13	27	.	.	.	.	.	.	.		
Lathyrus palustris	.	.	.	.	.	1	15	.	32	2	.	6	.	.	.	.	.	.	.	.	.	5	.	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	.		
Eleocharito-Sagittarion																																									
Sagittaria sagittifolia	7	.	.	3	10	.	1	.	.	.	2	.	1	.	86	3	17	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Sparganium emersum	.	.	.	.	.	1	.	.	.	.	.	.	.	.	43	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
Rorippa amphibia	47	.	10	32	50	83	14	11	78	.	11	10	6	.	14	97	67	64	38	3	.	9	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
Oenanthe aquatica	27	.	6	19	40	33	1	9	33	.	11	.	.	.	57	57	17	45	3	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
Butomus umbellatus	20	.	.	29	50	50	1	4	22	.	9	.	.	.	29	14	100	18	1	.	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		
Eleocharis palustris agg.	.	.	.	3	10	67	9	27	22	27	7	.	15	5	.	11	50	100	1	23	40	.	30	20	10	2	.	2	.	8	.	7	.	.	.	.	.	.	.		
Phragmito-Magnocaricetea																																									
Galium palustre agg.	27	8	30	42	10	17	35	76	89	77	39	59	86	85	.	20	.	18	4	57	.	.	45	13	8	13	.	25	.	.	13	8	.	40	3	.	.	.	.		
Mentha aquatica	.	.	22	3	.	17	15	17	22	18	13	41	38	47	43	6	9	3	13	.	.	.	7	.	3	.	.	.	25	.	.	13	3	.	.	.	.	.	.		
Alisma plantago-aquatica	.	.	3	16	40	50	8	21	56	5	11	.	15	3	29	29	17	27	1	6	20	.	3	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.			
Sium latifolium	20	.	1	26	20	.	7	28	33	32	9	.	13	.	3	9	.	9	.	3	.	5	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.			
Rumex hydrolapathum	.	.	3	3	20	.	8	8	44	5	7	.	21	2	14	.	.	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.			
Alisma lanceolatum	.	.	.	6	.	17	2	1	.	.	.	.	3	.	14	6	67	27	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.			
Scheuchzerio-Caricetea nigrae																																									
Carex panicea	.	.	1	.	.	.	.	7	.	14	.	.	6	32	.	.	.	.	8	.	3	.	.	.	5	25	.	92	1	.	.	4	7	40	3	5	2	.	.	.	
Valeriana dioica	.	.	1	.	.	.	.	6	.	14	.	4	37	.	.	.	.	1	.	.	.	.	.	.	.	.	.	57	.	.	.	7	.	.	.	.	.	.			
Carex flava agg.	.	.	2	.	.	.	.																																		

Supplement E1. Comparison of TWINSpan result (columns) and supervised classification of relevés (rows). Values are number of relevés. The frames show the main position of the communities in the TWINSpan classification.

Anhang E1. Vergleich von TWINSPAN-Ergebnis (Spalten) und nachbearbeiteter Klassifikation der Aufnahmen (Zeilen). Die Werte geben die Zahl der Aufnahmen an. Die Rahmen veranschaulichen den Schwerpunkt jeder Gesellschaft in der TWINSPAN-Klassifikation.

[illegible]

Supplement E2. Synoptic table. Values are percentage constancy. Grey shading: diagnostic (differential and character) species of associations; frames: character species of associations, alliances and orders; bold frames: character species of classes; bold values: species has an average cover >20%; italics: column has less than 5 relevés.

Anhang E2. Synoptische Tabelle. Die Werte stellen die Stetigkeit in % dar. Graue Schattierung: Charakter- und Differentialarten der Assoziationen; Rahmen: Charakterarten von Assoziationen, Verbänden und Ordnungen; fette Rahmen: Klassen-Charakterarten. Fette Stetigkeitswerte zeigen an, dass die Art in dieser Einheit > 20 % mittlere Deckung aufweist. Kursive Stetigkeitswerte bedeuten, dass die Spalte weniger als 5 Aufnahmen enthält.

[illegible]

[illegible]

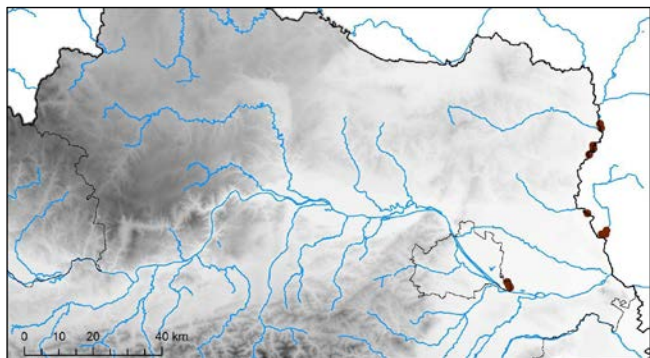
Supplement E3. Distribution maps of the associations and rankless communities.

Anhang E3. Verbreitungskarten der Assoziationen und ranglosen Gesellschaften.

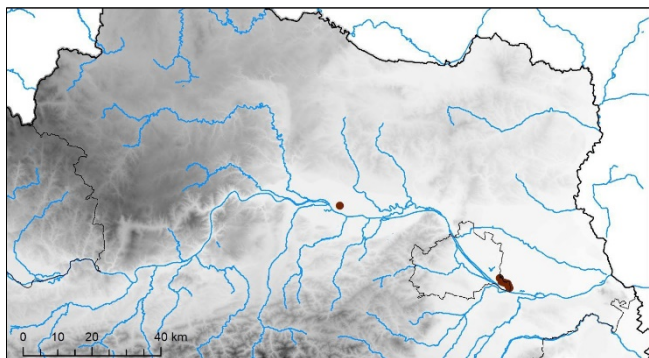
Phragmito-Magnocaricetea

Phragmition

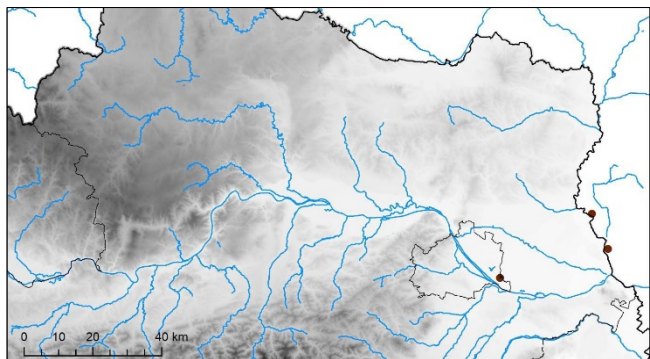
1.1 *Scirpetum lacustris*



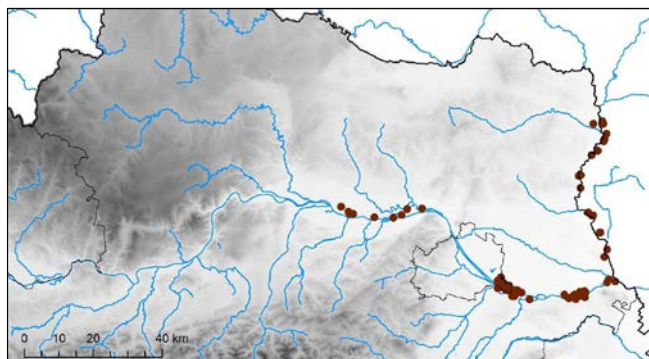
1.2 *Typhetum angustifoliae*



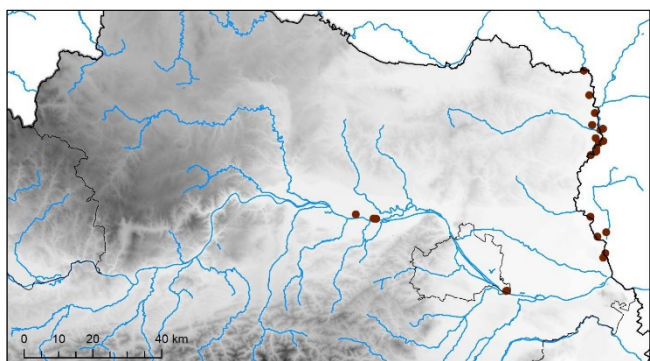
1.3 *Typhetum latifoliae*



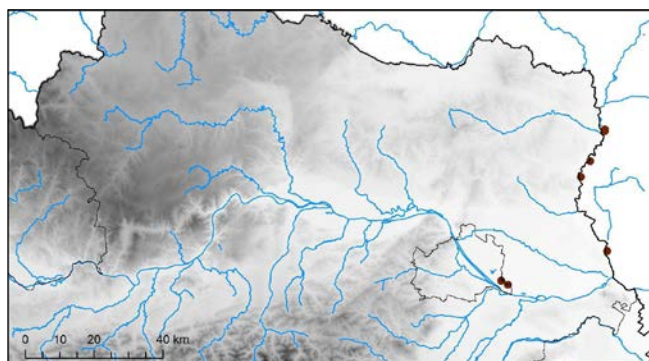
1.4 *Phragmitetum australis*



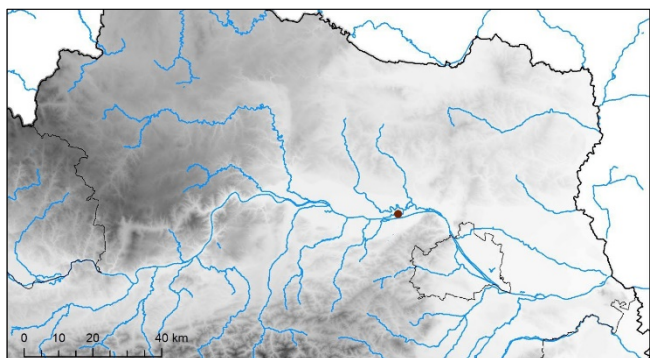
1.5 *Glycerietum maximae*



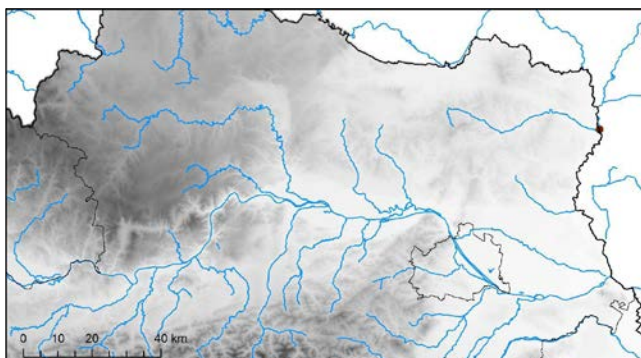
1.6 *Sparganietum erecti*



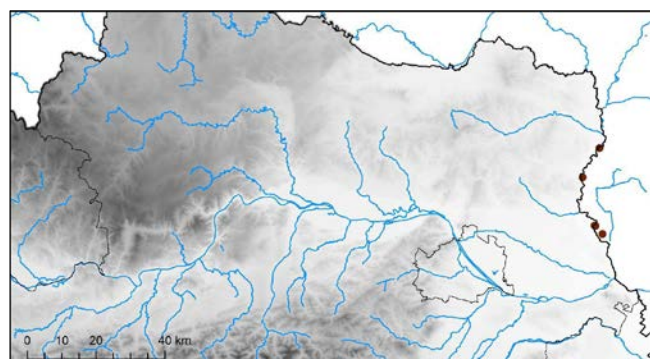
1.7 *Equisetum fluvialis*



1.8 *Acoretum calami*

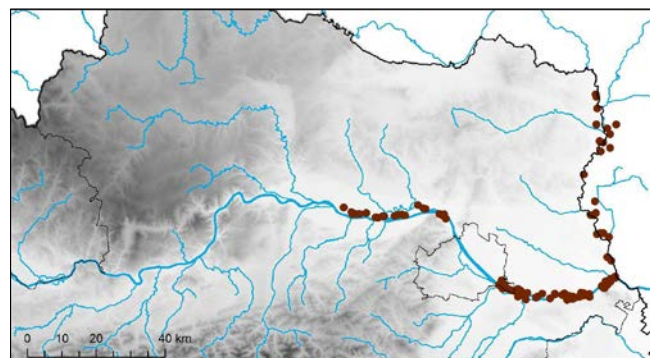


1.9 *Phalarido-Bolboschoenetum laticarpi*



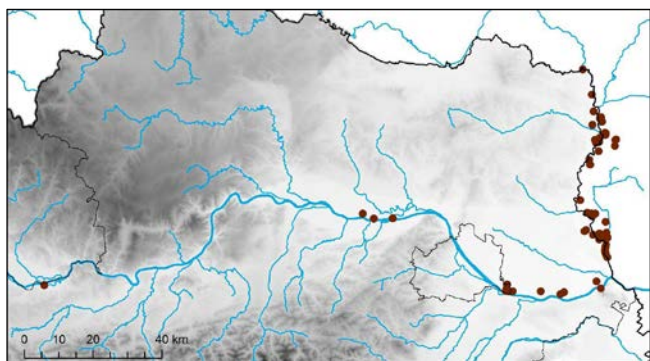
Phalaridion

2.1 *Phalaridetum arundinacei*

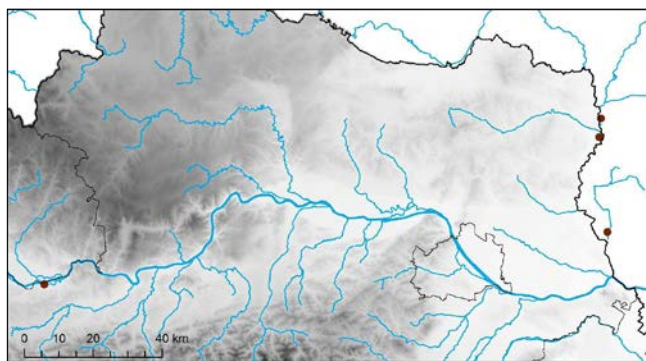


Magnocaricion

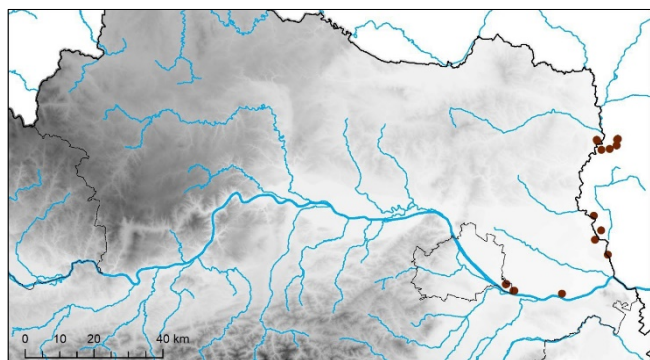
3.1 *Caricetum acutae*



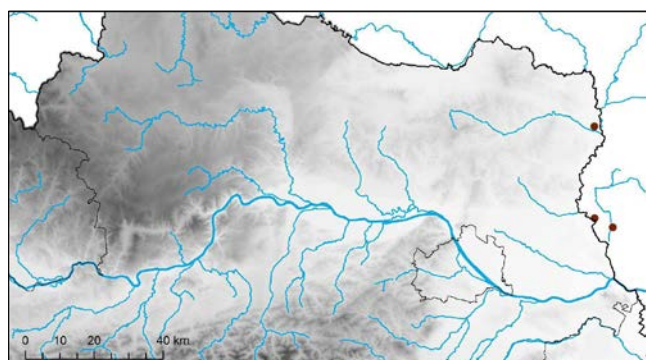
3.2 *Caricetum vesicariae*



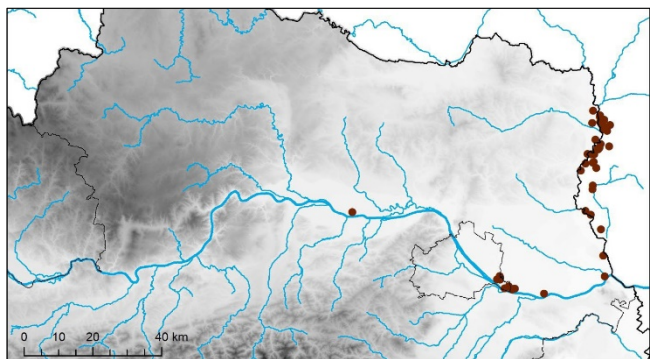
3.3 *Caricetum distichae*



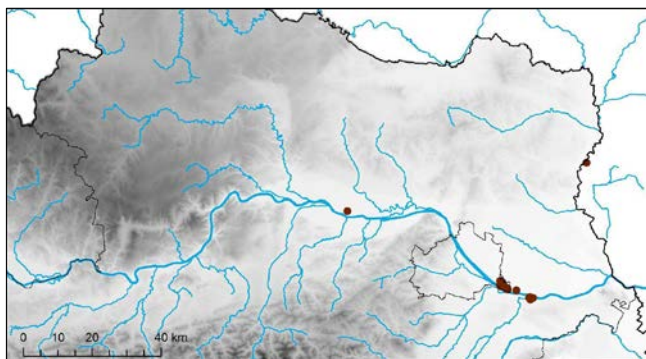
3.4 *Caricetum vulpariae*



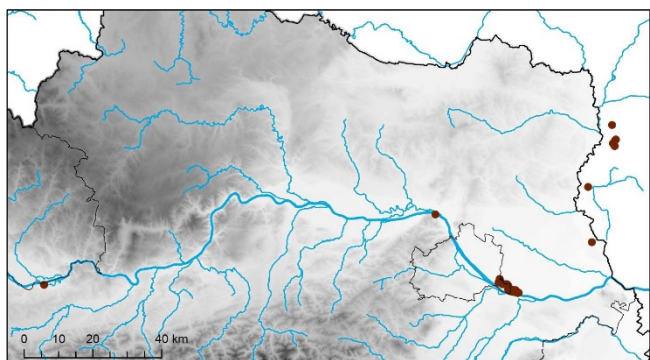
3.5 *Caricetum ripariae*



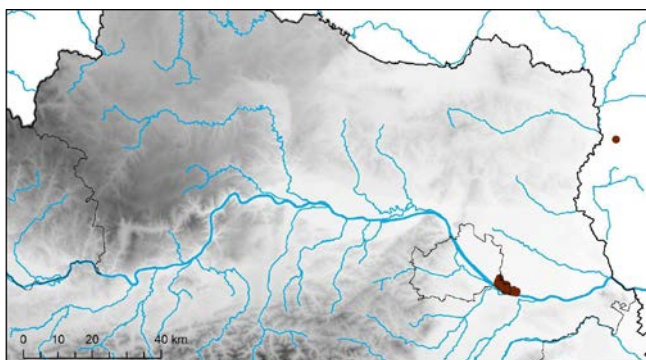
3.6 *Caricetum acutiformis*



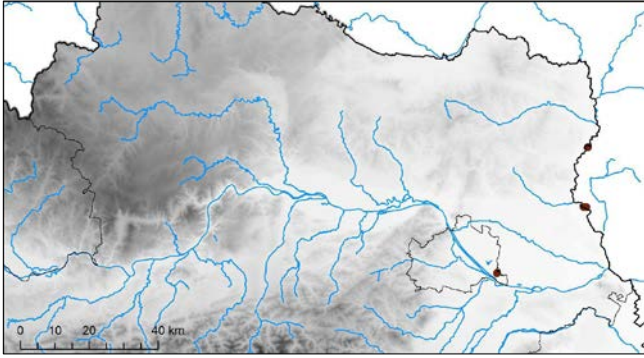
3.7 *Caricetum elatae*



3.8 *Calamagrostietum canescentis*

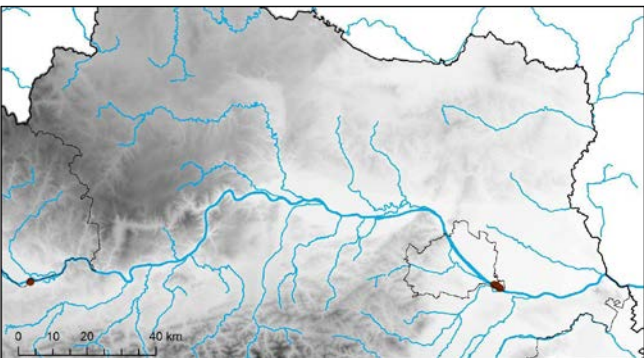


3.9 *Iridetum pseudacori*



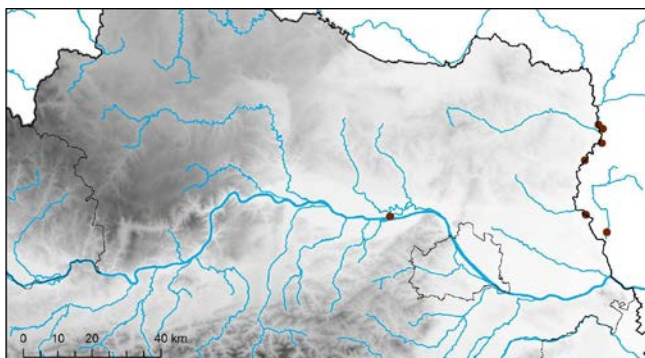
Glycerio-Sparganion

4.1 *Glycerietum fluitantis*

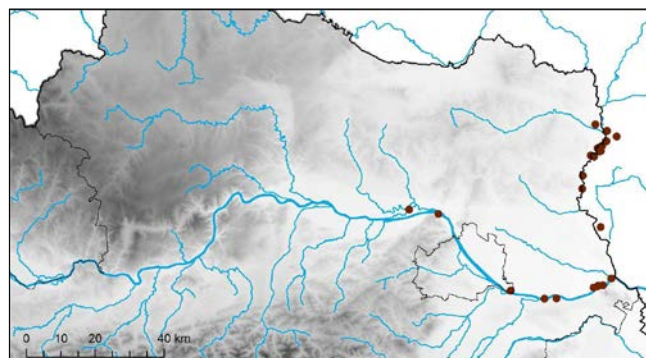


Eleocharito-Sagittarion

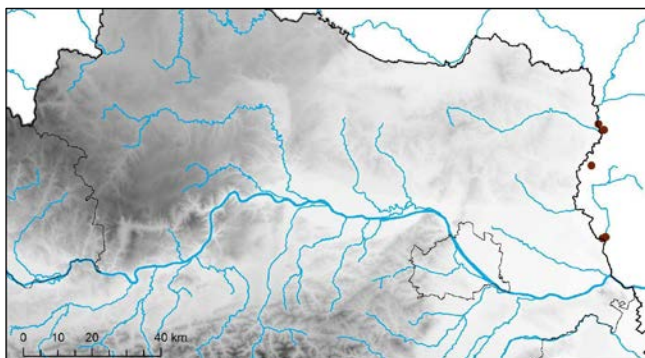
5.1 *Sagittario-Sparganietum emersi*



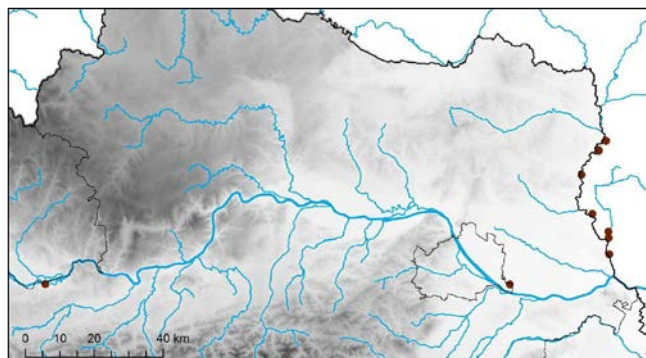
5.2 *Oenanthro-Rorippetum amphibiae*



5.3 *Butometum umbellati*



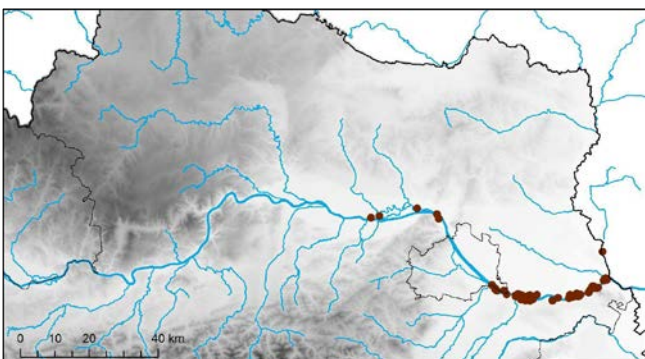
5.4 *Eleocharitetum palustris*



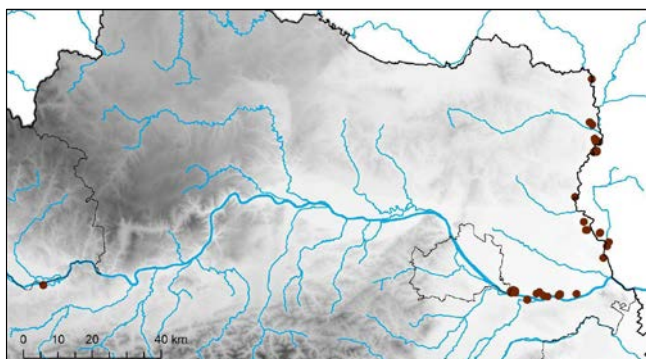
Molinio-Arrhenatheretea

Potentillion anserinae

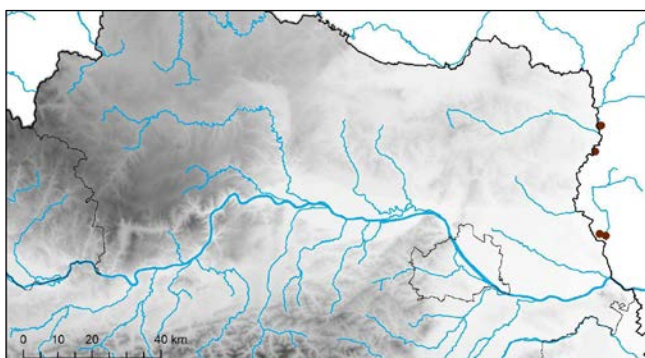
6.1 *Rorippo-Agrostietum stoloniferae*



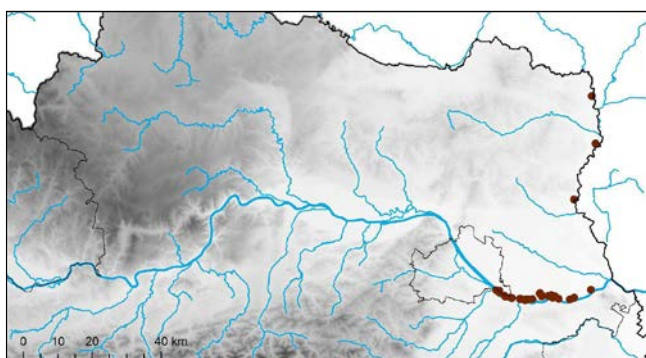
6.2 *Ranunculetum repentis*



6.3 *Ranunculo-Alopecuretum geniculati*

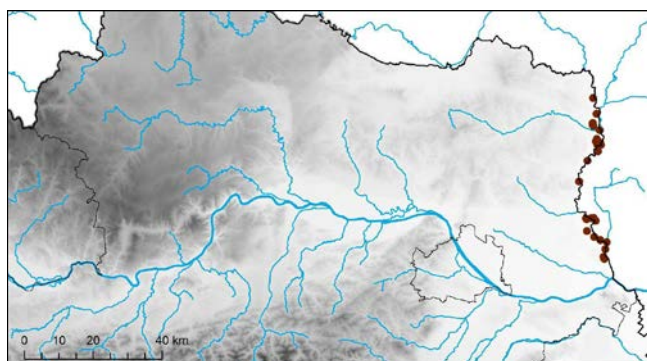


6.4 *Dactylido-Festucetum arundinaceae*

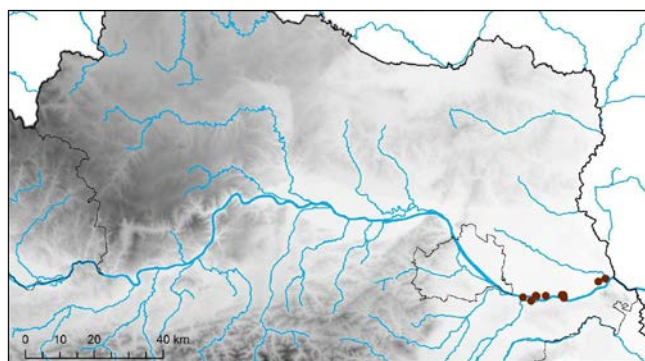


Deschampsion

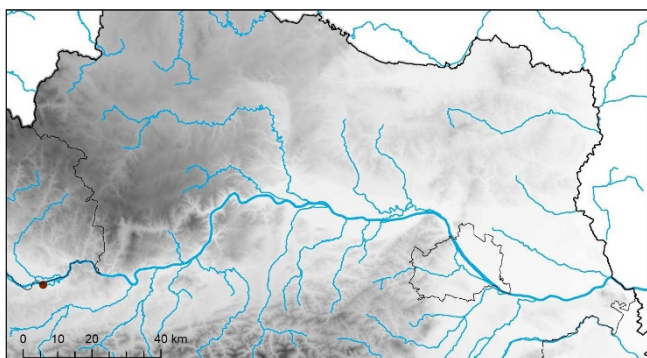
7.1 *Gratiolo-Caricetum suzae*



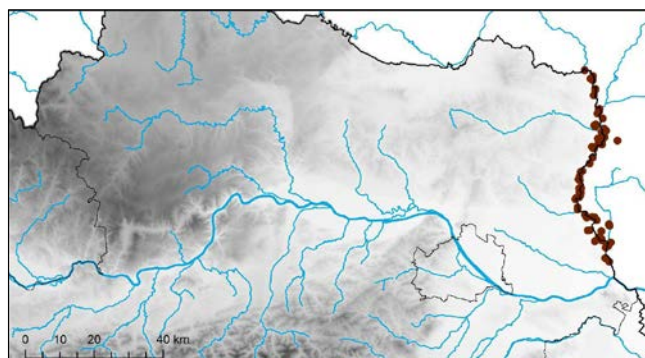
7.2 "*Poa palustris*-*Alopecurus pratensis* community"



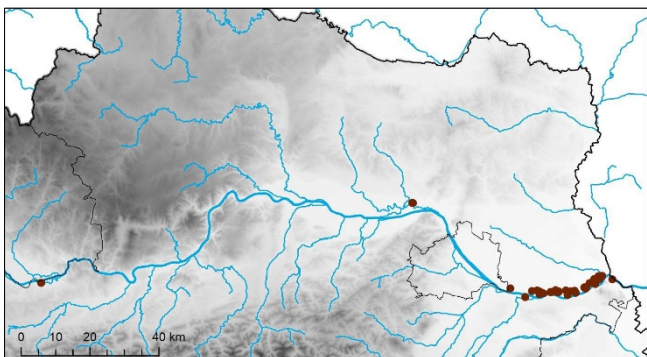
7.3 *Gratiolo-Caricetum nigrae*



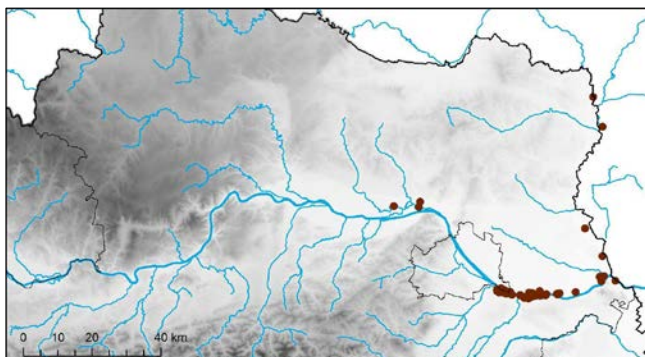
7.4 *Cnidio-Violetum pumilae*



7.5 *Ophioglosso-Caricetum tomentosae*

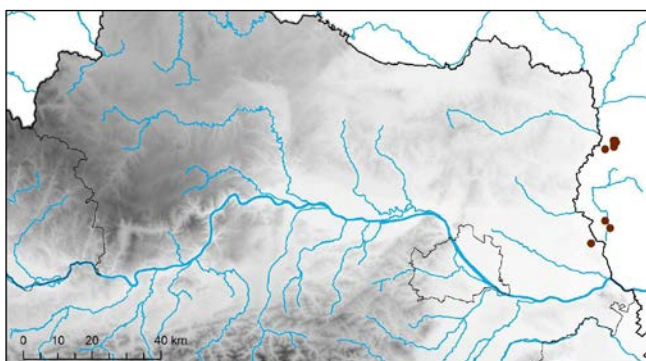


7.6 *Agropyro-Alopecuretum pratensis*



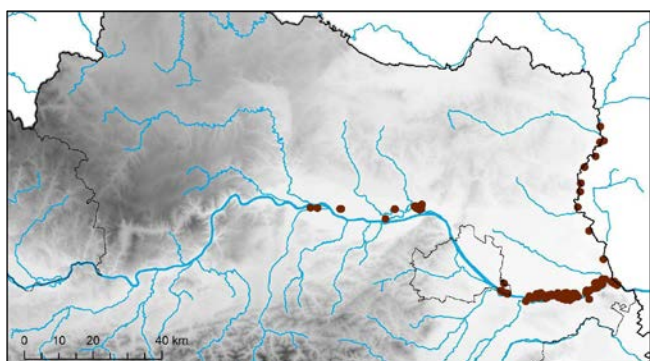
Molinion

8.1 *Molinietum caeruleae* s.l.

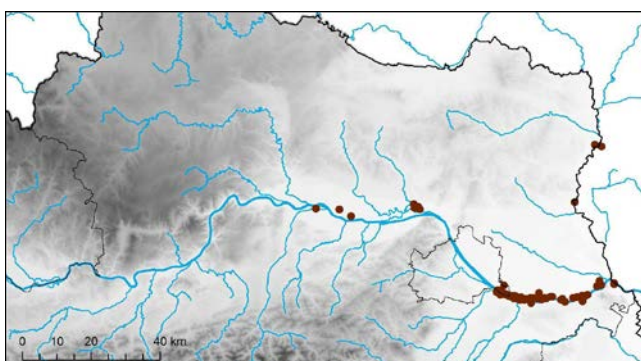


Arrhenatherion

9.1 *Ranunculo bulbosi*-Arrhenatheretum

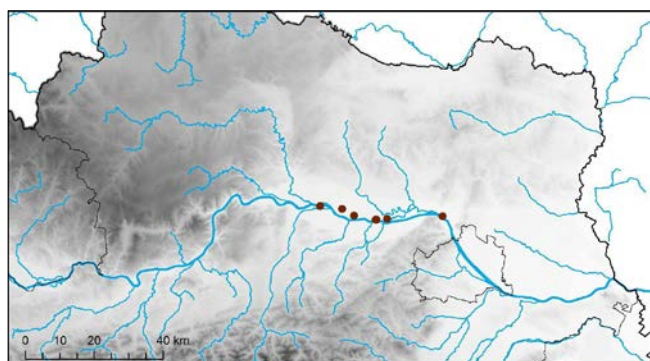


9.2 *Pastinaco*-Arrhenatheretum



Cynosurion

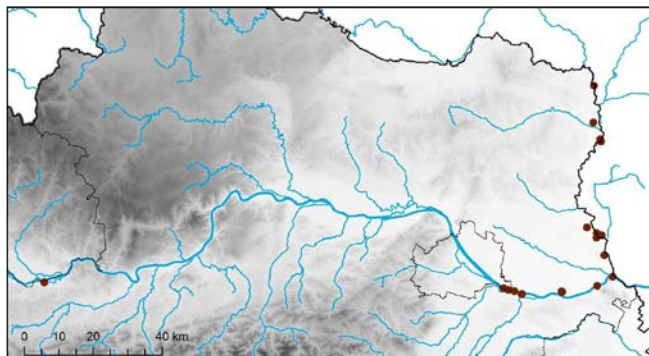
10.1 *Plantagini*-Lolietum



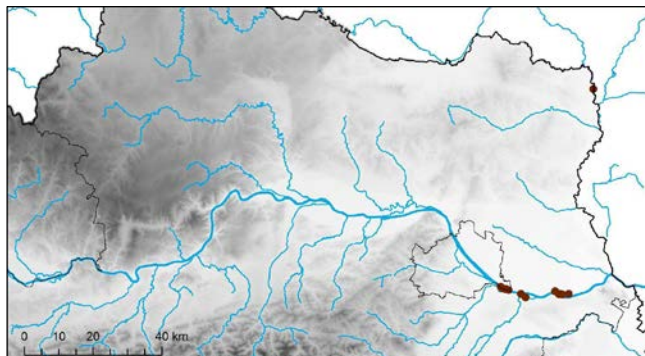
Artemisietea

Convolvulo-Agropyrion

11.1 *Ranunculus repens*-*Elymus repens* community

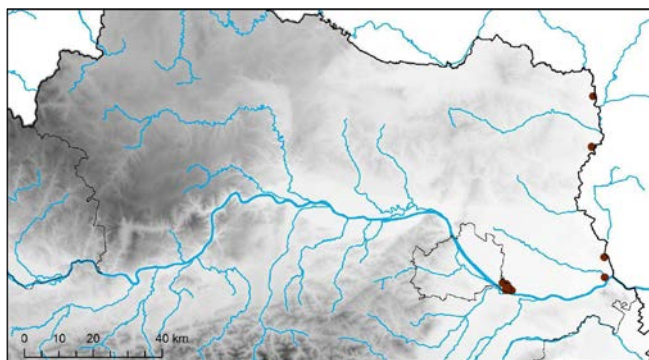


11.2 *Dactylis glomerata*-*Elymus repens* community

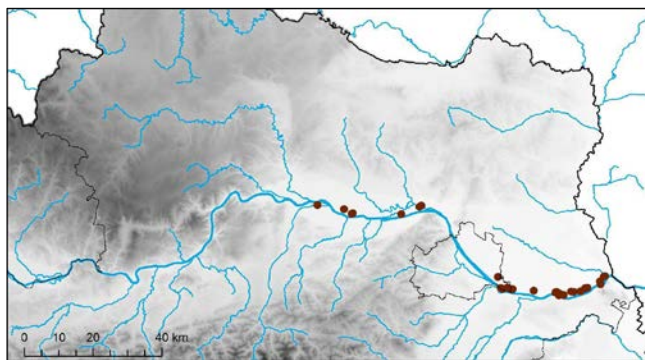


Rubio caesii*-*Calamagrostion epigeii

12.1 *Deschampsia cespitosa*-*Calamagrostis epigejos* community



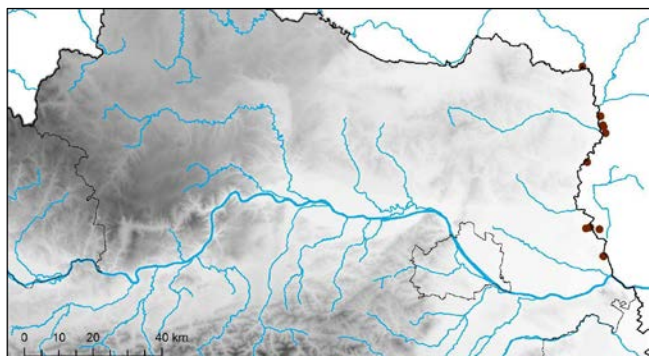
12.2 *Colchicum autumnale*-*Calamagrostis epigejos* community



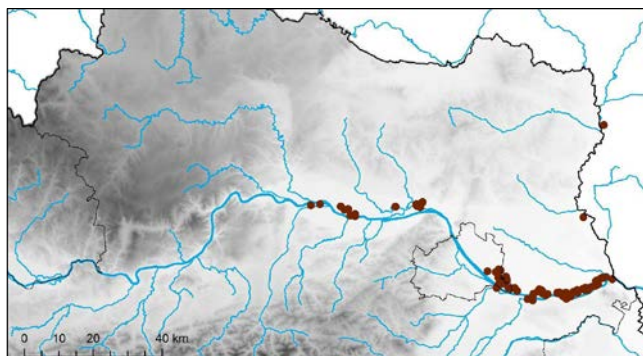
Festuco-Brometea

Cirsio-Brachypodion

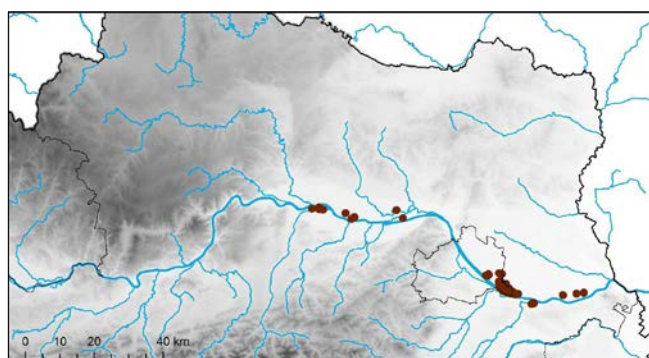
13.1 *Colchico-Festucetum rupicolae*



13.2 *Festuco rupicolae-Brometum*

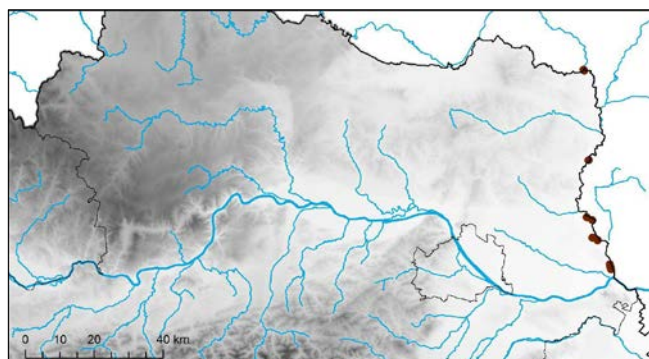


13.3 *Polygalo majoris-Brachypodietum selaginellatosum helveticae* subass. nov.



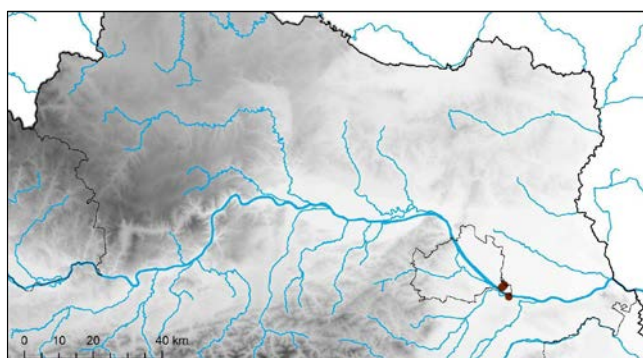
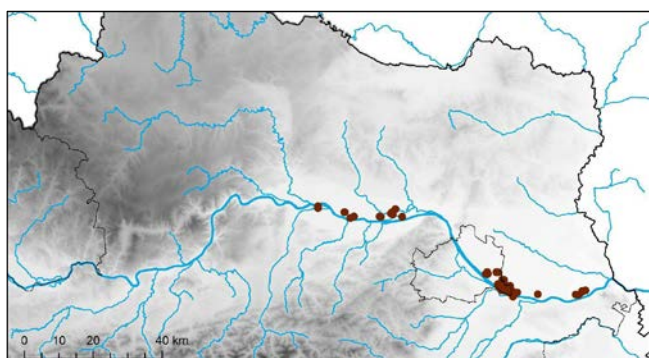
Festucion valesiacae

14.1 *Peucedano-Festucetum rupicolae*



14.2a *Teucrio-Andropogonetum brometosum erecti* subass. nov.

14.2b *Teucrio-Andropogonetum typicum*



Supplement E4. Data sources.

Anhang E4. Herkunft der Aufnahmen.

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
1.1	AT	341670		Rotter D. (1999)	2	28	Scirpetum lacustris	16.56459	48.16076	7
1.1	AT	341671		Rotter D. (1999)	2	29	Scirpetum lacustris	16.5706	48.15081	9
1.1	AT	341672		Rotter D. (1999)	2	30	Scirpetum lacustris	16.57247	48.14968	8
1.1	AT	341673		Rotter D. (1999)	2	31	Scirpetum lacustris	16.57521	48.14589	8
1.1	AT	341674		Rotter D. (1999)	2	32	Scirpetum lacustris	16.567	48.15846	8
1.1	AT	341675		Rotter D. (1999)	2	33	Scirpetum lacustris	16.56466	48.16103	8
1.1	SK		611154	Otahelová H. (1996)	1	13	Scirpetum lacustris Chouard 1924	16.938889	48.280556	20
1.1	SK		611156	Otahelová H. (1996)	1	16	Scirpetum lacustris Chouard 1924	16.913889	48.5125	20
1.1	SK		611157	Otahelová H. (1996)	1	17	Scirpetum lacustris Chouard 1924	16.947222	48.558333	10
1.1	SK		611158	Otahelová H. (1996)	1	18	Scirpetum lacustris Chouard 1924	16.885556	48.336111	20
1.1	SK		611159	Otahelová H. (1996)	1	15	Scirpetum lacustris Chouard 1924	16.897222	48.489444	20
1.1	SK		611251	Otahelová H. (1996)	1	10	Scirpetum lacustris Chouard 1924	16.958333	48.289444	20
1.1	SK		611253	Otahelová H. (1996)	1	11	Scirpetum lacustris Chouard 1924	16.943889	48.568889	20
1.1	SK		611254	Otahelová H. (1996)	1	12	Scirpetum lacustris Chouard 1924	16.954167	48.280556	11
1.1	SK		624676	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	20	Scirpetum lacustris Chouard 1924	16.913889	48.504167	12
1.2	AT	341590		Essl F. (1999)	9	319	Typhetum angustifoliae	15.914744	48.369037	1
1.2	AT	341676		Rotter D. (1999)	2	34	Typhetum angustifoliae	16.57054	48.15269	2
1.2	AT	341677		Rotter D. (1999)	2	35	Typhetum angustifoliae	16.56794	48.15792	2
1.2	AT	341678		Rotter D. (1999)	2	36	Typhetum angustifoliae	16.57274	48.14918	3
1.2	AT	341679		Rotter D. (1999)	2	37	Typhetum angustifoliae	16.5706	48.15081	2
1.2	AT	341680		Rotter D. (1999)	2	38	Typhetum angustifoliae	16.56794	48.15792	2
1.2	AT	341681		Rotter D. (1999)	2	39	Typhetum angustifoliae	16.54411	48.16372	1
1.2	AT	341682		Rotter D. (1999)	2	40	Typhetum angustifoliae	16.53756	48.1725	1
1.2	AT	341683		Rotter D. (1999)	2	41	Typhetum angustifoliae	16.57461	48.14626	1
1.2	AT	341684		Rotter D. (1999)	2	42	Typhetum angustifoliae	16.55928	48.1596	1
1.2	AT	341685		Rotter D. (1999)	2	43	Typhetum angustifoliae	16.55438	48.16105	1
1.2	AT	341686		Rotter D. (1999)	2	44	Typhetum angustifoliae	16.55317	48.16114	4
1.2	AT	341687		Rotter D. (1999)	2	45	Typhetum angustifoliae	16.54975	48.16195	6
1.3	AT	341688		Rotter D. (1999)	2	46	Typhetum angustifoliae	16.53749	48.17295	5
1.3	SK		613861	Seffer J., Stanová V. (eds.) (1999)	1	4	Typhetum latifoliae Lang 1973	16.9625	48.241667	20
1.3	SK		712574	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.903056	48.334444	20
1.4	AT	317455		Schratt-Ehrendorfer, unpubl.				16.5332238	48.15284477	26
1.4	AT	317515		Schratt-Ehrendorfer, unpubl.				16.59849257	48.13673784	26
1.4	AT	341207		Staudinger M., unpubl.				16.52719	48.15143	27
1.4	AT	341224		Staudinger M., unpubl.				16.5889	48.1281	28
1.4	AT	341225		Staudinger M., unpubl.				16.5795	48.12875	27
1.4	AT	341230		Staudinger M., unpubl.				16.64721	48.11883	27
1.4	AT	341235		Staudinger M., unpubl.				16.82798	48.11748	27
1.4	AT	341237		Staudinger M., unpubl.				16.86401	48.12105	27
1.4	AT	341247		Staudinger M., unpubl.				16.78356	48.12962	27
1.4	AT	341251		Staudinger M., unpubl.				16.8002	48.11966	27
1.4	AT	341259		Staudinger M., unpubl.				16.81723	48.12472	27
1.4	AT	341263		Staudinger M., unpubl.				16.81338	48.12221	27
1.4	AT	341268		Staudinger M., unpubl.				16.82385	48.12851	27
1.4	AT	341284		Staudinger M., unpubl.				16.84519	48.1326	27
1.4	AT	341285		Staudinger M., unpubl.				16.84719	48.13187	27
1.4	AT	341288		Staudinger M., unpubl.				16.84425	48.13341	27
1.4	AT	341289		Staudinger M., unpubl.				16.8426	48.12937	27
1.4	AT	341293		Staudinger M., unpubl.				16.84155	48.13176	27
1.4	AT	341295		Staudinger M., unpubl.				16.85013	48.12988	27
1.4	AT	341302		Staudinger M., unpubl.				16.84505	48.12612	27
1.4	AT	341307		Staudinger M., unpubl.				16.84441	48.13566	27
1.4	AT	341309		Staudinger M., unpubl.				16.98345	48.16077	27
1.4	AT	341316		Staudinger M., unpubl.				16.95919	48.16643	27
1.4	AT	341319		Staudinger M., unpubl.				16.86669	48.13376	27
1.4	AT	341320		Staudinger M., unpubl.				16.86256	48.13697	28
1.4	AT	341321		Staudinger M., unpubl.				16.86288	48.13526	27
1.4	AT	341336		Staudinger M., unpubl.				16.95204	48.15874	27
1.4	AT	341365		Staudinger M., unpubl.				16.52423	48.14954	28
1.4	AT	341591		Essl F. (1999)	9	111	Phragmitetum communis	16.232498	48.361445	25
1.4	AT	341592		Essl F. (1999)	9	402	Phragmitetum communis	15.961399	48.350005	28
1.4	AT	341593		Essl F. (1999)	9	220	Phragmitetum communis	16.045248	48.340232	28
1.4	AT	341594		Essl F. (1999)	9	317	Phragmitetum communis	15.915568	48.369152	19
1.4	AT	341595		Essl F. (1999)	9	10	Phragmitetum communis	16.119836	48.339166	27
1.4	AT	341596		Essl F. (1999)	9	802	Phragmitetum communis	16.152008	48.345421	27
1.4	AT	341643		Rotter D. (1999)	2	1	Phragmitetum vulgaris	16.57139	48.14793	28
1.4	AT	341644		Rotter D. (1999)	2	2	Phragmitetum vulgaris	16.5369	48.17772	28
1.4	AT	341645		Rotter D. (1999)	2	3	Phragmitetum vulgaris	16.52531	48.16996	28
1.4	AT	341646		Rotter D. (1999)	2	4	Phragmitetum vulgaris	16.53739	48.16566	28
1.4	AT	341647		Rotter D. (1999)	2	5	Phragmitetum vulgaris	16.54136	48.16498	28
1.4	AT	341648		Rotter D. (1999)	2	6	Phragmitetum vulgaris	16.53644	48.17839	28
1.4	AT	341649		Rotter D. (1999)	2	7	Phragmitetum vulgaris	16.53684	48.1779	28
1.4	AT	341650		Rotter D. (1999)	2	8	Phragmitetum vulgaris	16.53637	48.17763	28
1.4	AT	341651		Rotter D. (1999)	2	9	Phragmitetum vulgaris	16.53629	48.17646	28
1.4	AT	341652		Rotter D. (1999)	2	10	Phragmitetum vulgaris	16.53741	48.16967	28
1.4	AT	341653		Rotter D. (1999)	2	11	Phragmitetum vulgaris	16.60547	48.13827	28
1.4	AT	341654		Rotter D. (1999)	2	12	Phragmitetum vulgaris	16.53916	48.15266	28
1.4	AT	341655		Rotter D. (1999)	2	13	Phragmitetum vulgaris	16.54654	48.15099	25
1.4	AT	341656		Rotter D. (1999)	2	14	Phragmitetum vulgaris	16.56425	48.14308	25
1.4	AT	341657		Rotter D. (1999)	2	15	Phragmitetum vulgaris	16.60387	48.13918	28
1.4	AT	341658		Rotter D. (1999)	2	16	Phragmitetum vulgaris	16.58969	48.13997	25
1.4	AT	341659		Rotter D. (1999)	2	17	Phragmitetum vulgaris	16.53116	48.16977	28
1.4	AT	341660		Rotter D. (1999)	2	18	Phragmitetum vulgaris	16.56921	48.15616	25
1.4	AT	341661		Rotter D. (1999)	2	19	Phragmitetum vulgaris	16.57294	48.14828	28
1.4	AT	341662		Rotter D. (1999)	2	20	Phragmitetum vulgaris	16.58521	48.14246	25
1.4	AT	341663		Rotter D. (1999)	2	21	Phragmitetum vulgaris	16.5474	48.16308	26
1.4	AT	341754		Rotter D. (1999)	4	10	Caricetum gracilis	16.59892	48.14413	25
1.4	AT	341873		Rotter D. (1999)	6	25	Molinio-Arrhenatheretea	16.58622	48.1443	25
1.4	AT	341894		Rotter D. (1999)	7	3	An Galio-Urticetea-Arten reiche Verges.	16.60387	48.14084	27
1.4	AT	341895		Rotter D. (1999)	7	4	An Galio-Urticetea-Arten reiche Verges.	16.5382	48.16494	28
1.4	AT	341896		Rotter D. (1999)	7	5	An Galio-Urticetea-Arten reiche Verges.	16.52585	48.1696	28
1.4	AT	341899		Rotter D. (1999)	7	9	An Galio-Urticetea-Arten reiche Verges.	16.61648	48.13712	27
1.4	AT	341901		Rotter D. (1999)	7	11	An Galio-Urticetea-Arten reiche Verges.	16.55525	48.14544	26
1.4	AT	341902		Rotter D. (1999)	7	12	An Galio-Urticetea-Arten reiche Verges.	16.58151	48.14197	25
1.4	AT	341905		Rotter D. (1999)	7	15	An Galio-Urticetea-Arten reiche Verges.	16.52623	48.16343	27
1.4	AT	341906		Rotter D. (1999)	7	16	An Galio-Urticetea-Arten reiche Verges.	16.55989	48.14471	25
1.4	AT	341909		Rotter D. (1999)	7	19	An Galio-Urticetea-Arten reiche Verges.	16.58367	48.1443	26
1.4	AT	341910		Rotter D. (1999)	7	20	An Galio-Urticetea-Arten reiche Verges.	16.52612	48.16964	27
1.4	AT	341911		Rotter D. (1999)	7	21	An Galio-Urticetea-Arten reiche Verges.	16.53851	48.15937	27
1.4	AT	341915		Rotter D. (1999)	7	25	An Galio-Urticetea-Arten reiche Verges.	16.54464	48.16349	26
1.4	AT	341928		Rotter D. (1999)	7	38	An Galio-Urticetea-Arten reiche Verges.	16.52471	48.16996	27
1.4	AT	342080		Projektstudie 1991 (Gottfried et al.)	8	2	Phragmites-Urtica-Gesellschaft	16.9131	48.57316	28
1.4	AT	342081		Projektstudie 1991 (Gottfried et al.)	8	3	Phragmites-Urtica-Gesellschaft	16.94402	48.22529	27
1.4	AT	343044		Straka A. (1992)	1	21	Phragmitetum vulgaris	16.17429	48.36039	27
1.4	AT	343045		Straka A. (1992)	1	22	Phragmitetum vulgaris	15.9482	48.35041	27
1.4	AT	343046		Straka A. (1992)	1	23	Phragmitetum vulgaris	15.94337	48.35602	27
1.4	SK		611242	Otahelová H. (1996)	1	8	Phragmitetum vulgaris von Soo 1927	16.952778	48.527778	28
1.4	SK		611243	Otahelová H. (1996)	1	1	Phragmitetum vulgaris von Soo 1927	16.927778	48.289444	27
1.4	SK		611244	Otahelová H. (1996)	1	3	Phragmitetum vulgaris von Soo 1927	16.930833	48.289444	19
1.4	SK		611245	Otahelová H. (1996)	1	2	Phragmitetum vulgaris von Soo 1927	16.956389	48.532778	27
1.4	SK		611247	Otahelová H. (1996)	1	7	Phragmitetum vulgaris von Soo 1927	16.955556	48.244444	28
1.4	SK		611249	Otahelová H. (1996)	1	6	Phragmitetum vulgaris von Soo 1927	16.859167	48.440278	27
1.4	SK		611250	Otahelová H. (1996)	1	5	Phragmitetum vulgaris von Soo 1927	16.903056	48.491389	28
1.4	SK		624675	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	19	Phragmitetum vulgaris von Soo 1927	16.851389	48.438333	27
1.4	SK		624788	Banášová V. et al. (1994)	1	16	Phragmitetum vulgaris von Soo 1927	16.926667	48.502778	28
1.4	SK		624789	Banášová V. et al. (1994)	1	17	Phragmitetum vulgaris von Soo 1927	16.928056	48.502	

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
1.5	SK		611181	Otahelová H. (1996)	1	21	Glycerietum aquaticae Hueck 1931	16.923611	48.281111	20
1.5	SK		611183	Otahelová H. (1996)	1	23	Glycerietum aquaticae Hueck 1931	16.957778	48.291667	20
1.5	SK		611184	Otahelová H. (1996)	1	25	Glycerietum aquaticae Hueck 1931	16.927778	48.510556	20
1.5	SK		611193	Otahelová H. (1996)	1	19	Glycerietum aquaticae Hueck 1931	16.927222	48.503889	20
1.5	SK		611194	Otahelová H. (1996)	1	22	Glycerietum aquaticae Hueck 1931	16.955556	48.562222	18
1.5	SK		611195	Otahelová H. (1996)	1	26	Glycerietum aquaticae Hueck 1931	16.955556	48.562222	20
1.5	SK		611196	Otahelová H. (1996)	1	27	Glycerietum aquaticae Hueck 1931	16.905	48.494722	20
1.5	SK		624677	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	21	Glycerietum aquaticae Hueck 1931	16.945	48.559444	20
1.5	SK		712558	Hegedúsová K.			Glycerietum aquaticae Hueck 1931	16.898056	48.333056	20
1.5	SK		712638	Hegedúsová K.			Glycerietum aquaticae Hueck 1931	16.953056	48.236944	20
1.6	AT	341666		Rotter D. (1999)	2	24	Sparganietum erecti	16.53749	48.17295	20
1.6	AT	341667		Rotter D. (1999)	2	25	Sparganietum erecti	16.53749	48.17295	20
1.6	AT	341668		Rotter D. (1999)	2	26	Sparganietum erecti	16.53749	48.17295	9
1.6	AT	341669		Rotter D. (1999)	2	27	Sparganietum erecti	16.56352	48.16175	28
1.6	SK		611225	Otahelová H. (1996)	1	33	Sparganietum erecti Roll 1938	16.955	48.243333	20
1.6	SK		611228	Otahelová H. (1996)	1	34	Sparganietum erecti Roll 1938	16.958333	48.558333	19
1.6	SK		611229	Otahelová H. (1996)	1	30	Sparganietum erecti Roll 1938	16.897222	48.48	19
1.6	SK		611231	Otahelová H. (1996)	1	31	Sparganietum erecti Roll 1938	16.858611	48.439722	19
1.6	SK		624678	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	22	Sparganietum erecti Roll 1938	16.954722	48.244167	20
1.6	SK		712586	Hegedúsová K.			Sparganietum erecti Roll 1938	16.958611	48.562222	20
1.7	AT	343056		Straka A. (1992)	1	33	Equisetetum limosi	16.14188	48.24816	19
1.8	SK		624679	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	23	Acoretum calami Schultz 1941	16.945	48.559444	20
1.9	SK		611162	Otahelová H. (1996)	3	1	Bolboschoenetalia maritimi Hejný in Holub et al. 1967	16.931111	48.291667	19
1.9	SK		611163	Otahelová H. (1996)	3	2	Bolboschoenetalia maritimi Hejný in Holub et al. 1967	16.927778	48.516111	19
1.9	SK		611169	Otahelová H. (1996)	3	3	Bolboschoenetalia maritimi Hejný in Holub et al. 1967	16.904167	48.313333	19
1.9	SK		611170	Otahelová H. (1996)	3	4	Bolboschoenetalia maritimi Hejný in Holub et al. 1967	16.904167	48.313333	13
1.9	SK		611177	Otahelová H. (1996)	3	5	Bolboschoenetalia maritimi Hejný in Holub et al. 1967	16.858333	48.441111	19
1.9	SK		624685	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	29	Oenantho aquaticae-Roripetum amphibiae Lohmayer 1950	16.900833	48.314444	14
2.1	AT	317043		Schratt-Ehrendorfer, unpubl.				16.93316748	48.16202446	24
2.1	AT	317044		Schratt-Ehrendorfer, unpubl.				16.93427846	48.16188563	27
2.1	AT	317167		Schratt-Ehrendorfer, unpubl.				16.7629153	48.12979999	27
2.1	AT	317171		Schratt-Ehrendorfer, unpubl.				16.77235817	48.13341101	23
2.1	AT	317524		Schratt-Ehrendorfer, unpubl.				16.54738737	48.1496512	27
2.1	AT	317758		Staudinger M., unpubl.			Basalgesellschaft des Senecionion fluviatilis	16.66633	48.12633	27
2.1	AT	318673		Zuna-Kratky T., unpubl. (2017)				16.91642	48.64579	24
2.1	AT	340549		Plenk S. (1991)		20	Cnidion	16.938083	48.525139	23
2.1	AT	340572		Plenk S. (1991)		46	Phalaridetum arundinaceae Faz. Poa palustris	16.924472	48.529583	24
2.1	AT	340983		Balatova-Tulackova E. & Hübl E. (1974)	3	1	Phalaridetum arundinaceae	16.91469	48.65229	24
2.1	AT	340984		Balatova-Tulackova E. & Hübl E. (1974)	3	2	Phalaridetum arundinaceae	16.91469	48.65229	24
2.1	AT	340985		Balatova-Tulackova E. & Hübl E. (1974)	3	3	Phalaridetum arundinaceae	16.91469	48.65229	24
2.1	AT	340986		Balatova-Tulackova E. & Hübl E. (1974)	3	4	Phalaridetum arundinaceae	16.95865	48.21626	24
2.1	AT	340987		Balatova-Tulackova E. & Hübl E. (1974)	3	5	Phalaridetum arundinaceae	16.90547	48.28619	24
2.1	AT	340988		Balatova-Tulackova E. & Hübl E. (1974)	3	6	Phalaridetum arundinaceae	16.90547	48.28619	24
2.1	AT	340989		Balatova-Tulackova E. & Hübl E. (1974)	3	7	Phalaridetum arundinaceae	16.90547	48.28619	24
2.1	AT	340990		Balatova-Tulackova E. & Hübl E. (1974)	3	8	Phalaridetum arundinaceae	16.91901	48.61535	24
2.1	AT	341211		Staudinger M., unpubl.				16.53101	48.14931	27
2.1	AT	341218		Staudinger M., unpubl.				16.59104	48.12778	27
2.1	AT	341248		Staudinger M., unpubl.				16.78904	48.12681	27
2.1	AT	341253		Staudinger M., unpubl.				16.7999	48.12402	27
2.1	AT	341255		Staudinger M., unpubl.				16.7855	48.12143	27
2.1	AT	341256		Staudinger M., unpubl.				16.80247	48.11857	27
2.1	AT	341257		Staudinger M., unpubl.				16.81088	48.12016	27
2.1	AT	341258		Staudinger M., unpubl.				16.80528	48.12432	27
2.1	AT	341265		Staudinger M., unpubl.				16.82575	48.12306	27
2.1	AT	341283		Staudinger M., unpubl.				16.84633	48.13259	27
2.1	AT	341286		Staudinger M., unpubl.				16.83728	48.13443	27
2.1	AT	341287		Staudinger M., unpubl.				16.84058	48.12866	22
2.1	AT	341290		Staudinger M., unpubl.				16.84281	48.13027	22
2.1	AT	341299		Staudinger M., unpubl.				16.85207	48.12915	22
2.1	AT	341301		Staudinger M., unpubl.				16.84667	48.12643	27
2.1	AT	341303		Staudinger M., unpubl.				16.84687	48.12643	27
2.1	AT	341305		Staudinger M., unpubl.				16.86328	48.12883	27
2.1	AT	341313		Staudinger M., unpubl.				16.97288	48.17045	27
2.1	AT	341317		Staudinger M., unpubl.				16.96192	48.17029	22
2.1	AT	341318		Staudinger M., unpubl.				16.97273	48.17418	27
2.1	AT	341323		Staudinger M., unpubl.				16.93058	48.14572	27
2.1	AT	341332		Staudinger M., unpubl.				16.95307	48.16103	22
2.1	AT	341334		Staudinger M., unpubl.				16.95219	48.16	22
2.1	AT	341340		Staudinger M., unpubl.				16.95914	48.16774	22
2.1	AT	341346		Staudinger M., unpubl.				16.92568	48.14593	27
2.1	AT	341348		Staudinger M., unpubl.				16.87101	48.12299	22
2.1	AT	341351		Staudinger M., unpubl.				16.68552	48.1336	27
2.1	AT	341353		Staudinger M., unpubl.				16.73629	48.13186	22
2.1	AT	341354		Staudinger M., unpubl.				16.87081	48.12268	22
2.1	AT	341355		Staudinger M., unpubl.				16.73523	48.13326	22
2.1	AT	341371		Staudinger M., unpubl.				16.94089	48.15345	27
2.1	AT	341372		Staudinger M., unpubl.				16.94232	48.15524	27
2.1	AT	341373		Staudinger M., unpubl.				16.94017	48.15565	19
2.1	AT	341375		Staudinger M., unpubl.				16.95106	48.16693	21
2.1	AT	341377		Staudinger M., unpubl.				16.95058	48.16648	27
2.1	AT	341388		Staudinger M., unpubl.				16.91806	48.14983	21
2.1	AT	341440		Staudinger M., unpubl.			Rorippo-Phalaridetum arundinaceae	16.83019	48.12358	27
2.1	AT	341443		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.82555	48.12293	21
2.1	AT	341455		Staudinger M., unpubl.			Rorippo-Phalaridetum	16.924911	48.145816	22
2.1	AT	341456		Staudinger M., unpubl.			Rorippo-Phalaridetum	16.924936	48.145752	27
2.1	AT	341457		Staudinger M., unpubl.			Rorippo-Phalaridetum	16.93066	48.145645	21
2.1	AT	341462		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.66054	48.12401	21
2.1	AT	341469		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.61396	48.1298	21
2.1	AT	341473		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.61318	48.13416	21
2.1	AT	341476		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.61962	48.13248	21
2.1	AT	341477		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.61901	48.13257	21
2.1	AT	341499		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.97303	48.17121	21
2.1	AT	341510		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.86921	48.13024	21
2.1	AT	341513		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.8616	48.12884	21
2.1	AT	341527		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.78284	48.11631	22
2.1	AT	341537		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.71573	48.12137	21
2.1	AT	341549		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.5172	48.15904	21
2.1	AT	341557		Staudinger M., unpubl.			Rorippo-Phalaridetum	16.62095	48.11953	23
2.1	AT	341600		Essl F. (1999)	9	122	Phalaridetum arundinaceae	16.227062	48.362855	24
2.1	AT	341601		Essl F. (1999)	9	113	Phalaridetum arundinaceae	16.230042	48.36225	24
2.1	AT	341602		Essl F. (1999)	9	419	Phalaridetum arundinaceae	15.962307	48.351073	24
2.1	AT	341603		Essl F. (1999)	9	321	Phalaridetum arundinaceae	15.914473	48.368512	24
2.1	AT	341604		Essl F. (1999)	9	809	Phalaridetum arundinaceae	16.154068	48.34564	27
2.1	AT	341605		Essl F. (1999)	9	502	Phalaridetum arundinaceae	16.307294	48.347105	22
2.1	AT	341606		Essl F. (1999)	9	503	Phalaridetum arundinaceae	16.30702	48.347179	22
2.1	AT	341608		Essl F. (1999)	9	215	Phalaridetum arundinaceae	16.047392	48.340668	24
2.1	AT	341755		Rotter D. (1999)	4	11	Phalaridetum arundinaceae	16.62717	48.13696	27
2.1	AT	341757		Rotter D. (1999)	4	13	Phalaridetum arundinaceae	16.53851	48.15937	27
2.1	AT	341758		Rotter D. (1999)	4	14	Phalaridetum arundinaceae	16.52814	48.17099	27
2.1	AT	341759		Rotter D. (1999)	4	15	Phalaridetum arundinaceae	16.59415	48.14351	25
2.1	AT	341760		Rotter D. (1999)	4	16	Phalaridetum arundinaceae	16.59415	48.14351	22
2.1	AT	341761		Rotter D. (1999)	4	17	Phalaridetum arundinaceae	16.59816	48.13928	24
2.1	AT	341762		Rotter D. (1999)	4	18	Phalaridetum arundinaceae	16.60387	48.13918	27
2.1	AT	341763		Rotter D. (1999)	4	19	Phalaridetum arundinaceae	16.52854	48.17071	27
2.1	AT	341765		Rotter D. (1999)	4	21	Phalaridetum arundinaceae	16.6026	48.14192	24
2.1	AT	341766		Rotter D. (1999)	4	22	Phalaridetum arundinaceae	16.56358	48.14452	25
2.1	AT	341767		Rotter D. (1999)	4	23	Phalaridetum arundinaceae	16.6026	48.14192	25
2.1	AT	341768		Rotter D. (1999)	4	24	Phalaridetum arundinaceae	16.59798	48.14414	24
2.1	AT	341769								

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
2.1	SK		604152	Balátová-Tulácková E. (1976)	6	5	Phalaridetum arundinaceae Libbert 1931	16.965278	48.511111	24
2.1	SK		604153	Balátová-Tulácková E. (1976)	6	6	Phalaridetum arundinaceae Libbert 1931	16.902778	48.341667	24
2.1	SK		604155	Balátová-Tulácková E. (1976)	6	8	Phalaridetum arundinaceae Libbert 1931	16.991667	48.572222	24
2.1	SK		611166	Otahelová H. (1996)	2	32	Eleocharitetum palustris Ubrizsy 1948	16.952222	48.277778	24
2.1	SK		611200	Otahelová H. (1996)	2	19	Phalaridetum arundinaceae Libbert 1931	16.918889	48.288889	24
2.1	SK		611201	Otahelová H. (1996)	2	20	Phalaridetum arundinaceae Libbert 1931	16.93	48.288611	22
2.1	SK		611202	Otahelová H. (1996)	2	18	Phalaridetum arundinaceae Libbert 1931	16.929722	48.288333	27
2.1	SK		611205	Otahelová H. (1996)	2	23	Phalaridetum arundinaceae Libbert 1931	16.955556	48.562222	24
2.1	SK		611206	Otahelová H. (1996)	2	22	Phalaridetum arundinaceae Libbert 1931	16.893056	48.335833	24
2.1	SK		611207	Otahelová H. (1996)	2	21	Phalaridetum arundinaceae Libbert 1931	16.858889	48.443056	24
2.1	SK		624689	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	33	Phalaridetum arundinaceae Libbert 1931	16.883333	48.336944	24
2.1	SK		624777	Banášová V. et al. (1994)	1	5	Cnidion venosi Bal.-Tul. 1966	16.928056	48.502778	24
3.1	AT	317815		Beiser A., unpubl.				16.91472	48.16486	24
3.1	AT	340532		Plenk S. (1991)		3	Caricetum gracilis	16.938889	48.528333	23
3.1	AT	340568		Plenk S. (1991)		41	Carex acuta-Phalaris arundinacea-Gesellschaft	16.922167	48.534306	24
3.1	AT	340570		Plenk S. (1991)		44	Caricetum gracilis	16.924472	48.529583	24
3.1	AT	340576		Plenk S. (1991)		47	Caricetum gracilis	16.925917	48.526111	24
3.1	AT	340995		Balatova-Tulackova E. & Hübl E. (1974)	4	1	Caricetum gracilis	16.88039	48.71833	24
3.1	AT	340996		Balatova-Tulackova E. & Hübl E. (1974)	4	2	Caricetum gracilis	16.88039	48.71833	24
3.1	AT	340997		Balatova-Tulackova E. & Hübl E. (1974)	4	3	Caricetum gracilis	16.91469	48.65229	24
3.1	AT	340998		Balatova-Tulackova E. & Hübl E. (1974)	4	4	Caricetum gracilis	16.87249	48.29611	24
3.1	AT	340999		Balatova-Tulackova E. & Hübl E. (1974)	4	5	Caricetum gracilis	16.94135	48.53889	24
3.1	AT	341000		Balatova-Tulackova E. & Hübl E. (1974)	4	6	Caricetum gracilis	16.90547	48.28619	20
3.1	AT	341001		Balatova-Tulackova E. & Hübl E. (1974)	4	7	Caricetum gracilis	16.92008	48.60815	24
3.1	AT	341002		Balatova-Tulackova E. & Hübl E. (1974)	4	8	Caricetum gracilis	16.77171	48.13344	25
3.1	AT	341003		Balatova-Tulackova E. & Hübl E. (1974)	4	9	Caricetum gracilis	16.69559	48.14194	24
3.1	AT	341004		Balatova-Tulackova E. & Hübl E. (1974)	4	10	Caricetum gracilis	16.78666	48.13824	24
3.1	AT	341458		Staudinger M., unpubl.			Heleocharito acicularis-Limoselletum aquaticae	16.93123	48.145699	21
3.1	AT	341610		Essl F. (1999)	9	10	Phalaridetum arundinaceae	16.120364	48.339421	24
3.1	AT	341611		Essl F. (1999)	9	10	Caricetum gracilis	16.120435	48.339303	24
3.1	AT	341612		Essl F. (1999)	9	225	Caricetum gracilis	16.045419	48.33976	27
3.1	AT	341746		Rotter D. (1999)	4	2	Caricetum gracilis	16.56352	48.16175	25
3.1	AT	341747		Rotter D. (1999)	4	3	Caricetum gracilis	16.5648	48.1612	25
3.1	AT	341748		Rotter D. (1999)	4	4	Caricetum gracilis	16.56721	48.14452	24
3.1	AT	341749		Rotter D. (1999)	4	5	Caricetum gracilis	16.55962	48.14489	25
3.1	AT	341750		Rotter D. (1999)	4	6	Caricetum gracilis	16.567	48.1438	16
3.1	AT	341751		Rotter D. (1999)	4	7	Caricetum gracilis	16.56098	48.14975	25
3.1	AT	341752		Rotter D. (1999)	4	8	Caricetum gracilis	16.58501	48.14367	24
3.1	AT	342011		Projektstudie 1991 (Gottfried et al.)	3	14	Gratiolo-Caricetum suzae	16.9131	48.57316	23
3.1	AT	342045		Projektstudie 1991 (Gottfried et al.)	5	1	Caricetum gracilis	16.9131	48.57316	23
3.1	AT	342046		Projektstudie 1991 (Gottfried et al.)	5	2	Caricetum gracilis	16.9131	48.57316	24
3.1	AT	342047		Projektstudie 1991 (Gottfried et al.)	5	3	Caricetum gracilis	16.9131	48.57316	23
3.1	AT	342052		Projektstudie 1991 (Gottfried et al.)	5	8	Caricetum gracilis	16.9131	48.57316	23
3.1	AT	342053		Projektstudie 1991 (Gottfried et al.)	5	9	Caricetum gracilis	16.9131	48.57316	23
3.1	AT	342055		Projektstudie 1991 (Gottfried et al.)	5	11	Caricetum gracilis	16.9131	48.57316	24
3.1	AT	342056		Projektstudie 1991 (Gottfried et al.)	5	12	Caricetum gracilis	16.9131	48.57316	24
3.1	AT	342058		Projektstudie 1991 (Gottfried et al.)	5	14	Caricetum gracilis	16.9131	48.57316	37
3.1	AT	342060		Projektstudie 1991 (Gottfried et al.)	5	16	Caricetum gracilis	16.87845	48.29887	23
3.1	AT	343059		Straka A. (1992)	1	36	Caricetum gracilis	16.00202	48.35287	25
3.1	AT	425862		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.1	AT	425866		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.1	AT	425868		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.1	AT	425869		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.1	AT	425877		Wagner H. (1950)			Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
3.1	SK		600165	Bosácková E. (1975)	4	10	Caricetum gracilis Almquist 1929	17	48.516667	24
3.1	SK		604033	Klika J. (1958)	pp.14	1	Caricetum gracilis Almquist 1929	17.002778	48.531944	25
3.1	SK		604045	Bosácková E. (1970)	3	1	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604046	Bosácková E. (1970)	3	2	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604047	Bosácková E. (1970)	3	3	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604048	Bosácková E. (1970)	3	4	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604049	Bosácková E. (1970)	3	5	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604050	Bosácková E. (1970)	3	6	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604051	Bosácková E. (1970)	3	7	Caricetum gracilis Almquist 1929	17.002778	48.531944	24
3.1	SK		604195	Balátová-Tulácková E. (1976)	11	5	Caricetum gracilis Almquist 1929	16.944444	48.588889	24
3.1	SK		604198	Balátová-Tulácková E. (1976)	11	8	Caricetum gracilis Almquist 1929	16.916667	48.341667	24
3.1	SK		604199	Balátová-Tulácková E. (1976)	11	9	Caricetum gracilis Almquist 1929	16.902778	48.341667	24
3.1	SK		604204	Balátová-Tulácková E. (1976)	11	14	Caricetum gracilis Almquist 1929	16.858333	48.377778	24
3.1	SK		604221	Balátová-Tulácková E. (1976)	11	31	Caricetum gracilis Almquist 1929	16.955556	48.319444	20
3.1	SK		608136	Posltová A. (1997)	7	1	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		608137	Posltová A. (1997)	7	2	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		608138	Posltová A. (1997)	7	3	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		608139	Posltová A. (1997)	7	4	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		608140	Posltová A. (1997)	7	5	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		608141	Posltová A. (1997)	7	6	Caricetum gracilis Almquist 1929	17.005556	48.533333	24
3.1	SK		611197	Otahelová H. (1996)	2	3	Caricetum gracilis Almquist 1929	16.930556	48.288889	24
3.1	SK		611198	Otahelová H. (1996)	2	1	Caricetum gracilis Almquist 1929	16.930556	48.288333	24
3.1	SK		611199	Otahelová H. (1996)	2	9	Caricion gracilis Neuhausl 1959	16.944444	48.278333	20
3.1	SK		611203	Otahelová H. (1996)	2	7	Caricetum gracilis Almquist 1929	16.957778	48.291111	20
3.1	SK		611238	Otahelová H. (1996)	2	4	Caricetum gracilis Almquist 1929	16.885833	48.343889	25
3.1	SK		611241	Otahelová H. (1996)	2	8	Caricetum gracilis Almquist 1929	16.897222	48.482778	24
3.1	SK		616347	Malovcová-Staníková M. (2004)	1	18	Caricetum gracilis Almquist 1929	16.9	48.469444	24
3.1	SK		624686	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	30	Caricetum gracilis Almquist 1929	16.929167	48.273611	24
3.1	SK		712568	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.903056	48.334444	25
3.1	SK		712573	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.903056	48.334444	24
3.1	SK		712583	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.965	48.546667	24
3.1	SK		712585	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.965278	48.550278	24
3.1	SK		712589	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.935	48.503889	23
3.1	SK		712592	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.948611	48.5925	25
3.1	SK		712593	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.951389	48.581111	24
3.1	SK		712607	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.9625	48.277778	24
3.1	SK		712610	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.945556	48.592222	24
3.1	SK		712615	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.962778	48.551667	24
3.1	SK		712629	Hegedúsová K.			Acoretum calami Schultz 1941	16.952778	48.238611	24
3.1	SK		712631	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.953056	48.236944	24
3.1	SK		712637	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.958889	48.226389	24
3.1	SK		712639	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.955	48.232222	24
3.1	SK		712641	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.951389	48.248889	24
3.1	SK		712642	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.953611	48.255833	20
3.1	SK		712643	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.955833	48.259444	24
3.1	SK		712644	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.953056	48.253889	24
3.1	SK		712645	Hegedúsová K.			Caricetum gracilis Almquist 1929	16.950556	48.243889	24
3.2	AT	340992		Balatova-Tulackova E. & Hübl E. (1974)	5	2	Caricetum vesicariae	16.93581	48.53968	24
3.2	AT	425860		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	25
3.2	AT	425861		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.2	AT	425863		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.2	AT	425864		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.2	AT	425865		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.2	AT	425867		Wagner H. (1950)			Caricetum vesicariae-gracilis	14.7507	48.1708	24
3.2	SK		604177	Balátová-Tulácková E. (1976)	8	4	Caricetum vesicariae Chouard 1924	16.944444	48.588889	24
3.2	SK		611185	Otahelová H. (1996)	p.397		Caricetum vesicariae Chouard 1924	16.957778	48.291111	20
3.3	AT	317839		Beiser A., unpubl.				16.5848	48.14345	26
3.3	AT	318642		Zuna-Kratky T., unpubl. (2017)				16.90609	48.27222	23

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster	
3.5	AT	341787	604160	Rotter D. (1999)	4	43	Caricetum ripariae	16.59287	48.1441	25	
3.5	AT	341788		Rotter D. (1999)	4	44	Caricetum ripariae	16.58487	48.14187	25	
3.5	AT	341789		Rotter D. (1999)	4	45	Caricetum ripariae	16.59455	48.14423	23	
3.5	AT	342051		Projektstudie 1991 (Gottfried et al.)	5	7	Caricetum gracilis	16.9131	48.57316	24	
3.5	AT	342077		Projektstudie 1991 (Gottfried et al.)	7	9	Glycerietum maximae	16.94402	48.22529	24	
3.5	AT	342078		Projektstudie 1991 (Gottfried et al.)	7	10	Glycerietum maximae	16.94402	48.22529	24	
3.5	SK			Balátová-Tulácková E. (1976)	7	5	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.944444	48.588889	25	
3.5	SK			604161	Balátová-Tulácková E. (1976)	7	6	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.961111	48.580556	20
3.5	SK			604162	Balátová-Tulácková E. (1976)	7	7	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.977778	48.511111	20
3.5	SK			604164	Balátová-Tulácková E. (1976)	7	9	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.925	48.455556	20
3.5	SK			611182	Otahelová H. (1996)	2	15	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.930556	48.505556	20
3.5	SK			611187	Otahelová H. (1996)	2	16	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.9375	48.294444	28
3.5	SK			611188	Otahelová H. (1996)	2	10	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.961389	48.556667	20
3.5	SK			611189	Otahelová H. (1996)	2	11	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.955556	48.562222	25
3.5	SK			611190	Otahelová H. (1996)	2	17	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.955556	48.561667	28
3.5	SK			611191	Otahelová H. (1996)	2	12	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.959722	48.558333	20
3.5	SK			611192	Otahelová H. (1996)	2	13	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.905556	48.491389	28
3.5	SK			616355	Malovcová-Staníková M. (2004)	3	1	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.983333	48.566389	25
3.5	SK			616356	Malovcová-Staníková M. (2004)	3	2	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.909167	48.409444	28
3.5	SK			616364	Malovcová-Staníková M. (2004)	3	10	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.915278	48.471111	24
3.5	SK			616369	Malovcová-Staníková M. (2004)	3	15	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.911944	48.469167	28
3.5	SK			616374	Malovcová-Staníková M. (2004)	3	20	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.908611	48.399722	28
3.5	SK			624687	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	31	Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.891667	48.492222	28
3.5	SK			712559	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.898611	48.333056	25
3.5	SK			712560	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.878889	48.343889	28
3.5	SK			712578	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.882778	48.467778	24
3.5	SK			712587	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.939444	48.507778	25
3.5	SK			712590	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.935	48.503889	24
3.5	SK			712596	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.971111	48.551389	25
3.5	SK			712608	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.863611	48.449167	25
3.5	SK			712609	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.918889	48.491667	25
3.5	SK			712611	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.945556	48.592222	28
3.5	SK			712612	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.944444	48.575	24
3.5	SK			712613	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.955	48.568333	20
3.5	SK			712647	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.960278	48.555833	24
3.5	SK		712648	Hegedűsová K.			Galio palustris-Caricetum ripariae Bal.-Tul. in Bal.-Tul.	16.944444	48.5175	24	
3.6	AT	341231	712577	Staudinger M., unpubl.				16.65431	48.11683	23	
3.6	AT	341358		Staudinger M., unpubl.				16.64944	48.12089	23	
3.6	AT	341360		Staudinger M., unpubl.				16.65308	48.12322	23	
3.6	AT	341427		Staudinger M., unpubl.				16.66501	48.12004	23	
3.6	AT	341916		Rotter D. (1999)	7	26	An Galio-Urticetea-Arten reiche Verges.	16.59991	48.14085	25	
3.6	AT	341919		Rotter D. (1999)	7	29	An Galio-Urticetea-Arten reiche Verges.	16.53916	48.15266	25	
3.6	AT	341921		Rotter D. (1999)	7	31	An Galio-Urticetea-Arten reiche Verges.	16.53863	48.15662	26	
3.6	AT	341922		Rotter D. (1999)	7	32	An Galio-Urticetea-Arten reiche Verges.	16.54518	48.16412	28	
3.6	AT	341926		Rotter D. (1999)	7	36	An Galio-Urticetea-Arten reiche Verges.	16.53793	48.16499	26	
3.6	AT	341927		Rotter D. (1999)	7	37	An Galio-Urticetea-Arten reiche Verges.	16.53706	48.16616	26	
3.6	AT	341929		Rotter D. (1999)	7	39	An Galio-Urticetea-Arten reiche Verges.	16.54467	48.154	25	
3.6	AT	341930		Rotter D. (1999)	7	40	An Galio-Urticetea-Arten reiche Verges.	16.56358	48.14452	25	
3.6	AT	341931		Rotter D. (1999)	7	41	An Galio-Urticetea-Arten reiche Verges.	16.56098	48.14975	25	
3.6	AT	341932		Rotter D. (1999)	7	42	An Galio-Urticetea-Arten reiche Verges.	16.567	48.1438	25	
3.6	AT	341933		Rotter D. (1999)	7	43	An Galio-Urticetea-Arten reiche Verges.	16.53863	48.15662	27	
3.6	AT	343071		Straka A. (1992)	1	48	Phalaridetum arundinaceae	15.94337	48.35602	25	
3.6	SK		712577	Hegedűsová K.			Caricetum acutiformis Eggler 1933	16.886944	48.470833	25	
3.7	AT	340994	Balatova-Tulackova E. & Hübl E. (1974)	5	4	Caricetum elatae	16.90094	48.26697	25		
3.7	AT	341689	Rotter D. (1999)	3	1	Caricetum elatae	16.60608	48.13823	25		
3.7	AT	341690	Rotter D. (1999)	3	2	Caricetum elatae	16.58535	48.14367	25		
3.7	AT	341691	Rotter D. (1999)	3	3	Caricetum elatae	16.59058	48.14285	24		
3.7	AT	341692	Rotter D. (1999)	3	4	Caricetum elatae	16.57761	48.1427	25		
3.7	AT	341693	Rotter D. (1999)	3	5	Caricetum elatae	16.59596	48.14396	25		
3.7	AT	341694	Rotter D. (1999)	3	6	Caricetum elatae	16.59964	48.13959	25		
3.7	AT	341695	Rotter D. (1999)	3	7	Caricetum elatae	16.59287	48.1441	25		
3.7	AT	341696	Rotter D. (1999)	3	8	Caricetum elatae	16.60053	48.14359	25		
3.7	AT	341697	Rotter D. (1999)	3	9	Caricetum elatae	16.60991	48.1388	25		
3.7	AT	341698	Rotter D. (1999)	3	10	Caricetum elatae	16.56554	48.16075	25		
3.7	AT	341699	Rotter D. (1999)	3	11	Caricetum elatae	16.57247	48.14977	20		
3.7	AT	341700	Rotter D. (1999)	3	12	Caricetum elatae	16.57916	48.14346	25		
3.7	AT	341701	Rotter D. (1999)	3	13	Caricetum elatae	16.59631	48.14558	25		
3.7	AT	341702	Rotter D. (1999)	3	14	Caricetum elatae	16.58501	48.14367	25		

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3.8	AT	341865		Rotter D. (1999)	6	17	Molinio-Arrhenatheretea	16.57045	48.14842	26
3.8	AT	341868		Rotter D. (1999)	6	20	Molinio-Arrhenatheretea	16.58575	48.14385	26
3.8	AT	341870		Rotter D. (1999)	6	22	Molinio-Arrhenatheretea	16.57762	48.14409	26
3.8	AT	341871		Rotter D. (1999)	6	23	Molinio-Arrhenatheretea	16.55955	48.16081	26
3.8	AT	341876		Rotter D. (1999)	6	28	Molinio-Arrhenatheretea	16.5885	48.14384	25
3.8	AT	341879		Rotter D. (1999)	6	31	Molinio-Arrhenatheretea	16.53615	48.15784	26
3.8	AT	341880		Rotter D. (1999)	6	32	Molinio-Arrhenatheretea	16.58199	48.14413	26
3.8	AT	341881		Rotter D. (1999)	6	33	Calamagrostietum canescentis	16.58662	48.14407	25
3.8	AT	341882		Rotter D. (1999)	6	34	Calamagrostietum canescentis	16.59288	48.14518	26
3.8	AT	341883		Rotter D. (1999)	6	35	Calamagrostietum canescentis	16.59964	48.13959	25
3.8	AT	341884		Rotter D. (1999)	6	36	Calamagrostietum canescentis	16.53636	48.17569	26
3.8	AT	341885		Rotter D. (1999)	6	37	Calamagrostietum canescentis	16.54437	48.163	26
3.8	AT	341886		Rotter D. (1999)	6	38	Calamagrostietum canescentis	16.54437	48.163	26
3.8	AT	341887		Rotter D. (1999)	6	39	Calamagrostietum canescentis	16.54908	48.16231	26
3.8	AT	341888		Rotter D. (1999)	6	40	Calamagrostietum canescentis	16.58622	48.1443	25
3.8	AT	341889		Rotter D. (1999)	6	41	Calamagrostietum canescentis	16.53741	48.16967	26
3.8	AT	341890		Rotter D. (1999)	6	42	Calamagrostietum canescentis	16.53868	48.16759	25
3.8	AT	341891		Rotter D. (1999)	6	43	Calamagrostietum canescentis	16.58973	48.14708	26
3.8	AT	341892		Rotter D. (1999)	7	1	An Galio-Urticetea-Arten reiche Verges.	16.6018	48.14278	25
3.8	AT	341897		Rotter D. (1999)	7	6	An Galio-Urticetea-Arten reiche Verges.	16.5885	48.14384	26
3.8	AT	341903		Rotter D. (1999)	7	13	An Galio-Urticetea-Arten reiche Verges.	16.56015	48.15946	26
3.8	AT	341904		Rotter D. (1999)	7	14	An Galio-Urticetea-Arten reiche Verges.	16.54223	48.16422	26
3.8	AT	341907		Rotter D. (1999)	7	17	An Galio-Urticetea-Arten reiche Verges.	16.54411	48.16417	26
3.8	AT	341912		Rotter D. (1999)	7	22	An Galio-Urticetea-Arten reiche Verges.	16.53733	48.16566	26
3.8	AT	341913		Rotter D. (1999)	7	23	An Galio-Urticetea-Arten reiche Verges.	16.53174	48.16387	26
3.8	AT	341914		Rotter D. (1999)	7	24	An Galio-Urticetea-Arten reiche Verges.	16.53867	48.16508	26
3.8	AT	341917		Rotter D. (1999)	7	27	An Galio-Urticetea-Arten reiche Verges.	16.53671	48.17884	27
3.8	AT	341918		Rotter D. (1999)	7	28	An Galio-Urticetea-Arten reiche Verges.	16.52975	48.17044	26
3.8	AT	341923		Rotter D. (1999)	7	33	An Galio-Urticetea-Arten reiche Verges.	16.54545	48.16443	25
3.8	SK		608142	Posltová A. (1997)	7	7	Caricetum gracilis Almqvist 1929	17.005556	48.533333	23
3.9	AT	341790		Rotter D. (1999)	4	50	Iris pseudacorus-Gesellschaft	16.53741	48.16917	28
3.9	SK		611208	Otahelová H. (1996)	1	36	Iris pseudacorus-comm.	16.892778	48.336111	24
3.9	SK		611209	Otahelová H. (1996)	1	37	Iris pseudacorus-comm.	16.904722	48.493056	20
3.9	SK		624680	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	24	Iris pseudacorus-comm.	16.883333	48.336944	24
4.1	AT	341640		Rotter D. (1999)	1	19	Glycerietum fluitantis	16.53638	48.15388	19
4.1	AT	341641		Rotter D. (1999)	1	20	Glycerietum fluitantis	16.54444	48.15277	19
4.1	AT	341642		Rotter D. (1999)	1	21	Glycerietum fluitantis	16.55861	48.145	19
4.1	AT	425857		Wagner H. (1950)	p.3	150	Glycerieto-Sparganietum neglecti	14.7203064	48.17112289	19
5.1	AT	343081		Straka A. (1992)	1	58	Sagittario-Sparganietum	16.1127	48.34226	16
5.1	SK		611218	Otahelová H. (1996)	4	16	Sagittario-Sparganietum emersi R.Tx. 1953	16.963889	48.289444	18
5.1	SK		611223	Otahelová H. (1996)	4	17	Sagittario-Sparganietum emersi R.Tx. 1953	16.941111	48.570278	18
5.1	SK		611224	Otahelová H. (1996)	4	18	Sagittario-Sparganietum emersi R.Tx. 1953	16.883333	48.478056	18
5.1	SK		611232	Otahelová H. (1996)	4	19	Sagittario-Sparganietum emersi R.Tx. 1953	16.957778	48.559167	18
5.1	SK		611233	Otahelová H. (1996)	4	20	Sagittario-Sparganietum emersi R.Tx. 1953	16.952778	48.522222	18
5.1	SK		624684	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	28	Sagittario-Sparganietum emersi R.Tx. 1953	16.883333	48.336944	18
5.2	AT	341378		Staudinger M., unpubl.				16.96178	48.16921	16
5.2	AT	341402		Staudinger M., unpubl.				16.69752	48.1208	16
5.2	AT	341405		Staudinger M., unpubl.				16.89108	48.14655	16
5.2	AT	341406		Staudinger M., unpubl.				16.90616	48.14935	16
5.2	AT	341408		Staudinger M., unpubl.				16.90922	48.15199	16
5.2	AT	341409		Staudinger M., unpubl.				16.9273	48.15262	16
5.2	AT	341486		Staudinger M., unpubl.			Bidention tripartiti	16.7448	48.12077	21
5.2	AT	341636		Rotter D. (1999)	1	15	Rumici-Alopecuretum aequalis	16.56583	48.14333	19
5.2	AT	341639		Rotter D. (1999)	1	18	Rumici-Alopecuretum aequalis	16.56666	48.14388	16
5.2	AT	342085		Projektstudie 1991 (Gottfried et al.)	9	1	Oenanthe aquaticae-Rorippetum amphibiae	16.9131	48.57316	19
5.2	AT	342087		Projektstudie 1991 (Gottfried et al.)	9	3	Oenanthe aquaticae-Rorippetum amphibiae	16.9131	48.57316	19
5.2	AT	342088		Projektstudie 1991 (Gottfried et al.)	9	4	Oenanthe aquaticae-Rorippetum amphibiae	16.9131	48.57316	19
5.2	AT	343076		Straka A. (1992)	1	53	Oenanthe-Rorippetum	16.17429	48.36039	16
5.2	AT	343117		Fink M., Korner I. & Wrбка T. (1987)			Oenanthon aquaticae	16.28887	48.34763	19
5.2	SK		611211	Otahelová H. (1996)	4	6	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.955556	48.529167	19
5.2	SK		611212	Otahelová H. (1996)	4	4	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.953333	48.528333	19
5.2	SK		611213	Otahelová H. (1996)	4	11	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.9375	48.517222	24
5.2	SK		611214	Otahelová H. (1996)	4	9	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.92	48.511111	19
5.2	SK		611215	Otahelová H. (1996)	4	7	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.930556	48.504167	19
5.2	SK		611216	Otahelová H. (1996)	4	15	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.855556	48.405556	16
5.2	SK		611217	Otahelová H. (1996)	4	8	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.856111	48.405556	19
5.2	SK		611219	Otahelová H. (1996)	4	3	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.924444	48.304167	19
5.2	SK		611220	Otahelová H. (1996)	4	10	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.922778	48.510556	19
5.2	SK		611221	Otahelová H. (1996)	4	2	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.925	48.508333	19
5.2	SK		611222	Otahelová H. (1996)	4	14	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.9275	48.509722	18
5.2	SK		611227	Otahelová H. (1996)	1	28	Sparganietum erecti Roll 1938	16.933333	48.503611	19
5.2	SK		611234	Otahelová H. (1996)	4	1	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.959444	48.555833	19
5.2	SK		611236	Otahelová H. (1996)	4	12	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.905556	48.488889	19
5.2	SK		611237	Otahelová H. (1996)	4	13	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.858889	48.44	19
5.2	SK		624681	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	25	Oenanthon aquaticae Hejný ex Neuhausl 1959	16.891667	48.492222	19
5.2	SK		624793	Banášová V. et al. (1994)	1	21	Oenanthon aquaticae Hejný ex Neuhausl 1959	16.928056	48.502778	18
5.2	SK		624794	Banášová V. et al. (1994)	1	22	Oenanthon aquaticae Hejný ex Neuhausl 1959	16.928056	48.502778	18
5.2	SK		624795	Banášová V. et al. (1994)	1	23	Oenanthon aquaticae Hejný ex Neuhausl 1959	16.928056	48.502778	18
5.2	SK		624796	Banášová V. et al. (1994)	1	24	Oenanthon aquaticae Hejný ex Neuhausl 1959	16.928056	48.502778	18
5.2	SK		638395	Májeková J.		3	Oenanthe aquaticae-Rorippetum amphibiae Lohmayer 1950	16.996944	48.540833	19
5.3	SK		611161	Otahelová H. (1996)	4	21	Butometum umbellati (Konczak 1968) Phillipi 1973	16.958333	48.275	19
5.3	SK		611168	Otahelová H. (1996)	4	22	Butometum umbellati (Konczak 1968) Phillipi 1973	16.941111	48.571389	18
5.3	SK		611175	Otahelová H. (1996)	4	23	Butometum umbellati (Konczak 1968) Phillipi 1973	16.908889	48.463333	18
5.3	SK		611176	Otahelová H. (1996)	4	24	Butometum umbellati (Konczak 1968) Phillipi 1973	16.9625	48.555833	19
5.3	SK		611246	Otahelová H. (1996)	4	21	Butometum umbellati (Konczak 1968) Phillipi 1973	16.956389	48.275	19
5.3	SK		624683	Otahelová H., Janauer G.-A., Husák, S. (1994)	3	27	Butometum umbellati (Konczak 1968) Phillipi 1973	16.946111	48.271667	19
5.4	AT	341745		Rotter D. (1999)	4	1	Eleocharietum palustris	16.56768	48.1594	19
5.4	AT	425880		Wagner H. (1950)			Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
5.4	SK		611160	Otahelová H. (1996)	2	24	Eleocharitetum palustris Ubrizsy 1948	16.958333	48.275	17
5.4	SK		611165	Otahelová H. (1996)	2	28	Eleocharitetum palustris Ubrizsy 1948	16.957778	48.291111	17
5.4	SK		611167	Otahelová H. (1996)	2	25	Eleocharitetum palustris Ubrizsy 1948	16.897222	48.338889	17
5.4	SK		611171	Otahelová H. (1996)	2	26	Eleocharitetum palustris Ubrizsy 1948	16.957778	48.527778	20
5.4	SK		611173	Otahelová H. (1996)	2	30	Eleocharitetum palustris Ubrizsy 1948	16.858333	48.441111	19
5.4	SK		624778	Banášová V. et al. (1994)	1	6	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.928056	48.502778	19
5.4	SK		624779	Banášová V. et al. (1994)	1	7	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.928056	48.502778	20
5.4	SK		624780	Banášová V. et al. (1994)	1	8	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.927778	48.503889	20
5.4	SK		712636	Hegedúsová K.			Eleocharitetum palustris Ubrizsy 1948	16.958889	48.231944	20
6.1	AT	317756		Staudinger M., unpubl.			Basalgesellschaft des Senecionion fluviatilis	16.66058	48.12994	22
6.1	AT	317757		Staudinger M., unpubl.			Potentillion anserinae-Basalgesellschaft	16.66494	48.1302	22
6.1	AT	341201		Staudinger M., unpubl.				16.53556	48.14417	15
6.1	AT	341202		Staudinger M., unpubl.				16.53375	48.1449	15
6.1	AT	341204		Staudinger M., unpubl.				16.52986	48.14778	15
6.1	AT	341205		Staudinger M., unpubl.				16.52813	48.15062	15
6.1	AT	341219		Staudinger M., unpubl.				16.57341	48.13367	15
6.1	AT	341226		Staudinger M., unpubl.				16.62888	48.11919	15
6.1	AT	341228		Staudinger M., unpubl.				16.64425	48.11897	15
6.1	AT	341234		Staudinger M., unpubl.				16.67629	48.11956	22
6.1	AT	341238		Staudinger M., unpubl.				16.66445	48.11554	22
6.1	AT	341264		Staudinger M., unpubl.				16.81761	48.12139	16
6.1	AT	341275		Staudinger M., unpubl.				16.66121	48.12392	16
6.1	AT	341277		Staudinger M., unpubl.				16.77497	48.12214	16
6.1	AT	341278								

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster	
6.1	AT	341481	712628	Staudinger M., unpubl.	5	115	Rumici crispi-Agrostietum stoloniferae	16.62499	48.1317	21	
6.1	AT	341492		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.96233	48.17033	21	
6.1	AT	341545		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.51721	48.15931	21	
6.1	AT	341546		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.517	48.15931	15	
6.1	AT	341547		Staudinger M., unpubl.			Rumici crispi-Agrostietum stoloniferae	16.51687	48.15918	15	
6.1	AT	341577		Essl F. (1999)			Lolietum perennis	16.229853	48.36267	21	
6.1	AT	341578		Essl F. (1999)			Rumici crispi-Agrostietum	16.30702	48.347179	22	
6.1	AT	341580		Essl F. (1999)			Rumici crispi-Agrostietum	16.047973	48.340509	22	
6.1	AT	341626		Rotter D. (1999)			Rumici-Alopecuretum aequalis	16.56388	48.14361	16	
6.1	AT	343095		Straka A. (1992)			Cyperus fuscus-Gesellschaft	16.08112	48.34471	22	
6.1	AT	343112		Fink M., Korner I. & Wrbka T. (1987)	Potentillion anserinae	16.3139	48.33518	22			
6.1	AT	360007		Staudinger M., unpubl.	Rumici obtusifolii-Agrostietum stoloniferae	16.91613333	48.14951667	21			
6.1	SK			Hegedűsová K.	Beruletum angustifoliae Roll 1938	16.953056	48.239444	19			
6.2	AT	317078		Schratt-Ehrendorfer, unpubl.		16.706534	48.13035349	40			
6.2	AT	317132		Schratt-Ehrendorfer, unpubl.		16.83568295	48.13327437	42			
6.2	AT	317278		Schratt-Ehrendorfer, unpubl.		16.67903726	48.13618518	42			
6.2	AT	317354		Schratt-Ehrendorfer, unpubl.		16.77096947	48.13341096	40			
6.2	AT	317371		Schratt-Ehrendorfer, unpubl.		16.7690253	48.13341089	39			
6.2	AT	317405		Schratt-Ehrendorfer, unpubl.		16.64209901	48.12090789	23			
6.2	AT	317406		Schratt-Ehrendorfer, unpubl.		16.64251564	48.12076903	23			
6.2	AT	317514		Schratt-Ehrendorfer, unpubl.		16.58377195	48.14173673	23			
6.2	AT	317539		Schratt-Ehrendorfer, unpubl.		16.58488276	48.143681	23			
6.2	AT	317794		Sauberer N., unpubl.		16.76421	48.12954	23			
6.2	AT	317831		Beiser A., unpubl.		16.77133	48.13258	23			
6.2	AT	318619		Zuna-Kratky T., unpubl. (2017)		16.9155	48.69233	37			
6.2	AT	318653		Zuna-Kratky T., unpubl. (2017)		16.83828	48.38606	23			
6.2	AT	340536		Plenk S. (1991)		7	Gratiolo-Caricetum suzae Faz. Lysimachia vulgaris	16.938889	48.528333	23	
6.2	AT	340573		Plenk S. (1991)		42	Potentillion anserinae	16.924472	48.529583	23	
6.2	AT	340583		Kuyper T.W. et al. (1978)		170	Agrostio-Poetum trivialis	16.690111	48.139833	42	
6.2	AT	341017		Balatova-Tulackova E. & Hübl E. (1974)	7	11	Gratiolo-Caricetum suzae	16.88229	48.29876	23	
6.2	AT	341412		Staudinger M., unpubl.			16.72216	48.12782	23		
6.2	AT	341622		Rotter D. (1999)	1	1	Agrosti stolonifera-Gesellschaft	16.58833	48.1425	22	
6.2	AT	341834		Rotter D. (1999)	5	45	Calam.epig.-reiche Vergesellschaftungen	16.58535	48.14367	23	
6.2	AT	341846		Rotter D. (1999)	5	57	Calam.epig.-reiche Vergesellschaftungen	16.58076	48.13927	23	
6.2	AT	341847		Rotter D. (1999)	5	58	Calam.epig.-reiche Vergesellschaftungen	16.58501	48.14367	23	
6.2	AT	341848		Rotter D. (1999)	5	60	Calam.epig.-reiche Vergesellschaftungen	16.58622	48.1443	23	
6.2	AT	341849		Rotter D. (1999)	6	1	Molinio-Arrhenatheretea	16.57863	48.14382	23	
6.2	AT	341850		Rotter D. (1999)	6	2	Molinio-Arrhenatheretea	16.57863	48.14382	23	
6.2	AT	341858		Rotter D. (1999)	6	10	Molinio-Arrhenatheretea	16.58622	48.1438	39	
6.2	AT	341859		Rotter D. (1999)	6	11	Molinio-Arrhenatheretea	16.59059	48.14438	23	
6.2	AT	341860		Rotter D. (1999)	6	12	Molinio-Arrhenatheretea	16.59577	48.14518	23	
6.2	AT	341861		Rotter D. (1999)	6	13	Molinio-Arrhenatheretea	16.59547	48.13964	23	
6.2	AT	341862		Rotter D. (1999)	6	14	Molinio-Arrhenatheretea	16.57863	48.14382	23	
6.2	AT	341863		Rotter D. (1999)	6	15	Molinio-Arrhenatheretea	16.57916	48.14346	23	
6.2	AT	341864		Rotter D. (1999)	6	16	Molinio-Arrhenatheretea	16.58501	48.14367	23	
6.2	AT	341869		Rotter D. (1999)	6	21	Molinio-Arrhenatheretea	16.58622	48.1443	23	
6.2	AT	341872		Rotter D. (1999)	6	24	Molinio-Arrhenatheretea	16.58798	48.14636	26	
6.2	AT	341878		Rotter D. (1999)	6	30	Molinio-Arrhenatheretea	16.58749	48.14272	23	
6.2	AT	341984		Projektstudie 1991 (Gottfried et al.)	2	29	Cnidio venosi-Violetum pumilae	16.87845	48.29887	40	
6.2	AT	342021		Projektstudie 1991 (Gottfried et al.)	3	24	Gratiolo-Caricetum suzae	16.9131	48.57316	40	
6.2	AT	342027		Projektstudie 1991 (Gottfried et al.)	3	30	Gratiolo-Caricetum suzae	16.9131	48.57316	37	
6.2	AT	342043		Projektstudie 1991 (Gottfried et al.)	4	6	Cerastio-Ranunculetum sardoi	16.94402	48.22529	23	
6.2	AT	342044		Projektstudie 1991 (Gottfried et al.)	4	7	Cerastio-Ranunculetum sardoi	16.94402	48.22529	40	
6.2	AT	342048		Projektstudie 1991 (Gottfried et al.)	5	4	Caricetum gracilis	16.9131	48.57316	23	
6.2	AT	342049		Projektstudie 1991 (Gottfried et al.)	5	5	Caricetum gracilis	16.9131	48.57316	23	
6.2	AT	355076		Sauberer N., unpubl.	3	10		16.90376	48.58018	25	
6.2	AT	355077		Sauberer N., unpubl.				16.90408	48.57956	25	
6.2	AT	355078		Sauberer N., unpubl.				16.90422	48.57928	23	
6.2	AT	355079		Sauberer N., unpubl.				16.92192	48.5371	39	
6.2	AT	355080		Sauberer N., unpubl.				16.92351	48.53549	23	
6.2	AT	355081		Sauberer N., unpubl.				16.87102	48.32067	23	
6.2	AT	425870		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425871		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425872		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425873		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425874		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425875		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425876		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425878		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425879		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425881		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425882		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425883		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425884		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	40
6.2	AT	425885		Wagner H. (1950)				(ausgeschieden)	14.7507	48.1708	23
6.2	AT	425886		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	23
6.2	AT	425888		Wagner H. (1950)				Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	40
6.2	AT	425890		Wagner H. (1950)				(ausgeschieden)	14.7507	48.1708	40
6.2	AT	425892		Wagner H. (1950)				Carex toment.-Ophiogl.vulg.-Ass. - Poa pal.	14.7507	48.1708	23
6.2	AT	425893		Wagner H. (1950)				Carex toment.-Ophiogl.vulg.-Ass. - Poa pal.	14.7507	48.1708	39
6.2	AT	425895		Wagner H. (1950)				(ausgeschieden)	14.7507	48.1708	23
6.2	AT	425897		Wagner H. (1950)				Carex toment.-Ophiogl.vulg.-Ass. - Poa pal.	14.7507	48.1708	39
6.2	SK		412067	Balátová-Tulácková E. (1968)	3	10	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.958611	48.256111	23	
6.2	SK		602257	Zlinská J., Otahelová H. (1992)	1	4	Rorippo-Phalaridetum arundinaceae Kopecký 1961	16.916389	48.502222	24	
6.2	SK		604328	Balátová-Tulácková E. (1968)	2	3	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.966667	48.266667	23	
6.2	SK		613693	Zlinská J. (1993)	1	11	Potentillion anserinae R.Tx. 1947	16.933889	48.291111	23	
6.2	SK		613694	Zlinská J. (1993)	1	12	Potentillion anserinae R.Tx. 1947	16.931111	48.29	23	
6.2	SK		613696	Zlinská J. (1993)	1	14	Rorippo-Agrostietum stoloniferae Oberd. et	16.927			

Syntaxon	Country	Turbogev ID (AT)	Turbogev ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
7.1	AT	340561		Plenk S. (1991)		33	Gratiolo-Caricetum suzae	16.928833	48.525778	23
7.1	AT	340563		Plenk S. (1991)		36	Gratiolo-Caricetum suzae	16.928833	48.525778	37
7.1	AT	340564		Plenk S. (1991)		31	Potentillion anserinae	16.928833	48.525778	23
7.1	AT	340565		Plenk S. (1991)		34	Potentillion anserinae	16.928833	48.525778	23
7.1	AT	340578		Plenk S. (1991)		49	Cnidion	16.925917	48.526111	23
7.1	AT	340581		Plenk S. (1991)		52	Cnidium dubium-Carex disticha-Gesellschaft	16.922194	48.532389	23
7.1	AT	341005		Balatova-Tulackova E. & Hübl E. (1974)	6	1	Lathyro palustris-Gratioletum	16.92695	48.60443	23
7.1	AT	341006		Balatova-Tulackova E. & Hübl E. (1974)	6	2	Lathyro palustris-Gratioletum	16.92695	48.60443	23
7.1	AT	341007		Balatova-Tulackova E. & Hübl E. (1974)	7	1	Gratiolo-Caricetum suzae	16.90631	48.28344	23
7.1	AT	341008		Balatova-Tulackova E. & Hübl E. (1974)	7	2	Gratiolo-Caricetum suzae	16.90631	48.28344	23
7.1	AT	341009		Balatova-Tulackova E. & Hübl E. (1974)	7	3	Gratiolo-Caricetum suzae	16.90631	48.28344	23
7.1	AT	341010		Balatova-Tulackova E. & Hübl E. (1974)	7	4	Gratiolo-Caricetum suzae	16.90631	48.28344	23
7.1	AT	341011		Balatova-Tulackova E. & Hübl E. (1974)	7	5	Gratiolo-Caricetum suzae	16.92558	48.53874	23
7.1	AT	341012		Balatova-Tulackova E. & Hübl E. (1974)	7	6	Gratiolo-Caricetum suzae	16.92558	48.53874	37
7.1	AT	341013		Balatova-Tulackova E. & Hübl E. (1974)	7	7	Gratiolo-Caricetum suzae	16.92558	48.53874	37
7.1	AT	341015		Balatova-Tulackova E. & Hübl E. (1974)	7	9	Gratiolo-Caricetum suzae	16.92695	48.60443	23
7.1	AT	341985		Projektstudie 1991 (Gottfried et al.)	2	30	Cnidio venosi-Violetum pumilae	16.87845	48.29887	37
7.1	AT	342004		Projektstudie 1991 (Gottfried et al.)	3	7	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.1	AT	342017		Projektstudie 1991 (Gottfried et al.)	3	20	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.1	AT	342019		Projektstudie 1991 (Gottfried et al.)	3	22	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.1	AT	342022		Projektstudie 1991 (Gottfried et al.)	3	25	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.1	AT	342023		Projektstudie 1991 (Gottfried et al.)	3	26	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.1	AT	342025		Projektstudie 1991 (Gottfried et al.)	3	28	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.1	AT	342033		Projektstudie 1991 (Gottfried et al.)	3	36	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.1	AT	342034		Projektstudie 1991 (Gottfried et al.)	3	37	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.1	AT	342040		Projektstudie 1991 (Gottfried et al.)	4	3	Cerastio-Ranunculetum sardoi	16.9131	48.57316	23
7.1	AT	342042		Projektstudie 1991 (Gottfried et al.)	4	5	Cerastio-Ranunculetum sardoi	16.94402	48.22529	23
7.1	AT	342054		Projektstudie 1991 (Gottfried et al.)	5	10	Caricetum gracilis	16.9131	48.57316	23
7.1	AT	342059		Projektstudie 1991 (Gottfried et al.)	5	15	Caricetum gracilis	16.9131	48.57316	23
7.1	AT	342083		Projektstudie 1991 (Gottfried et al.)	8	5	Phragmites-Urtica-Gesellschaft	16.94402	48.22529	37
7.1	AT	343246		Staudinger M., unpubl.			Alopecurion	16.85206667	48.42915	23
7.1	AT	343247		Staudinger M., unpubl.			Alopecurion	16.85231667	48.42913333	23
7.1	AT	343248		Staudinger M., unpubl.			Alopecurion	16.85296667	48.42896667	23
7.1	AT	343251		Staudinger M., unpubl.			Alopecurion	16.88725	48.48265	23
7.1	SK		412068	Balátová-Tulácková E. (1968)	3	11	Molinio-Arrhenathereta R.Tx. 1937 em. 1970	16.896944	48.332778	23
7.1	SK		604329	Balátová-Tulácková E. (1968)	2	4	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.905556	48.333333	23
7.1	SK		613690	Zlinská J. (1993)	1	8	Potentillion anserinae R.Tx. 1947	16.929722	48.274444	23
7.1	SK		613692	Zlinská J. (1993)	1	10	Rorippo-Agrostietum stoloniferae Oberd. et	16.955278	48.268611	23
7.1	SK		613695	Zlinská J. (1993)	1	13	Potentillion anserinae R.Tx. 1947	16.929444	48.506111	23
7.1	SK		613844	Seffer J., Stanová V. (eds.) (1999)	2	7	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.913889	48.325	23
7.2	AT	317184		Schratt-Ehrendorfer, unpubl.				16.91400323	48.16443183	23
7.2	AT	317282		Schratt-Ehrendorfer, unpubl.				16.66876129	48.13090766	40
7.2	AT	317283		Schratt-Ehrendorfer, unpubl.				16.66820581	48.13076876	23
7.2	AT	317359		Schratt-Ehrendorfer, unpubl.				16.77513575	48.13118915	23
7.2	AT	317360		Schratt-Ehrendorfer, unpubl.				16.77569118	48.13174465	23
7.2	AT	317366		Schratt-Ehrendorfer, unpubl.				16.77055309	48.13063349	40
7.2	AT	317367		Schratt-Ehrendorfer, unpubl.				16.77027532	48.13091123	40
7.2	AT	317370		Schratt-Ehrendorfer, unpubl.				16.77041412	48.13188334	23
7.2	AT	317416		Schratt-Ehrendorfer, unpubl.				16.65015369	48.11826959	23
7.2	AT	317527		Schratt-Ehrendorfer, unpubl.				16.61849053	48.12812843	23
7.2	AT	317759		Staudinger M., unpubl.			Poo trivialis-Alopecuretum	16.66831	48.13082	23
7.2	AT	317798		Sauberer N., unpubl.				16.77754	48.12425	23
7.2	AT	317803		Huspeka J., unpubl.				16.70699	48.13026	23
7.2	AT	317812		Huspeka J., unpubl.				16.67053	48.13024	23
7.2	AT	317817		Beiser A., unpubl.				16.94187	48.17154	23
7.3	AT	425906		Wagner H. (1950)				14.7507	48.1708	39
7.3	AT	425907		Wagner H. (1950)			Gratiola off.-Carex fusca-Ass.	14.7507	48.1708	23
7.3	AT	425908		Wagner H. (1950)			Gratiola off.-Carex fusca-Ass.	14.7507	48.1708	23
7.3	AT	425909		Wagner H. (1950)			Gratiola off.-Carex fusca-Ass.	14.7507	48.1708	23
7.4	AT	318615		Zuna-Kratky T., unpubl. (2017)				16.91066	48.69176	37
7.4	AT	318618		Zuna-Kratky T., unpubl. (2017)				16.91253	48.70245	43
7.4	AT	318620		Zuna-Kratky T., unpubl. (2017)				16.91993	48.57627	37
7.4	AT	318621		Zuna-Kratky T., unpubl. (2017)				16.9206	48.66955	38
7.4	AT	318622		Zuna-Kratky T., unpubl. (2017)				16.93192	48.61155	41
7.4	AT	318623		Zuna-Kratky T., unpubl. (2017)				16.93258	48.61598	37
7.4	AT	318624		Zuna-Kratky T., unpubl. (2017)				16.93432	48.6102	38
7.4	AT	318625		Zuna-Kratky T., unpubl. (2017)				16.9356	48.61684	37
7.4	AT	318641		Zuna-Kratky T., unpubl. (2017)				16.90472	48.27067	42
7.4	AT	318646		Zuna-Kratky T., unpubl. (2017)				16.94682	48.25272	41
7.4	AT	318649		Zuna-Kratky T., unpubl. (2017)				16.94908	48.25635	37
7.4	AT	318650		Zuna-Kratky T., unpubl. (2017)				16.83275	48.38324	43
7.4	AT	318652		Zuna-Kratky T., unpubl. (2017)				16.83605	48.38513	38
7.4	AT	318654		Zuna-Kratky T., unpubl. (2017)				16.84006	48.3599	38
7.4	AT	318655		Zuna-Kratky T., unpubl. (2017)				16.84023	48.3547	37
7.4	AT	318660		Zuna-Kratky T., unpubl. (2017)				16.84642	48.4333	37
7.4	AT	318661		Zuna-Kratky T., unpubl. (2017)				16.85508	48.45279	41
7.4	AT	318662		Zuna-Kratky T., unpubl. (2017)				16.86231	48.45472	38
7.4	AT	318663		Zuna-Kratky T., unpubl. (2017)				16.90218	48.51774	37
7.4	AT	318666		Zuna-Kratky T., unpubl. (2017)				16.91012	48.51252	37
7.4	AT	318668		Zuna-Kratky T., unpubl. (2017)				16.92797	48.52582	37
7.4	AT	318669		Zuna-Kratky T., unpubl. (2017)				16.93654	48.52519	37
7.4	AT	318674		Zuna-Kratky T., unpubl. (2017)				16.92046	48.66574	37
7.4	AT	340530		Plenk S. (1991)		1	Cnidion	16.938889	48.528333	41
7.4	AT	340531		Plenk S. (1991)		2	Cnidion	16.938889	48.528333	37
7.4	AT	340538		Plenk S. (1991)		9	Gratiolo-Caricetum suzae subass. Galium boreale	16.938889	48.528333	37
7.4	AT	340541		Plenk S. (1991)		12	Thalictro flavi-Veronicetum longifoliae	16.942028	48.531694	37
7.4	AT	340542		Plenk S. (1991)		13	Arrhenatherion	16.942028	48.531694	38
7.4	AT	340547		Plenk S. (1991)		18	Potentillion anserinae	16.938083	48.525139	23
7.4	AT	340555		Plenk S. (1991)		26	Gratiolo-Caricetum suzae	16.942139	48.523278	37
7.4	AT	340562		Plenk S. (1991)		35	Gratiolo-Caricetum suzae	16.928833	48.525778	37
7.4	AT	341014		Balatova-Tulackova E. & Hübl E. (1974)	7	8	Gratiolo-Caricetum suzae	16.92558	48.53874	37
7.4	AT	341016		Balatova-Tulackova E. & Hübl E. (1974)	7	10	Gratiolo-Caricetum suzae	16.88039	48.71833	37
7.4	AT	341018		Balatova-Tulackova E. & Hübl E. (1974)	7	12	Gratiolo-Caricetum suzae	16.88039	48.71833	38
7.4	AT	341019		Balatova-Tulackova E. & Hübl E. (1974)	7	14	Gratiolo-Caricetum suzae	16.88039	48.71833	38
7.4	AT	341020		Balatova-Tulackova E. & Hübl E. (1974)	7	15	Gratiolo-Caricetum suzae	16.88039	48.71833	37
7.4	AT	341021		Balatova-Tulackova E. & Hübl E. (1974)	8	1	Cnidio dubii-Violetum pumilae	16.95865	48.21626	38
7.4	AT	341022		Balatova-Tulackova E. & Hübl E. (1974)	8	2	Cnidio dubii-Violetum pumilae	16.88587	48.29946	37
7.4	AT	341023		Balatova-Tulackova E. & Hübl E. (1974)	8	3	Cnidio dubii-Violetum pumilae	16.92558	48.53874	37
7.4	AT	341024		Balatova-Tulackova E. & Hübl E. (1974)	8	4	Cnidio dubii-Violetum pumilae	16.92695	48.60443	38
7.4	AT	341025		Balatova-Tulackova E. & Hübl E. (1974)	8	5	Cnidio dubii-Violetum pumilae	16.92695	48.60443	37
7.4	AT	341031		Balatova-Tulackova E. & Hübl E. (1974)	9	1	Silaetum pratensis	16.92695	48.60443	39
7.4	AT	341032		Balatova-Tulackova E. & Hübl E. (1974)	9	2	Silaetum pratensis	16.92695	48.60443	39
7.4	AT	341033		Balatova-Tulackova E. & Hübl E. (1974)	9	3	Silaetum pratensis	16.92695	48.60443	39
7.4	AT	341034		Balatova-Tulackova E. & Hübl E. (1974)	9	4	Silaetum pratensis	16.90303	48.69596	39
7.4	AT	341035		Balatova-Tulackova E. & Hübl E. (1974)	9	5	Silaetum pratensis	16.91469	48.65229	38
7.4	AT	341068		Staudinger M., unpubl.			Gratiolo-Caricetum suzae	16.91809	48.57048	37
7.4	AT	341937		Projektstudie 1991 (Gottfried et al.)	1	3	Serratulo-Festucetum commutatae	16.94402	48.22529	41
7.4	AT	341940		Projektstudie 1991 (Gottfried et al.)	1	6	Serratulo-Festucetum commutatae	16.94402	48.22529	41
7.4	AT	341950		Projektstudie 1991 (Gottfried et al.)	1	16	Serratulo-Festucetum commutatae	16.94402	48.22529	38
7.4	AT	341952		Projektstudie 1991 (Gottfried et al.)	1	18	Serratulo-Festucetum commutatae	16.94402	48.22529	38
7.4	AT	341954		Projektstudie 1991 (Gottfried et al.)	1	20	Serratulo-Festucetum commutatae	16.94402	48.22529	38
7.4	AT	341955		Projektstudie 1991 (Gottfried et al.)	1	21	Serratulo-Festucetum commutatae	16.94402	48.22529	41
7.4	AT	341956		Projektstudie 1991 (Gottfried et al.)	2	1	Cnidio venosi-Violetum pumilae	16.94402	48.22529	38
7.4	AT	341959		Projektstudie 1991 (Gottfried et al.)	2	4	Cnidio venosi-Violetum pumilae	16.94402	48.22529	38
7.4										

Syntaxon	Country	Turbogev ID (AT)	Turbogev ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
7.4	AT	342014		Projektstudie 1991 (Gottfried et al.)	3	17	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342015		Projektstudie 1991 (Gottfried et al.)	3	18	Gratiolo-Caricetum suzae	16.94402	48.22529	37
7.4	AT	342016		Projektstudie 1991 (Gottfried et al.)	3	19	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342018		Projektstudie 1991 (Gottfried et al.)	3	21	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342020		Projektstudie 1991 (Gottfried et al.)	3	23	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.4	AT	342026		Projektstudie 1991 (Gottfried et al.)	3	29	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342029		Projektstudie 1991 (Gottfried et al.)	3	32	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342030		Projektstudie 1991 (Gottfried et al.)	3	33	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342031		Projektstudie 1991 (Gottfried et al.)	3	34	Gratiolo-Caricetum suzae	16.94402	48.22529	37
7.4	AT	342032		Projektstudie 1991 (Gottfried et al.)	3	35	Gratiolo-Caricetum suzae	16.94402	48.22529	37
7.4	AT	342035		Projektstudie 1991 (Gottfried et al.)	3	38	Gratiolo-Caricetum suzae	16.9131	48.57316	37
7.4	AT	342036		Projektstudie 1991 (Gottfried et al.)	3	39	Gratiolo-Caricetum suzae	16.9131	48.57316	23
7.4	AT	342037		Projektstudie 1991 (Gottfried et al.)	3	40	Gratiolo-Caricetum suzae	16.87845	48.29887	37
7.4	AT	342041		Projektstudie 1991 (Gottfried et al.)	4	4	Cerastio-Ranunculetum sardoii	16.94402	48.22529	38
7.4	AT	342093		Pauer E. (2005)	1	4	Gratiolo-Caricetum praecocis	16.86819	48.34041	37
7.4	AT	342094		Pauer E. (2005)	1	6	Gratiolo-Caricetum praecocis	16.87477	48.33305	38
7.4	AT	343149		Staudinger M., unpubl.			Alopecurion	16.83221667	48.3814	38
7.4	AT	343150		Staudinger M., unpubl.			Alopecurion	16.83581667	48.385	38
7.4	AT	343152		Staudinger M., unpubl.			Alopecurion	16.84813333	48.3865	41
7.4	AT	343153		Staudinger M., unpubl.			Alopecurion	16.84988333	48.39058333	41
7.4	AT	343154		Staudinger M., unpubl.			Alopecurion	16.85285	48.3941	38
7.4	AT	343155		Staudinger M., unpubl.			Alopecurion	16.85323333	48.39621667	41
7.4	AT	343156		Staudinger M., unpubl.			Alopecurion	16.85445	48.39875	38
7.4	AT	343157		Staudinger M., unpubl.			Alopecurion	16.85401667	48.39955	38
7.4	AT	343158		Staudinger M., unpubl.			Alopecurion	16.85133333	48.4026	41
7.4	AT	343159		Staudinger M., unpubl.			Alopecurion	16.84818333	48.40331667	37
7.4	AT	343160		Staudinger M., unpubl.			Alopecurion	16.8474	48.40961667	37
7.4	AT	343161		Staudinger M., unpubl.			Alopecurion	16.84933333	48.39893333	37
7.4	AT	343162		Staudinger M., unpubl.			Alopecurion	16.8485	48.39873333	37
7.4	AT	343163		Staudinger M., unpubl.			Alopecurion	16.84995	48.39845	37
7.4	AT	343245		Staudinger M., unpubl.			Alopecurion	16.84988333	48.43975	38
7.4	AT	343249		Staudinger M., unpubl.			Alopecurion	16.85083333	48.43021667	37
7.4	AT	343253		Staudinger M., unpubl.			Alopecurion	16.90508333	48.51461667	37
7.4	AT	343254		Staudinger M., unpubl.			Alopecurion	16.90463333	48.51633333	37
7.4	SK		412065	Balátová-Tulácková E. (1968)	3	8	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.957222	48.2575	37
7.4	SK		412066	Balátová-Tulácková E. (1968)	3	9	Molinio-Arrhenatheretea R.Tx. 1937 em. 1970	16.895833	48.334167	37
7.4	SK		604326	Balátová-Tulácková E. (1968)	2	1	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.966667	48.266667	37
7.4	SK		604327	Balátová-Tulácková E. (1968)	2	2	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.905556	48.333333	37
7.4	SK		604335	Balátová-Tulácková E. (1968)	2	10	Filipendulo-Geranietum palustris Koch 1926	17.002778	48.531944	23
7.4	SK		608426	Zlinská J. & Stanová V. (1995)	p. 83	1	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.275	38
7.4	SK		608427	Zlinská J. & Stanová V. (1995)	p. 83	2	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.272222	37
7.4	SK		613691	Zlinská J. (1993)	1	9	Potentillion anserinae R.Tx. 1947	16.925278	48.278056	37
7.4	SK		613841	Seffer J., Stanová V. (eds.) (1999)	2	4	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.941667	48.555556	37
7.4	SK		613845	Seffer J., Stanová V. (eds.) (1999)	2	8	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.913889	48.325	37
7.4	SK		613846	Seffer J., Stanová V. (eds.) (1999)	2	9	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	37
7.4	SK		613850	Seffer J., Stanová V. (eds.) (1999)	2	13	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.952778	48.541667	38
7.4	SK		613851	Seffer J., Stanová V. (eds.) (1999)	2	14	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.952778	48.541667	38
7.4	SK		613852	Seffer J., Stanová V. (eds.) (1999)	2	15	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	38
7.4	SK		613853	Seffer J., Stanová V. (eds.) (1999)	2	16	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	38
7.4	SK		613854	Seffer J., Stanová V. (eds.) (1999)	2	17	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.919444	48.280556	38
7.4	SK		613855	Seffer J., Stanová V. (eds.) (1999)	2	18	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.913889	48.325	38
7.4	SK		613856	Seffer J., Stanová V. (eds.) (1999)	2	19	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	38
7.4	SK		613857	Seffer J., Stanová V. (eds.) (1999)	2	20	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	38
7.4	SK		613858	Seffer J., Stanová V. (eds.) (1999)	2	21	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.930556	48.295833	38
7.4	SK		628500	Banášová V., Otahelová H., Zaliberová M. (1995)	1	1	Molinietalia Koch 1926	16.961667	48.313611	39
7.4	SK		628501	Banášová V., Otahelová H., Zaliberová M. (1995)	1	2	Molinion Koch 1926	16.961667	48.3125	39
7.4	SK		628502	Banášová V., Otahelová H., Zaliberová M. (1995)	1	3	Alopecurion pratensis Passarge 1964	16.962778	48.311667	38
7.4	SK		628503	Banášová V., Otahelová H., Zaliberová M. (1995)	1	4	Alopecurion pratensis Passarge 1964	16.963333	48.31	38
7.4	SK		714421	Skodová I.			Alopecurion pratensis Passarge 1964	16.855833	48.410278	41
7.4	SK		714426	Skodová I.			Molinietalia Koch 1926	16.891389	48.473889	37
7.4	SK		714429	Skodová I.			Molinietalia Koch 1926	16.903889	48.488889	41
7.4	SK		714433	Skodová I.			Alopecurion pratensis Passarge 1964	16.947222	48.590833	38
7.4	SK		714437	Skodová I.			Molinietalia Koch 1926	16.9525	48.564167	41
7.4	SK		714443	Skodová I.			Molinietalia Koch 1926	16.958889	48.558889	41
7.5	AT	317011		Schratt-Ehrendorfer, unpubl.				16.93705531	48.16882936	40
7.5	AT	317018		Schratt-Ehrendorfer, unpubl.				16.94552608	48.17271809	39
7.5	AT	317021		Schratt-Ehrendorfer, unpubl.				16.94205443	48.17137646	23
7.5	AT	317022		Schratt-Ehrendorfer, unpubl.				16.94247104	48.17146813	39
7.5	AT	317023		Schratt-Ehrendorfer, unpubl.				16.94510957	48.17146822	39
7.5	AT	317047		Schratt-Ehrendorfer, unpubl.				16.93622245	48.16424653	40
7.5	AT	317073		Schratt-Ehrendorfer, unpubl.				16.71458848	48.13000659	42
7.5	AT	317091		Schratt-Ehrendorfer, unpubl.				16.91789261	48.15160847	42
7.5	AT	317128		Schratt-Ehrendorfer, unpubl.				16.83707151	48.13507977	47
7.5	AT	317174		Schratt-Ehrendorfer, unpubl.				16.74708382	48.13341012	26
7.5	AT	317185		Schratt-Ehrendorfer, unpubl.				16.91400321	48.16461515	39
7.5	AT	317189		Schratt-Ehrendorfer, unpubl.				16.93136141	48.17174548	40
7.5	AT	317196		Schratt-Ehrendorfer, unpubl.				16.87873217	48.13980291	42
7.5	AT	317214		Schratt-Ehrendorfer, unpubl.				16.76819214	48.13243876	39
7.5	AT	317226		Schratt-Ehrendorfer, unpubl.				16.74347322	48.13313225	39
7.5	AT	317227		Schratt-Ehrendorfer, unpubl.				16.74291775	48.13299335	42
7.5	AT	317260		Schratt-Ehrendorfer, unpubl.				16.70097878	48.13549158	42
7.5	AT	317273		Schratt-Ehrendorfer, unpubl.				16.69014669	48.13840753	42
7.5	AT	317348		Schratt-Ehrendorfer, unpubl.				16.80846511	48.12438556	42
7.5	AT	317382		Schratt-Ehrendorfer, unpubl.				16.87595448	48.1434135	42
7.5	AT	317392		Schratt-Ehrendorfer, unpubl.				16.87484353	48.14327459	42
7.5	AT	317402		Schratt-Ehrendorfer, unpubl.				16.89511772	48.15396885	42
7.5	AT	317407		Schratt-Ehrendorfer, unpubl.				16.64265446	48.12132453	42
7.5	AT	317541		Schratt-Ehrendorfer, unpubl.				16.58585474	48.14506976	42
7.5	AT	317749		Staudinger M., unpubl.			Ranunculo repentis-Alopecuretum pratensis	16.69878	48.12821	39
7.5	AT	317766		Staudinger M., unpubl.			Festuco pratensis-Alopecuretum	16.98529	48.1626	41
7.5	AT	317785		Staudinger M., unpubl.			Ranunculo repentis-Alopecuretum pratensis	16.84126	48.13005	43
7.5	AT	317795		Sauberer N., unpubl.				16.74342	48.13351	40
7.5	AT	317804		Huspeka J., unpubl.				16.70933	48.13196	40
7.5	AT	317806		Huspeka J., unpubl.				16.70065	48.13339	43
7.5	AT	317811		Huspeka J., unpubl.				16.66934	48.13683	40
7.5	AT	317816		Beiser A., unpubl.				16.93714	48.17054	41
7.5	AT	317819		Beiser A., unpubl.				16.82159	48.134	39
7.5	AT	317820		Beiser A., unpubl.				16.94602	48.17212	39
7.5	AT	317825		Beiser A., unpubl.				16.88283	48.14249	39
7.5	AT	317826		Beiser A., unpubl.				16.87558	48.14364	39
7.5	AT	317828		Beiser A., unpubl.				16.7629	48.13837	39
7.5	AT	317829		Beiser A., unpubl.				16.80236	48.13657	42
7.5	AT	317830		Beiser A., unpubl.				16.77419	48.13242	39
7.5	AT	317833		Beiser A., unpubl.				16.93065	48.17117	39
7.5	AT	341026		Balatova-Tulackova E. & Hübl E. (1974)	8	6	Cnidio dubii-Violetum pumilae	16.77171	48.13344	39
7.5	AT	341027		Balatova-Tulackova E. & Hübl E. (1974)	8	7	Cnidio dubii-Violetum pumilae	16.77171	48.13344	39
7.5	AT	341028		Balatova-Tulackova E. & Hübl E. (1974)	8	8	Cnidio dubii-Violetum pumilae	16.77171	48.13344	39
7.5	AT	341029		Balatova-Tulackova E. & Hübl E. (1974)	8	9	Cnidio dubii-Violetum pumilae	16.77359	48.13352	39
7.5	AT	341030		Balatova-Tulackova E. & Hübl E. (1974)	8	10	Cnidio dubii-Violetum pumilae	16.7738	48.13447	39
7.5	AT	341039		Balatova-Tulackova E. & Hübl E. (1974)	11	3	Molinietum caeruleae	16.77171	48.13344	39
7.5	AT	343311		Straka A. & Ellmauer T. (1990)			Ophioglosso-Caricetum tomentosae	16.20752	48.37356	42
7.5	AT	343316		Straka A. & Ellmauer T. (1990)			Ranunculo repentis-Alopecuretum	16.20989	48.37325	42
7.5	AT	343317		Straka A. & Ellmauer T. (1990)			Ophioglosso-Caricetum tomentosae	16.20786	48.3741	42
7.5	AT	425891		Wagner H. (1950)			Carex toment.-Ophiogl.vulg.-Ass. - Poa pal.	14.7507	48.1708	40
7.5	AT	425								

Syntaxon	Country	Turbogev ID (AT)	Turbogev ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
7.6	AT	317736	714438	Wiedermann M. et al. (2000)	3	118	Alopecurus pratensis-Ranunculus repens-Ges.	16.57849521	48.13757038	40
7.6	AT	317738		Wiedermann M. et al. (2000)			Alopecurus pratensis-Ranunculus repens-Ges.	16.57821747	48.13757037	40
7.6	AT	317739		Wiedermann M. et al. (2000)			Ranunculo repentis-Alopecuretum pratensis typicum	16.57793976	48.13729262	40
7.6	AT	317748		Staudinger M., unpubl.			Poo trivialis-Alopecuretum pratensis	16.69729	48.12597	40
7.6	AT	317770		Staudinger M., unpubl.			Ausgetrocknete Fuchsschwanzwiese mit Reitgras	16.99231	48.16022	42
7.6	AT	341215		Staudinger M., unpubl.				16.52815	48.13973	40
7.6	AT	341216		Staudinger M., unpubl.				16.5281	48.14306	43
7.6	AT	341217		Staudinger M., unpubl.				16.52777	48.14387	43
7.6	AT	341220		Staudinger M., unpubl.				16.56998	48.13363	40
7.6	AT	341229		Staudinger M., unpubl.				16.6503	48.11882	37
7.6	AT	341357		Staudinger M., unpubl.				16.63406	48.1212	23
7.6	AT	341367		Staudinger M., unpubl.				16.55306	48.13546	43
7.6	AT	341369		Staudinger M., unpubl.				16.56232	48.1336	43
7.6	AT	341390		Staudinger M., unpubl.				16.53885	48.14358	43
7.6	AT	341392		Staudinger M., unpubl.				16.53486	48.13639	21
7.6	AT	341416		Staudinger M., unpubl.				16.58622	48.12964	40
7.6	AT	341417		Staudinger M., unpubl.				16.61778	48.12866	40
7.6	AT	341421		Staudinger M., unpubl.				16.63367	48.12417	43
7.6	AT	341425		Staudinger M., unpubl.				16.66053	48.12302	43
7.6	AT	341431		Staudinger M., unpubl.				16.64435	48.12405	40
7.6	AT	341432		Staudinger M., unpubl.				16.64307	48.12266	23
7.6	AT	341562		Essl F. (1999)				16.227724	48.364058	42
7.6	AT	341957		Projektstudie 1991 (Gottfried et al.)				16.94402	48.22529	38
7.6	AT	341992		Projektstudie 1991 (Gottfried et al.)				16.87845	48.29887	43
7.6	AT	341993		Projektstudie 1991 (Gottfried et al.)				16.87845	48.29887	40
7.6	AT	341997		Projektstudie 1991 (Gottfried et al.)				16.87845	48.29887	40
7.6	AT	342057		Projektstudie 1991 (Gottfried et al.)				16.94402	48.22529	23
7.6	AT	342090		Huspeka J.				16.9236	48.64244	43
7.6	AT	342777		Stark W. (2010)				16.12845	48.36679	39
7.6	AT	343318		Straka A. & Ellmauer T. (1990)				16.23255	48.37759	42
7.6	SK			Skodová I.				16.956667	48.563889	41
8.1	AT	341037		Balatova-Tulackova E. & Hübl E. (1974)				16.90094	48.26697	29
8.1	AT	341038		Balatova-Tulackova E. & Hübl E. (1974)				16.90094	48.26697	35
8.1	AT	341040		Balatova-Tulackova E. & Hübl E. (1974)				16.90094	48.26697	35
8.1	SK	412069		Balátová-Tulácková E. (1968)				17.008333	48.529167	29
8.1	SK	412070		Balátová-Tulácková E. (1968)				17.0025	48.528333	29
8.1	SK	600120		Bosácková E. (1975)				17	48.516667	34
8.1	SK	600121		Bosácková E. (1975)				17	48.516667	34
8.1	SK	604017		Smarda J. (1951)				17.002778	48.531944	29
8.1	SK	604018		Smarda J. (1951)				17.002778	48.531944	29
8.1	SK	604019		Smarda J. (1951)				17.002778	48.531944	29
8.1	SK	604021		Smarda J. (1951)				17.002778	48.531944	29
8.1	SK	604062		Klicová J. (1993)			pp.29	17.008333	48.527778	34
8.1	SK	604330		Balátová-Tulácková E. (1968)				17.002778	48.531944	29
8.1	SK	604331		Balátová-Tulácková E. (1968)				17.002778	48.531944	29
8.1	SK	604333		Balátová-Tulácková E. (1968)				16.965278	48.511111	35
8.1	SK	608014		Bosácková E. (1975)				16.976389	48.305556	30
8.1	SK	608015		Bosácková E. (1975)				16.958333	48.325	33
8.1	SK	608017		Bosácková E. (1975)				16.958333	48.325	33
8.1	SK	608019		Bosácková E. (1975)				17	48.533333	33
8.1	SK	608020		Bosácková E. (1975)				17	48.533333	33
8.1	SK	608021		Bosácková E. (1975)				16.958333	48.325	35
8.1	SK	608091		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608092		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608093		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608094		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608095		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608097		Bosácková E. (1970)				17.005556	48.533333	29
8.1	SK	608098		Bosácková E. (1970)				17.005556	48.533333	29
8.1	SK	608099		Bosácková E. (1970)				17.005556	48.533333	29
8.1	SK	608100		Bosácková E. (1970)				17.005556	48.533333	29
8.1	SK	608101		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608102		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608103		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608104		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608105		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608106		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608107		Bosácková E. (1970)				17.005556	48.533333	30
8.1	SK	608108		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608109		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608110		Bosácková E. (1970)				17.005556	48.533333	32
8.1	SK	608114		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608115		Bosácková E. (1970)				17.005556	48.533333	34
8.1	SK	608116		Bosácková E. (1970)				17.005556	48.533333	34
8.1	SK	608117		Bosácková E. (1970)				17.005556	48.533333	34
8.1	SK	608118		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608119		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608120		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608121		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608122		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608123		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608124		Bosácková E. (1970)				17.005556	48.533333	31
8.1	SK	608126		Bosácková E. (1970)				17.005556	48.533333	33
8.1	SK	608150		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608154		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608155		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608156		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608158		Kanová K. (1997)				17.005556	48.533333	33
8.1	SK	608166		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608167		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	608171		Kanová K. (1997)				17.005556	48.533333	35
8.1	SK	628504		Somsák L., Kubíček F. (1995)			p.81	17	48.526389	35
9.1	AT	317001		Schratt-Ehrendorfer, unpubl.				16.93830475	48.17368995	42
9.1	AT	317006		Schratt-Ehrendorfer, unpubl.				16.93511101	48.17035689	42
9.1	AT	317015		Schratt-Ehrendorfer, unpubl.				16.9478868	48.17369029	42
9.1	AT	317035		Schratt-Ehrendorfer, unpubl.				16.92983487	48.1586914	42
9.1	AT	317036		Schratt-Ehrendorfer, unpubl.				16.92927935	48.15924687	42
9.1	AT	317041		Schratt-Ehrendorfer, unpubl.				16.93705605	48.15952489	42
9.1	AT	317065		Schratt-Ehrendorfer, unpubl.				16.65043031	48.13257349	42
9.1	AT	317071		Schratt-Ehrendorfer, unpubl.				16.71264458	48.12646527	42
9.1	AT	317075	Schratt-Ehrendorfer, unpubl.		16.71431076	48.12986771	42			
9.1	AT	317090	Schratt-Ehrendorfer, unpubl.		16.91719828	48.15119183	42			
9.1	AT	317094	Schratt-Ehrendorfer, unpubl.		16.9119212	48.15133052	42			
9.1	AT	317121	Schratt-Ehrendorfer, unpubl.		16.87262196	48.13883059	48			
9.1	AT	317131	Schratt-Ehrendorfer, unpubl.		16.8359607	48.13313551	42			
9.1	AT	317144	Schratt-Ehrendorfer, unpubl.		16.79152261	48.12882889	42			
9.1	AT	317149	Schratt-Eh							

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
9.1	AT	317767		Staudinger M., unpubl.			Cirsio pannonici-Brometum	16.98339	48.16144	42
9.1	AT	317769		Staudinger M., unpubl.			Ranunculo bulbosi-Arrhenatheretum	16.99204	48.16009	42
9.1	AT	317771		Staudinger M., unpubl.			Pastinaco-Arrhenatheretum alopecuretosum pratensis	16.99478	48.15886	42
9.1	AT	317772		Staudinger M., unpubl.			Ranunculo bulbosi-Arrhenatheretum	16.99659	48.15804	42
9.1	AT	317773		Staudinger M., unpubl.			Filipendulo vulgaris-Arrhenatheretum	16.99516	48.15652	42
9.1	AT	317775		Staudinger M., unpubl.			Filipendulo vulgaris-Arrhenatheretum	16.97276	48.16609	42
9.1	AT	317783		Staudinger M., unpubl.			Pastinaco-Arrhenatheretum	16.91616	48.15416	42
9.1	AT	317786		Staudinger M., unpubl.			Ranunculo bulbosi-Arrhenatheretum	16.84059	48.12929	42
9.1	AT	317787		Staudinger M., unpubl.			Pastinaco-Arrhenatheretum alopecuretosum pratensis	16.79343	48.12131	42
9.1	AT	317788		Staudinger M., unpubl.			Ranunculo bulbosi-Arrhenatheretum	16.79216	48.12163	48
9.1	AT	317790		Staudinger M., unpubl.			Ranunculi bulbosi-Arrhenatheretum	16.6617	48.12729	42
9.1	AT	317792		Sauberer N., unpubl.				16.87795	48.14024	48
9.1	AT	317797		Sauberer N., unpubl.				16.78004	48.12413	42
9.1	AT	317799		Sauberer N., unpubl.				16.78781	48.13813	42
9.1	AT	317807		Huspeka J., unpubl.				16.68857	48.13918	42
9.1	AT	340540		Plenk S. (1991)		11	Arrhenatherion	16.942028	48.531694	41
9.1	AT	341272		Staudinger M., unpubl.				16.8839	48.12163	48
9.1	AT	341364		Staudinger M., unpubl.				16.63607	48.12021	42
9.1	AT	341568		Essl F. (1999)	4	302	Pastinaco-Arrhenatheretum	15.915343	48.369692	42
9.1	AT	341569		Essl F. (1999)	4	306	Pastinaco-Arrhenatheretum	15.917398	48.369895	42
9.1	AT	341589		Essl F. (1999)	8	313	Scabiosa triandra-(Festucion valesiacae)-Ges.	15.914289	48.369421	45
9.1	AT	341941		Projektstudie 1991 (Gottfried et al.)	1	7	Serratulo-Festucetum commutatae	16.94402	48.22529	41
9.1	AT	342095		Pauer E. (2005)	1	11		16.89113	48.30086	41
9.1	AT	342778		Stark W. (2010)	1	29	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	42
9.1	AT	342781		Stark W. (2010)	1	32	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
9.1	AT	342788		Stark W. (2010)	1	39	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
9.1	AT	342789		Stark W. (2010)	1	40	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
9.1	AT	342793		Stark W. (2010)	1	44	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	42
9.1	AT	342795		Stark W. (2010)	1	46	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
9.1	AT	342798		Stark W. (2010)	1	49	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
9.1	AT	343102		Straka A. (1992)	1	81	Grünlandmischung	16.09186	48.34244	42
9.1	AT	343319		Straka A. & Ellmauer T. (1990)			Arrhenatheretum typicum	16.22676	48.37345	42
9.1	AT	343321		Straka A. & Ellmauer T. (1990)			Arrhenatheretum typicum	16.23377	48.37575	42
9.1	AT	343322		Straka A. & Ellmauer T. (1990)			Arrhenatheretum	16.2248	48.37241	42
9.1	AT	343323		Straka A. & Ellmauer T. (1990)			Holcetum lanati	16.22568	48.37273	42
9.1	AT	343324		Straka A. & Ellmauer T. (1990)			Arrhenatheretum typicum	16.22608	48.37331	42
9.1	AT	343327		Straka A. & Ellmauer T. (1990)			Arrhenatheretum	16.21036	48.37383	42
9.1	AT	343330		Straka A. & Ellmauer T. (1990)			Glatthaferbrache	16.22651	48.3645	42
9.1	AT	343331		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.2317	48.36752	42
9.1	AT	343332		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.23244	48.3659	42
9.1	AT	343340		Straka A. & Ellmauer T. (1990)			Ranunculo bulbosi-Arrhenatheretum	16.22797	48.37313	48
9.1	AT	343341		Straka A. & Ellmauer T. (1990)			Ranunculo bulbosi-Arrhenatheretum	16.2273	48.37336	42
9.1	AT	343342		Straka A. & Ellmauer T. (1990)			Ranunculo bulbosi-Arrhenatheretum	16.20725	48.37388	42
9.1	AT	343343		Straka A. & Ellmauer T. (1990)			Ranunculo bulbosi-Arrhenatheretum	16.23606	48.37809	42
9.1	AT	343344		Straka A. & Ellmauer T. (1990)			Tanaceto-Arrhenatheretum	16.21205	48.36961	42
9.1	AT	360507		Kurmann J. (2013)				15.82425	48.37304	45
9.1	AT	360514		Kurmann J. (2013)				15.79644	48.37404	45
9.1	SK		714418	Skodová I.			Arrhenathion elatioris Koch 1926	16.848611	48.363056	42
9.1	SK		714420	Skodová I.			Arrhenathion elatioris Koch 1926	16.858889	48.403889	42
9.1	SK		714422	Skodová I.			Arrhenathion elatioris Koch 1926	16.862222	48.425833	41
9.1	SK		714423	Skodová I.			Alopecurion pratensis Passarge 1964	16.861944	48.425833	41
9.1	SK		714427	Skodová I.			Alopecurion pratensis Passarge 1964	16.878333	48.467222	41
9.1	SK		714430	Skodová I.			Arrhenathion elatioris Koch 1926	16.923611	48.494722	41
9.1	SK		714436	Skodová I.			Molinietalia Koch 1926	16.945278	48.573056	41
9.1	SK		714441	Skodová I.			Arrhenathion elatioris Koch 1926	16.956667	48.535278	41
9.2	AT	317076		Schratt-Ehrendorfer, unpubl.				16.71417189	48.12979827	42
9.2	AT	317108		Schratt-Ehrendorfer, unpubl.				16.88220426	48.13549798	43
9.2	AT	317109		Schratt-Ehrendorfer, unpubl.				16.86290159	48.13202548	43
9.2	AT	317118		Schratt-Ehrendorfer, unpubl.				16.84123803	48.12980276	43
9.2	AT	317161		Schratt-Ehrendorfer, unpubl.				16.78346833	48.12646777	42
9.2	AT	317178		Schratt-Ehrendorfer, unpubl.				16.7020905	48.12590941	42
9.2	AT	317191		Schratt-Ehrendorfer, unpubl.				16.93038938	48.17091221	42
9.2	AT	317198		Schratt-Ehrendorfer, unpubl.				16.86206827	48.13327531	43
9.2	AT	317199		Schratt-Ehrendorfer, unpubl.				16.86012416	48.13244201	43
9.2	AT	317200		Schratt-Ehrendorfer, unpubl.				16.86123509	48.13271978	43
9.2	AT	317203		Schratt-Ehrendorfer, unpubl.				16.82512927	48.12758023	43
9.2	AT	317217		Schratt-Ehrendorfer, unpubl.				16.77791371	48.12410674	42
9.2	AT	317228		Schratt-Ehrendorfer, unpubl.				16.74347326	48.13257676	42
9.2	AT	317267		Schratt-Ehrendorfer, unpubl.				16.6932015	48.14257382	42
9.2	AT	317281		Schratt-Ehrendorfer, unpubl.				16.67042777	48.13035222	43
9.2	AT	317284		Schratt-Ehrendorfer, unpubl.				16.65876268	48.13035181	43
9.2	AT	317285		Schratt-Ehrendorfer, unpubl.				16.65959588	48.13062959	43
9.2	AT	317290		Schratt-Ehrendorfer, unpubl.				16.68598135	48.1286863	43
9.2	AT	317293		Schratt-Ehrendorfer, unpubl.				16.72042111	48.12903469	42
9.2	AT	317294		Schratt-Ehrendorfer, unpubl.				16.72069884	48.12910413	42
9.2	AT	317323		Schratt-Ehrendorfer, unpubl.				16.73791846	48.13257656	42
9.2	AT	317403		Schratt-Ehrendorfer, unpubl.				16.61654657	48.12535091	43
9.2	AT	317470		Schratt-Ehrendorfer, unpubl.				16.59266005	48.13645988	42
9.2	AT	317478		Schratt-Ehrendorfer, unpubl.				16.57544012	48.13701477	43
9.2	AT	317499		Schratt-Ehrendorfer, unpubl.				16.55072072	48.1436798	42
9.2	AT	317530		Schratt-Ehrendorfer, unpubl.				16.6168241	48.12812838	43
9.2	AT	317534		Schratt-Ehrendorfer, unpubl.				16.6169629	48.12896161	43
9.2	AT	317596		Schratt-Ehrendorfer, unpubl.				16.55682938	48.1645109	42
9.2	AT	317672		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.60043689	48.13507145	43
9.2	AT	317673		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.60015916	48.13479369	43
9.2	AT	317674		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.59821496	48.13507137	43
9.2	AT	317675		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.59599306	48.13479354	43
9.2	AT	317676		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.54099941	48.14895662	42
9.2	AT	317678		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.53933297	48.14895656	43
9.2	AT	317679		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.5387774	48.15006753	43
9.2	AT	317681		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.53822198	48.14923427	43
9.2	AT	317684		Wiedermann M. et al. (2000)			Ranunculo repentis-Alopecuretum pratensis typicum	16.54266594	48.1478457	43
9.2	AT	317688		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.54599899	48.14562385	43
9.2	AT	317692		Wiedermann M. et al. (2000)			Poa trivialis-(Arrhenatherion)-Ges.	16.54127736	48.14617918	43
9.2	AT	317693		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.55266486	48.14423536	42
9.2	AT	317694		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.prat.-Var.	16.55210938	48.14423534	43
9.2	AT	317695		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.55155393	48.14395757	43
9.2	AT	317696		Wiedermann M. et al. (2000)			Onobrychido viciifoliae-Brometum, Fest.rub.-Leont.hisp.-	16.55183175	48.1428466	42
9.2	AT	317697		Wiedermann M. et al. (2000)			Silaetum pratensis, Fest.prat.-Ranu.rep.-Var.	16.5532204	48.14340215	43
9.2	AT	317701		Wiedermann M. et al. (2000)			Silaetum pratensis, Fest.prat.-Lot.corn.-Var.	16.55599787	48.14256901	42
9.2	AT	317704		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.56849644	48.1392365	43
9.2	AT	317705		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.57016295	48.13840332	43
9.2	AT	317707		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.56405254	48.14006959	43
9.2	AT	317708		Wiedermann M. et al. (2000)			Alopecurus pratensis-Elymus repens-(Molinion)-Ges.	16.5707184	48.13868109	43
9.2	AT	317713		Wiedermann M. et al. (2000)			Poa trivialis-(Arrhenatherion)-Ges.	16.55016531	48.14284654	43
9.2	AT	317714		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.53794418	48.1500675	43
9.2	AT	317715		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, typicum	16.53766642	48.15034523	43
9.2	AT	317717		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.53350014	48.15256705	43
9.2	AT	317718		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.53405569	48.15173383	43
9.2	AT	317719		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.56377477	48.14034731	43
9.2	AT	317720		Wiedermann M. et al. (2000)			Poa trivialis-(Arrhenatherion)-Ges.	16.53711091	48.15062296	43
9.2	AT	317721		Wiedermann M. et al. (2000)			Poa trivialis-(Arrhenatherion)-Ges.	16.53211139	48.15312249	43
9.2	AT	317722		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.54405479	48.14590153	43
9.2	AT	317723		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.54405481	48.14562379	43
9.2	AT	31								

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
9.2	AT	341429		Staudinger M., unpubl.				16.66144	48.11744	43
9.2	AT	341564		Essl F. (1999)	3	409	Trifolio medii-Agrimonietyum	15.961503	48.351827	42
9.2	AT	341567		Essl F. (1999)	4	301	Pastinaco-Arrhenatheretum	15.916325	48.369751	43
9.2	AT	343313		Straka A. & Ellmauer T. (1990)			Ranunculo repentis-Alopecuretum	16.23237	48.36783	43
9.2	AT	343314		Straka A. & Ellmauer T. (1990)			Arrhenatheretum cirsietosum oleracei	16.21082	48.37766	43
9.2	AT	343320		Straka A. & Ellmauer T. (1990)			Arrhenatheretum typicum	16.22689	48.37381	42
9.2	AT	343325		Straka A. & Ellmauer T. (1990)			Anthriscetum sylvestris	16.21111	48.37051	43
9.2	AT	343326		Straka A. & Ellmauer T. (1990)			Arrhenatheretum	16.20899	48.38067	43
9.2	AT	360512		Kurmann J. (2013)				15.82425	48.37304	43
9.2	SK		714419	Skodová I.			Arrhenathion elatioris Koch 1926	16.841111	48.3775	41
9.2	SK		714440	Skodová I.			Arrhenathion elatioris Koch 1926	16.951389	48.521667	41
10.1	AT	341570		Essl F. (1999)	5	410	Lolietum perennis	15.961957	48.351666	44
10.1	AT	341572		Essl F. (1999)	5	219	Lolietum perennis	16.046208	48.340169	44
10.1	AT	341573		Essl F. (1999)	5	314	Lolietum perennis	15.915112	48.369501	44
10.1	AT	341574		Essl F. (1999)	5	506	Lolietum perennis	16.309321	48.346555	44
10.1	AT	341576		Essl F. (1999)	5	205	Lolietum perennis	16.0496	48.340241	44
10.1	AT	343104		Straka A. (1992)	1	83	Grünlandmischung	16.09186	48.34244	44
10.1	AT	343105		Straka A. (1992)	1	84	Grünlandmischung	16.09186	48.34244	44
10.1	AT	360515		Kurmann J. (2013)				15.82859	48.37832	43
11.1	AT	317355		Schratt-Ehrendorfer, unpubl.				16.77235821	48.13299439	40
11.1	AT	317356		Schratt-Ehrendorfer, unpubl.				16.77235823	48.13271664	23
11.1	AT	317357		Schratt-Ehrendorfer, unpubl.				16.77319147	48.13243893	40
11.1	AT	317358		Schratt-Ehrendorfer, unpubl.				16.77430247	48.13202235	40
11.1	AT	317361		Schratt-Ehrendorfer, unpubl.				16.77458017	48.13243898	39
11.1	AT	317468		Schratt-Ehrendorfer, unpubl.				16.58821619	48.1365986	40
11.1	AT	317487		Schratt-Ehrendorfer, unpubl.				16.56433026	48.14034733	40
11.1	AT	317528		Schratt-Ehrendorfer, unpubl.				16.61849051	48.12840618	40
11.1	AT	317531		Schratt-Ehrendorfer, unpubl.				16.61682407	48.128545	40
11.1	AT	317690		Wiedermann M. et al. (2000)			Ranunculo repentis-Alopecuretum pratensis typicum	16.54655454	48.14479064	40
11.1	AT	317778		Staudinger M., unpubl.			Queckenbrache	16.97393	48.16847	22
11.1	AT	317780		Staudinger M., unpubl.			Poo trivialis-Alopecuretum pratensis	16.91257	48.14541	23
11.1	AT	318643		Zuna-Kratky T., unpubl. (2017)				16.91442	48.27208	40
11.1	AT	340533		Plenk S. (1991)		4	Alopecurus pratensis-Elymus repens-Gesellschaft	16.938889	48.528333	37
11.1	AT	340553		Plenk S. (1991)		24	Gratiolo-Caricetum suzae	16.942139	48.523278	37
11.1	AT	340556		Plenk S. (1991)		27	Gratiolo-Caricetum suzae	16.942139	48.523278	37
11.1	AT	340557		Plenk S. (1991)		28	Gratiolo-Caricetum suzae	16.942139	48.523278	37
11.1	AT	341960		Projektstudie 1991 (Gottfried et al.)	2	5	Cnidio venosi-Violetum pumilae	16.94402	48.22529	37
11.1	AT	341987		Projektstudie 1991 (Gottfried et al.)	2	32	Cnidio venosi-Violetum pumilae	16.87845	48.29887	40
11.1	AT	342000		Projektstudie 1991 (Gottfried et al.)	3	3	Gratiolo-Caricetum suzae	16.9131	48.57316	37
11.1	AT	342089		Huspeka J.			Agropyro-Alopecuretum	16.91903	48.66949	37
11.1	AT	425887		Wagner H. (1950)			Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	40
11.1	AT	425889		Wagner H. (1950)			Ranu.repens-Alop.geniculatus-Ass.	14.7507	48.1708	39
11.1	SK		613689	Zlinská J. (1993)	1	7	Rorippo austriaci-Agropyretum repentis R.Tx.	16.935278	48.277222	38
11.1	SK		613847	Seffer J., Stanová V. (eds.) (1999)	2	10	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.916667	48.283333	37
11.1	SK		613848	Seffer J., Stanová V. (eds.) (1999)	2	11	Gratiolo-Caricetum suzae Bal.-Tul. 1966	16.916667	48.283333	37
11.2	AT	317225		Schratt-Ehrendorfer, unpubl.				16.76569302	48.12563391	43
11.2	AT	317320		Schratt-Ehrendorfer, unpubl.				16.7504167	48.13341024	42
11.2	AT	317333		Schratt-Ehrendorfer, unpubl.				16.76652625	48.12563394	43
11.2	AT	317334		Schratt-Ehrendorfer, unpubl.				16.76763716	48.12618947	43
11.2	AT	317337		Schratt-Ehrendorfer, unpubl.				16.77319198	48.12591192	43
11.2	AT	317340		Schratt-Ehrendorfer, unpubl.				16.77874688	48.12480113	42
11.2	AT	317343		Schratt-Ehrendorfer, unpubl.				16.80402117	48.12563526	42
11.2	AT	317411		Schratt-Ehrendorfer, unpubl.				16.63515564	48.11924117	43
11.2	AT	317485		Schratt-Ehrendorfer, unpubl.				16.56905192	48.13923651	43
11.2	AT	317498		Schratt-Ehrendorfer, unpubl.				16.54599909	48.14437399	43
11.2	AT	317533		Schratt-Ehrendorfer, unpubl.				16.61696292	48.12868388	43
11.2	AT	317682		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.53877755	48.14812331	43
11.2	AT	317700		Wiedermann M. et al. (2000)			Alopecurus pratensis-Elymus repens-(Molinion)-Ges.	16.55683119	48.14145805	43
11.2	AT	317712		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brom.iner.-Elym.rep.-	16.55988632	48.14145816	43
11.2	AT	342091		Huspeka J.			Agropyro-Alopecuretum	16.91979	48.6591	43
12.1	AT	317019		Schratt-Ehrendorfer, unpubl.				16.94372079	48.17244029	39
12.1	AT	318664		Zuna-Kratky T., unpubl. (2017)				16.90468	48.51529	37
12.1	AT	318665		Zuna-Kratky T., unpubl. (2017)				16.90513	48.51439	37
12.1	AT	318671		Zuna-Kratky T., unpubl. (2017)				16.91531	48.64735	40
12.1	AT	341833		Rotter D. (1999)	5	44	Calam.epig.-reiche Vergesellschaftungen	16.57916	48.14346	23
12.1	AT	341840		Rotter D. (1999)	5	51	Calam.epig.-reiche Vergesellschaftungen	16.54424	48.16331	36
12.1	AT	341841		Rotter D. (1999)	5	52	Calam.epig.-reiche Vergesellschaftungen	16.55693	48.16109	39
12.1	AT	341842		Rotter D. (1999)	5	53	Calam.epig.-reiche Vergesellschaftungen	16.54377	48.16417	26
12.1	AT	341844		Rotter D. (1999)	5	55	Calam.epig.-reiche Vergesellschaftungen	16.5433	48.16345	26
12.1	AT	341855		Rotter D. (1999)	6	7	Molinio-Arrhenatheretea	16.55525	48.14544	26
12.1	AT	341856		Rotter D. (1999)	6	8	Molinio-Arrhenatheretea	16.55962	48.14489	26
12.1	AT	341857		Rotter D. (1999)	6	9	Molinio-Arrhenatheretea	16.57045	48.14842	26
12.1	AT	341951		Projektstudie 1991 (Gottfried et al.)	1	17	Serratulo-Festucetum commutatae	16.94402	48.22529	38
12.1	AT	341953		Projektstudie 1991 (Gottfried et al.)	1	19	Serratulo-Festucetum commutatae	16.94402	48.22529	38
12.1	AT	341958		Projektstudie 1991 (Gottfried et al.)	2	3	Cnidio venosi-Violetum pumilae	16.94402	48.22529	38
12.2	AT	317014		Schratt-Ehrendorfer, unpubl.				16.94816457	48.17313481	42
12.2	AT	317020		Schratt-Ehrendorfer, unpubl.				16.94316535	48.17188477	42
12.2	AT	317032		Schratt-Ehrendorfer, unpubl.				16.92816836	48.15952458	42
12.2	AT	317126		Schratt-Ehrendorfer, unpubl.				16.84984758	48.13480248	42
12.2	AT	317159		Schratt-Ehrendorfer, unpubl.				16.78513482	48.12591234	42
12.2	AT	317223		Schratt-Ehrendorfer, unpubl.				16.77013658	48.12924475	43
12.2	AT	317224		Schratt-Ehrendorfer, unpubl.				16.77041437	48.12868927	43
12.2	AT	317231		Schratt-Ehrendorfer, unpubl.				16.86845556	48.14258	42
12.2	AT	317236		Schratt-Ehrendorfer, unpubl.				16.81401907	48.13507896	42
12.2	AT	317237		Schratt-Ehrendorfer, unpubl.				16.81526891	48.135079	42
12.2	AT	317253		Schratt-Ehrendorfer, unpubl.				16.75652688	48.13479918	47
12.2	AT	317280		Schratt-Ehrendorfer, unpubl.				16.66764966	48.13937884	42
12.2	AT	317319		Schratt-Ehrendorfer, unpubl.				16.75180541	48.13341029	42
12.2	AT	317332		Schratt-Ehrendorfer, unpubl.				16.76583187	48.12591166	48
12.2	AT	317381		Schratt-Ehrendorfer, unpubl.				16.87762087	48.14410792	42
12.2	AT	317394		Schratt-Ehrendorfer, unpubl.				16.86873331	48.14224414	42
12.2	AT	317396		Schratt-Ehrendorfer, unpubl.				16.86845556	48.14202451	42
12.2	AT	317436		Schratt-Ehrendorfer, unpubl.				16.52766566	48.17742504	47
12.2	AT	317495		Schratt-Ehrendorfer, unpubl.				16.54544348	48.14604045	42
12.2	AT	317519		Schratt-Ehrendorfer, unpubl.				16.56488504	48.14923519	42
12.2	AT	317538		Schratt-Ehrendorfer, unpubl.				16.58460497	48.14423647	43
12.2	AT	317540		Schratt-Ehrendorfer, unpubl.				16.58599365	48.14451427	42
12.2	AT	317677		Wiedermann M. et al. (2000)			Ranunculo bulbosi-Arrhenatheretum, Brach.pin.-Var.	16.53933301	48.14840107	42
12.2	AT	317751		Staudinger M., unpubl.			Reitgrasbrache	16.93045	48.15184	42
12.2	AT	317818		Beiser A., unpubl.				16.82375	48.13368	42
12.2	AT	341563		Essl F. (1999)	3	412	Trifolio medii-Agrimonietyum	15.958686	48.348762	42
12.2	AT	341565		Essl F. (1999)	3	401	Trifolio medii-Agrimonietyum	15.96285	48.350425	42
12.2	AT	341581		Essl F. (1999)	7	804	Teucrio botryos-Andropogonetum ischaemii	16.153722	48.346367	42
12.2	AT	341843		Rotter D. (1999)	5	54	Calam.epig.-reiche Vergesellschaftungen	16.58226	48.14467	42
12.2	AT	342779		Stark W. (2010)	1	30	Ranunculo bulbosi-Arrhenatheretum feuchte var.	15.92828	48.361	48
12.2	AT	342780		Stark W. (2010)	1	31	Ranunculo bulbosi-Arrhenatheretum feuchte var.	15.92828	48.361	48
12.2	AT	343309		Straka A. & Ellmauer T. (1990)			Reitgrasbrache	16.22651	48.3645	42
12.2	AT	343310		Straka A. & Ellmauer T. (1990)			Reitgrasbrache	16.23298	48.36765	42
12.2	AT	360502		Kurmann J. (2013)				15.82425	48.37304	52
12.2	AT	360510		Kurmann J. (2013)				15.82425	48.37304	42
12.2	AT	360511		Kurmann J. (2013)				15.82425	48.37304	43
13.1	AT	341036		Balatova-Tulackova E. & Hübl E. (1974)	10	1	Serratulo-Festucetum commutatae	16.87955	48.72269	41
13.1	AT	341935		Projektstudie 1991 (Gottfried et al.)	1	1	Serratulo-Festucetum commutatae	16.94402	48.22529	41
13.1	AT	341938		Projektstudie 1991 (Gottfried et al.)	1	4	Serratulo-Festucetum commutatae	16.94402	48.22529	41
13.1	AT	341939		Projektstudie 1991 (Gottfried et al.)	1	5	Serratulo-Festucetum commutatae	16.94402	48.22529	41
13.1	AT	341942		Projektstudie 1991 (Gottfried et al.)	1	8	Serratulo-Festucetum commutatae	16.94402	48.22529	38
13.1	AT	341943		Projekt						

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
13.2	AT	317215		Schratt-Ehrendorfer, unpubl.				16.76513704	48.13202203	48
13.2	AT	317232		Schratt-Ehrendorfer, unpubl.				16.86678883	48.14632951	55
13.2	AT	317235		Schratt-Ehrendorfer, unpubl.				16.81985148	48.13674563	48
13.2	AT	317252		Schratt-Ehrendorfer, unpubl.				16.75624918	48.13424368	48
13.2	AT	317255		Schratt-Ehrendorfer, unpubl.				16.68570239	48.14424002	48
13.2	AT	317257		Schratt-Ehrendorfer, unpubl.				16.68542478	48.14257355	48
13.2	AT	317259		Schratt-Ehrendorfer, unpubl.				16.69403472	48.14271271	42
13.2	AT	317263		Schratt-Ehrendorfer, unpubl.				16.69709004	48.14035199	42
13.2	AT	317270		Schratt-Ehrendorfer, unpubl.				16.69709028	48.13729679	42
13.2	AT	317271		Schratt-Ehrendorfer, unpubl.				16.6945904	48.14007416	48
13.2	AT	317274		Schratt-Ehrendorfer, unpubl.				16.6859806	48.13826851	48
13.2	AT	317275		Schratt-Ehrendorfer, unpubl.				16.68486958	48.13896283	48
13.2	AT	317298		Schratt-Ehrendorfer, unpubl.				16.78985574	48.13424486	48
13.2	AT	317299		Schratt-Ehrendorfer, unpubl.				16.79013347	48.13438374	48
13.2	AT	317300		Schratt-Ehrendorfer, unpubl.				16.7904112	48.13452263	48
13.2	AT	317310		Schratt-Ehrendorfer, unpubl.				16.76499794	48.13493835	48
13.2	AT	317311		Schratt-Ehrendorfer, unpubl.				16.76583116	48.13493838	48
13.2	AT	317312		Schratt-Ehrendorfer, unpubl.				16.76485904	48.13535496	48
13.2	AT	317313		Schratt-Ehrendorfer, unpubl.				16.76485907	48.13493835	46
13.2	AT	317342		Schratt-Ehrendorfer, unpubl.				16.79291132	48.12869007	48
13.2	AT	317344		Schratt-Ehrendorfer, unpubl.				16.80513211	48.12591305	48
13.2	AT	317345		Schratt-Ehrendorfer, unpubl.				16.80610419	48.12605195	48
13.2	AT	317347		Schratt-Ehrendorfer, unpubl.				16.80888171	48.12452445	48
13.2	AT	317353		Schratt-Ehrendorfer, unpubl.				16.78985646	48.12507927	48
13.2	AT	317368		Schratt-Ehrendorfer, unpubl.				16.77208058	48.13146678	41
13.2	AT	317372		Schratt-Ehrendorfer, unpubl.				16.83484911	48.14105121	48
13.2	AT	317383		Schratt-Ehrendorfer, unpubl.				16.87706539	48.14396903	42
13.2	AT	317384		Schratt-Ehrendorfer, unpubl.				16.87650993	48.14383014	48
13.2	AT	317385		Schratt-Ehrendorfer, unpubl.				16.87567664	48.14466335	48
13.2	AT	317389		Schratt-Ehrendorfer, unpubl.				16.87498237	48.14369122	47
13.2	AT	317390		Schratt-Ehrendorfer, unpubl.				16.87484351	48.14355234	47
13.2	AT	317393		Schratt-Ehrendorfer, unpubl.				16.87484354	48.14313572	47
13.2	AT	317395		Schratt-Ehrendorfer, unpubl.				16.86873337	48.14174677	48
13.2	AT	317418		Schratt-Ehrendorfer, unpubl.				16.6604302	48.11674235	46
13.2	AT	317435		Schratt-Ehrendorfer, unpubl.				16.52738793	48.17728616	47
13.2	AT	317439		Schratt-Ehrendorfer, unpubl.				16.5334987	48.1710371	50
13.2	AT	317471		Schratt-Ehrendorfer, unpubl.				16.54488643	48.16603809	48
13.2	AT	317502		Schratt-Ehrendorfer, unpubl.				16.59960311	48.14201504	47
13.2	AT	317520		Schratt-Ehrendorfer, unpubl.				16.56516267	48.15062393	48
13.2	AT	317563		Schratt-Ehrendorfer, unpubl.				16.51683266	48.19200629	48
13.2	AT	317564		Schratt-Ehrendorfer, unpubl.				16.52877493	48.19895033	50
13.2	AT	317580		Schratt-Ehrendorfer, unpubl.				16.55460686	48.17214882	50
13.2	AT	317581		Schratt-Ehrendorfer, unpubl.				16.55460682	48.17256544	48
13.2	AT	317583		Schratt-Ehrendorfer, unpubl.				16.55821714	48.176454	48
13.2	AT	317584		Schratt-Ehrendorfer, unpubl.				16.55738362	48.1803424	48
13.2	AT	317585		Schratt-Ehrendorfer, unpubl.				16.55960629	48.17076027	48
13.2	AT	317591		Schratt-Ehrendorfer, unpubl.				16.55794003	48.16853825	48
13.2	AT	317593		Schratt-Ehrendorfer, unpubl.				16.54849683	48.16881567	48
13.2	AT	317594		Schratt-Ehrendorfer, unpubl.				16.55071876	48.16867687	48
13.2	AT	317625		Rotter D. (2002)				16.57527	48.14916	49
13.2	AT	317658		Rotter D. (2002)				16.52777	48.15944	49
13.2	AT	317665		Rotter D. (2002)				16.53164	48.16103	49
13.2	AT	317776		Staudinger M., unpubl.			Filipendulo vulgaris-Arrhenatheretum	16.9727	48.16676	48
13.2	AT	317781		Staudinger M., unpubl.			Filipendulo-Arrhenatheretum	16.9161	48.15443	48
13.2	AT	317782		Staudinger M., unpubl.			Onobrychido arenariae-Brachypodietum	16.91616	48.15366	46
13.2	AT	317784		Staudinger M., unpubl.			Onobrychido arenariae-Brachypodietum	16.90631	48.1507	46
13.2	AT	317793		Sauberer N., unpubl.				16.87683	48.14236	48
13.2	AT	317802		Sauberer N., unpubl.				16.85557	48.14234	48
13.2	AT	317805		Huspeka J., unpubl.				16.71113	48.12905	48
13.2	AT	317808		Huspeka J., unpubl.				16.68639	48.13856	48
13.2	AT	317810		Huspeka J., unpubl.				16.67892	48.13877	48
13.2	AT	317814		Beiser A., unpubl.				16.91401	48.16445	48
13.2	AT	317822		Beiser A., unpubl.				16.76552	48.13493	48
13.2	AT	317824		Beiser A., unpubl.				16.75668	48.13487	48
13.2	AT	317827		Beiser A., unpubl.				16.91641	48.15384	48
13.2	AT	317832		Beiser A., unpubl.				16.79462	48.12973	48
13.2	AT	317834		Beiser A., unpubl.				16.92717	48.16939	48
13.2	AT	317845		Beiser A., unpubl.				16.53621	48.19646	48
13.2	AT	317847		Beiser A., unpubl.				16.52891	48.1989	50
13.2	AT	317849		Beiser A., unpubl.				16.54072	48.16143	48
13.2	AT	340817		Grass V., unpubl.				16.48532	48.19493	50
13.2	AT	341363		Staudinger M., unpubl.				16.6397	48.12015	48
13.2	AT	341394		Staudinger M., unpubl.				16.5198	48.15108	48
13.2	AT	341566		Essl F. (1999)	3	312	Trifolio medii-Agrimonietum	15.914352	48.369436	47
13.2	AT	342102		Pauer E. (2005)	1	8	Peucedano oreoselini-Festucetum rupicolae	16.86522	48.33022	48
13.2	AT	342767		Stark W. (2010)	1	18	Teucrio botryos-Andropogonetum ischaemii	16.12845	48.36679	51
13.2	AT	342769		Stark W. (2010)	1	20	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	48
13.2	AT	342772		Stark W. (2010)	1	23	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	48
13.2	AT	342774		Stark W. (2010)	1	25	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	48
13.2	AT	342775		Stark W. (2010)	1	26	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	48
13.2	AT	342776		Stark W. (2010)	1	27	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	48
13.2	AT	342782		Stark W. (2010)	1	33	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342783		Stark W. (2010)	1	34	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342784		Stark W. (2010)	1	35	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342785		Stark W. (2010)	1	36	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342787		Stark W. (2010)	1	38	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342791		Stark W. (2010)	1	42	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	342792		Stark W. (2010)	1	43	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	42
13.2	AT	342797		Stark W. (2010)	1	48	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	48
13.2	AT	343328		Straka A. & Ellmauer T. (1990)			Ranunculo bulbosi-Arrhenatheretum	16.21049	48.3733	48
13.2	AT	343329		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.22651	48.3645	48
13.2	AT	343333		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.21279	48.37087	48
13.2	AT	343334		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.21233	48.36894	48
13.2	AT	343335		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.22831	48.37394	48
13.2	AT	343336		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.23559	48.37845	48
13.2	AT	343337		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.21225	48.37069	48
13.2	AT	343338		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.23377	48.37597	42
13.2	AT	343339		Straka A. & Ellmauer T. (1990)			Mesobrometum	16.23242	48.37709	42
13.2	AT	360485		Kurmann J. (2013)				15.83245	48.37659	45
13.2	AT	360503		Kurmann J. (2013)				15.79644	48.37404	45
13.2	AT	360504		Kurmann J. (2013)				15.79644	48.37404	45
13.2	AT	365056		Kadlec G., unpubl.				15.94300001	48.3628	48
13.2	AT	365057		Kadlec G., unpubl.				15.94386001	48.36272	48
13.2	AT	365058		Kadlec G., unpubl.				15.97016001	48.3492	48
13.2	AT	365059		Kadlec G., unpubl.				15.97027001	48.34662	48
13.2	AT	365060		Kadlec G., unpubl.				15.96978001	48.34395	48
13.2	AT	365073		Kadlec G., unpubl.				16.59075001	48.14948	48
13.2	SK		712646	Hegedúsová K.			Arrhenathion elatioris Koch 1926	16.955278	48.569722	48
13.3	AT	317206		Schratt-Ehrendorfer, unpubl.				16.82790571	48.13980112	49
13.3	AT	317314		Schratt-Ehrendorfer, unpubl.				16.77457985	48.13646628	47
13.3	AT	317315		Schratt-Ehrendorfer, unpubl.				16.77430208	48.13702177	49
13.3	AT	317380		Schratt-Ehrendorfer, unpubl.				16.8567906	48.14105199	49
13.3	AT	317419		Schratt-Ehrendorfer, unpubl.				16.66070786	48.1175756	51
13.3	AT	317422		Schratt-Ehrendorfer, unpubl.				16.55127467	48.16326086	49
13.3	AT	317423		Schratt-Ehrendorfer, unpubl.				16.55155236	48.16395522	53
13.3	AT	317424		Schratt-Ehrendorfer, unpubl.				16.55071917	48.16353858	53
13.3	AT	317430		Schratt-Ehrendorfer, unpubl.				16.52766694	48.16103807	49
13.3	AT	317431		Schratt-Ehrendorfer, unpubl.				16.52711146	48.16089918	49
13.3	AT	317434		Schratt-Ehrendorfer, unpubl.				16.52544381	48.17645285	49
13.3	AT	317437		Schratt-Ehrendorfer, unpubl.				16.52877664	48.17714733	49
13.3	AT	317440		Schratt-Ehrendorfer, unpubl.				16.53405419	48.17089825	50
13.3	AT	317442		Schratt-Ehrendorfer, unpubl						

Syntaxon	Country	Turboveg ID (AT)	Turboveg ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
13.3	AT	317632		Rotter D. (2002)				16.55138	48.16361	49
13.3	AT	317636		Rotter D. (2002)				16.55611	48.14888	49
13.3	AT	317639		Rotter D. (2002)				16.55472	48.14722	49
13.3	AT	317641		Rotter D. (2002)				16.55166	48.16055	53
13.3	AT	317648		Rotter D. (2002)				16.54305	48.15722	49
13.3	AT	317654		Rotter D. (2002)				16.54555	48.16027	49
13.3	AT	317662		Rotter D. (2002)				16.53362	48.16338	49
13.3	AT	317664		Rotter D. (2002)				16.53111	48.16111	49
13.3	AT	317666		Rotter D. (2002)				16.53416	48.16083	49
13.3	AT	317669		Rotter D. (2002)				16.54027	48.15138	49
13.3	AT	317670		Rotter D. (2002)				16.54305	48.15	51
13.3	AT	317800		Sauberer N., unpubl.				16.85623	48.14197	48
13.3	AT	317823		Beiser A., unpubl.				16.82768	48.13961	49
13.3	AT	317838		Beiser A., unpubl.				16.59946	48.14258	46
13.3	AT	317840		Beiser A., unpubl.				16.5894	48.14191	49
13.3	AT	317841		Beiser A., unpubl.				16.57781	48.14893	49
13.3	AT	317842		Beiser A., unpubl.				16.5795	48.1474	49
13.3	AT	317843		Beiser A., unpubl.				16.57917	48.14754	53
13.3	AT	317844		Beiser A., unpubl.				16.53733	48.19523	50
13.3	AT	317850		Beiser A., unpubl.				16.53473	48.17133	49
13.3	AT	340777		Grass V., unpubl.				16.48465	48.19502	50
13.3	AT	340778		Grass V., unpubl.				16.48465	48.19502	50
13.3	AT	340779		Grass V., unpubl.				16.48465	48.19502	50
13.3	AT	340780		Grass V., unpubl.				16.48438	48.19502	50
13.3	AT	340781		Grass V., unpubl.				16.48438	48.19502	50
13.3	AT	340782		Grass V., unpubl.				16.48438	48.19502	50
13.3	AT	340783		Grass V., unpubl.				16.48438	48.19502	50
13.3	AT	340784		Grass V., unpubl.				16.48431	48.19493	50
13.3	AT	340785		Grass V., unpubl.				16.48431	48.19493	50
13.3	AT	340786		Grass V., unpubl.				16.48431	48.19493	50
13.3	AT	340787		Grass V., unpubl.				16.48431	48.19493	50
13.3	AT	340794		Grass V., unpubl.				16.48511	48.19335	53
13.3	AT	340795		Grass V., unpubl.				16.48511	48.19335	53
13.3	AT	340799		Grass V., unpubl.				16.48498	48.19335	50
13.3	AT	340801		Grass V., unpubl.				16.48498	48.19335	50
13.3	AT	340802		Grass V., unpubl.				16.48498	48.19335	50
13.3	AT	340804		Grass V., unpubl.				16.48478	48.19497	50
13.3	AT	340805		Grass V., unpubl.				16.48478	48.19497	50
13.3	AT	340806		Grass V., unpubl.				16.48478	48.19497	50
13.3	AT	340809		Grass V., unpubl.				16.48519	48.19515	50
13.3	AT	340810		Grass V., unpubl.				16.48519	48.19515	50
13.3	AT	340811		Grass V., unpubl.				16.48539	48.19529	50
13.3	AT	340812		Grass V., unpubl.				16.48539	48.19529	50
13.3	AT	340813		Grass V., unpubl.				16.48539	48.19529	50
13.3	AT	340814		Grass V., unpubl.				16.48539	48.19529	50
13.3	AT	340816		Grass V., unpubl.				16.48532	48.19493	50
13.3	AT	340818		Grass V., unpubl.				16.48465	48.19524	50
13.3	AT	340819		Grass V., unpubl.				16.48465	48.19524	50
13.3	AT	340820		Grass V., unpubl.				16.48465	48.19524	50
13.3	AT	340825		Grass V., unpubl.				16.48471	48.19358	50
13.3	AT	340826		Grass V., unpubl.				16.48471	48.19358	50
13.3	AT	340828		Grass V., unpubl.				16.48471	48.19358	50
13.3	AT	340833		Grass V., unpubl.				16.48478	48.19335	50
13.3	AT	340834		Grass V., unpubl.				16.48478	48.19335	50
13.3	AT	340835		Grass V., unpubl.				16.48478	48.19335	50
13.3	AT	340836		Grass V., unpubl.				16.48431	48.19394	49
13.3	AT	340837		Grass V., unpubl.				16.48431	48.19394	50
13.3	AT	340838		Grass V., unpubl.				16.48431	48.19394	50
13.3	AT	340843		Grass V., unpubl.				16.48538	48.1934	50
13.3	AT	340844		Grass V., unpubl.				16.48538	48.1934	50
13.3	AT	340849		Grass V., unpubl.				16.48525	48.19308	50
13.3	AT	340850		Grass V., unpubl.				16.48525	48.19308	50
13.3	AT	341273		Staudinger M., unpubl.				16.65075	48.11536	49
13.3	AT	341274		Staudinger M., unpubl.				16.65175	48.11531	49
13.3	AT	341428		Staudinger M., unpubl.				16.65962	48.11686	46
13.3	AT	341430		Staudinger M., unpubl.				16.65721	48.11808	51
13.3	AT	341583		Essl F. (1999)	7	805	Teucrio botryos-Andropogonetum ischaemii	16.153534	48.345986	51
13.3	AT	341586		Essl F. (1999)	7	414	Teucrio botryos-Andropogonetum ischaemii	15.963816	48.3504	51
13.3	AT	341587		Essl F. (1999)	7	413	Teucrio botryos-Andropogonetum ischaemii	15.963518	48.350652	51
13.3	AT	342751		Stark W. (2010)	1	2	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342755		Stark W. (2010)	1	6	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342758		Stark W. (2010)	1	9	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	51
13.3	AT	342761		Stark W. (2010)	1	12	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342764		Stark W. (2010)	1	15	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342766		Stark W. (2010)	1	17	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342768		Stark W. (2010)	1	19	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342770		Stark W. (2010)	1	21	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342771		Stark W. (2010)	1	22	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
13.3	AT	342786		Stark W. (2010)	1	37	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	51
13.3	AT	342790		Stark W. (2010)	1	41	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	51
13.3	AT	342794		Stark W. (2010)	1	45	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	51
13.3	AT	342796		Stark W. (2010)	1	47	Ranunculo bulbosi-Arrhenatheretum feuchte var.	16.12845	48.36679	51
13.3	AT	360488		Kurmann J. (2013)				15.79644	48.37404	52
13.3	AT	360489		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360490		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360492		Kurmann J. (2013)				15.82414	48.37718	52
13.3	AT	360493		Kurmann J. (2013)				15.84081	48.37114	52
13.3	AT	360494		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360495		Kurmann J. (2013)				15.82425	48.37304	50
13.3	AT	360496		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360497		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360498		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360499		Kurmann J. (2013)				15.82425	48.37304	52
13.3	AT	360508		Kurmann J. (2013)				15.84081	48.37114	56
13.3	AT	360513		Kurmann J. (2013)				15.82425	48.37304	52
14.1	AT	308167		Chytrý et al. (1997)			Peucedano oreoselini-Festucetum rupicolae	16.87942028	48.71772445	51
14.1	AT	342097		Pauer E. (2005)	1	5	Peucedano oreoselini-Festucetum rupicolae	16.87427	48.33338	41
14.1	AT	342100		Pauer E. (2005)	1	14	Peucedano oreoselini-Festucetum rupicolae	16.89552	48.28066	41
14.1	AT	342101		Pauer E. (2005)	1	10	Peucedano oreoselini-Festucetum rupicolae	16.89566	48.32669	41
14.1	AT	342103		Pauer E. (2005)	1	2	Peucedano oreoselini-Festucetum rupicolae	16.91561	48.27308	55
14.1	AT	342104		Pauer E. (2005)	1	1	Peucedano oreoselini-Festucetum rupicolae	16.91513	48.27275	46
14.1	AT	342105		Pauer E. (2005)	1	13	Peucedano oreoselini-Festucetum rupicolae	16.89466	48.27955	46
14.1	AT	342106		Pauer E. (2005)	1	3	Peucedano oreoselini-Festucetum rupicolae	16.91497	48.27288	46
14.1	AT	343250		Staudinger M., unpubl.			Cirsio-Brachypodion	16.88828333	48.48328333	46
14.1	AT	343252		Staudinger M., unpubl.			Cirsio-Brachypodion	16.88725	48.48265	41
14.1	AT	360627		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.96523	48.19569	46
14.1	AT	360628		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.96497	48.19625	46
14.1	AT	360629		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.96263	48.20204	46
14.1	AT	360630		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.96223	48.20321	46
14.1	AT	360631		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.96122	48.2052	46
14.1	AT	360638		Staudinger M., unpubl. (2017)			Peucedano oreoselini-Festucetum rupicolae	16.87647	48.71967	51
14.1	AT	360648		Staudinger M., unpubl. (2018)			Peucedano oreoselini-Festucetum rupicolae	16.9608	48.20909	41
14.2a	AT	312634		Margl H. (1973)	3	13	Astragalo austriaci-Festucetum sulcatae	16.58333	48.13333	56
14.2a	AT	312635		Margl H. (1973)	3	63		16.58333	48.13333	56
14.2a	AT	317129		Schratt-Ehrendorfer, unpubl.				16.84012674	48.13396889	54
14.2a	AT	317134		Schratt-Ehrendorfer, unpubl.				16.82901709	48.13452399	55
14.2a	AT	317378		Schratt-Ehrendorfer, unpubl.				16.8537353	48.14299609	53
14.2a	AT	317379		Schratt-Ehrendorfer, unpubl.				16.85512405	48.14230179	49
14.2a	AT	317398		Schratt-Ehrendorfer, unpubl.				16.8666501	48.14452415	46
14.2a	AT	317425		Schratt-Ehrendorfer, unpubl.				16.55058029	48.16367745	53
14.2a	AT	317426		Schratt-Ehrendorfer, unpubl.				16.55016367	48.16381631	55
14.2a	AT	317427		Schratt-Ehrendorfer, unpubl.				16.55016366	48.16395518	55
14.2a	AT	317428		Schratt-Ehrendorfer, unpubl.				16.54988592	48.16395517	55
14.2a	AT	317429		Schratt-Ehrendorfer, unpubl.				16.52655553	48.1667318	54
14.2a	AT	317432		Schratt-Ehrendorfer, unpubl.				16.52794477		

Syntaxon	Country	Turbogev ID (AT)	Turbogev ID (SK)	AUTHOR	Nr table	Nr relevé	Original classification	deg_lon	deg_lat	TWINSPAN Cluster
14.2a	AT	317570		Schratt-Ehrendorfer, unpubl.				16.52655314	48.19728379	55
14.2a	AT	317571		Schratt-Ehrendorfer, unpubl.				16.52655312	48.19756154	54
14.2a	AT	317572		Schratt-Ehrendorfer, unpubl.				16.5271086	48.19756156	54
14.2a	AT	317574		Schratt-Ehrendorfer, unpubl.				16.54821849	48.17645365	54
14.2a	AT	317575		Schratt-Ehrendorfer, unpubl.				16.54849622	48.1767314	53
14.2a	AT	317576		Schratt-Ehrendorfer, unpubl.				16.54821845	48.17700914	55
14.2a	AT	317577		Schratt-Ehrendorfer, unpubl.				16.54794071	48.177148	55
14.2a	AT	317578		Schratt-Ehrendorfer, unpubl.				16.54349681	48.17784221	57
14.2a	AT	317579		Schratt-Ehrendorfer, unpubl.				16.54433007	48.17742563	53
14.2a	AT	317586		Schratt-Ehrendorfer, unpubl.				16.48405891	48.1972823	54
14.2a	AT	317587		Schratt-Ehrendorfer, unpubl.				16.48239253	48.196449	53
14.2a	AT	317588		Schratt-Ehrendorfer, unpubl.				16.48350351	48.1961713	53
14.2a	AT	317601		Schratt-Ehrendorfer, unpubl.				16.54905299	48.16020558	53
14.2a	AT	317602		Schratt-Ehrendorfer, unpubl.				16.55266362	48.16006684	55
14.2a	AT	317603		Schratt-Ehrendorfer, unpubl.				16.55183039	48.16034455	54
14.2a	AT	317604		Schratt-Ehrendorfer, unpubl.				16.55155267	48.1600668	53
14.2a	AT	317611		Schratt-Ehrendorfer, unpubl.				16.55377434	48.16312207	55
14.2a	AT	317615		Schratt-Ehrendorfer, unpubl.				16.5459979	48.15951111	55
14.2a	AT	317617		Schratt-Ehrendorfer, unpubl.				16.54488696	48.15923332	54
14.2a	AT	317618		Schratt-Ehrendorfer, unpubl.				16.54710879	48.16048326	55
14.2a	AT	317620		Schratt-Ehrendorfer, unpubl.				16.47878211	48.19394917	53
14.2a	AT	317623		Rotter D. (2002)				16.57527	48.15	55
14.2a	AT	317624		Rotter D. (2002)				16.57555	48.14944	55
14.2a	AT	317630		Rotter D. (2002)				16.54888	48.16388	55
14.2a	AT	317631		Rotter D. (2002)				16.55027	48.16388	53
14.2a	AT	317634		Rotter D. (2002)				16.55166	48.15055	54
14.2a	AT	317635		Rotter D. (2002)				16.55242	48.14937	54
14.2a	AT	317646		Rotter D. (2002)				16.54194	48.16055	53
14.2a	AT	317650		Rotter D. (2002)				16.54416	48.15972	55
14.2a	AT	317653		Rotter D. (2002)				16.545	48.15916	54
14.2a	AT	317657		Rotter D. (2002)				16.56361	48.15805	53
14.2a	AT	317660		Rotter D. (2002)				16.52861	48.16166	53
14.2a	AT	317661		Rotter D. (2002)				16.52916	48.16194	53
14.2a	AT	317801		Sauberer N., unpubl.				16.85462	48.14305	56
14.2a	AT	317809		Huspeka J., unpubl.				16.68056	48.13796	54
14.2a	AT	317835		Beiser A., unpubl.				16.59848	48.14329	56
14.2a	AT	317836		Beiser A., unpubl.				16.59811	48.14326	56
14.2a	AT	317837		Beiser A., unpubl.				16.59928	48.14329	56
14.2a	AT	317846		Beiser A., unpubl.				16.52664	48.19746	54
14.2a	AT	317848		Beiser A., unpubl.				16.52272	48.19819	50
14.2a	AT	340788		Grass V., unpubl.				16.48491	48.19349	53
14.2a	AT	340789		Grass V., unpubl.				16.48491	48.19349	53
14.2a	AT	340790		Grass V., unpubl.				16.48491	48.19349	53
14.2a	AT	340791		Grass V., unpubl.				16.48491	48.19349	50
14.2a	AT	340792		Grass V., unpubl.				16.48511	48.19335	53
14.2a	AT	340793		Grass V., unpubl.				16.48511	48.19335	53
14.2a	AT	340796		Grass V., unpubl.				16.48498	48.19335	53
14.2a	AT	340797		Grass V., unpubl.				16.48498	48.19335	53
14.2a	AT	340798		Grass V., unpubl.				16.48498	48.19335	50
14.2a	AT	340800		Grass V., unpubl.				16.48498	48.19335	50
14.2a	AT	340803		Grass V., unpubl.				16.48478	48.19497	50
14.2a	AT	340807		Grass V., unpubl.				16.48519	48.19515	50
14.2a	AT	340808		Grass V., unpubl.				16.48519	48.19515	50
14.2a	AT	340815		Grass V., unpubl.				16.48532	48.19493	50
14.2a	AT	340821		Grass V., unpubl.				16.48478	48.19353	53
14.2a	AT	340822		Grass V., unpubl.				16.48478	48.19353	53
14.2a	AT	340823		Grass V., unpubl.				16.48478	48.19353	50
14.2a	AT	340824		Grass V., unpubl.				16.48478	48.19353	53
14.2a	AT	340827		Grass V., unpubl.				16.48471	48.19358	50
14.2a	AT	340829		Grass V., unpubl.				16.48484	48.1934	53
14.2a	AT	340830		Grass V., unpubl.				16.48484	48.1934	53
14.2a	AT	340831		Grass V., unpubl.				16.48484	48.1934	53
14.2a	AT	340832		Grass V., unpubl.				16.48484	48.1934	50
14.2a	AT	340839		Grass V., unpubl.				16.48465	48.19524	53
14.2a	AT	340840		Grass V., unpubl.				16.48465	48.19524	53
14.2a	AT	340841		Grass V., unpubl.				16.48465	48.19524	53
14.2a	AT	340842		Grass V., unpubl.				16.48538	48.1934	50
14.2a	AT	340845		Grass V., unpubl.				16.48538	48.19331	53
14.2a	AT	340846		Grass V., unpubl.				16.48538	48.19331	53
14.2a	AT	340847		Grass V., unpubl.				16.48538	48.19331	53
14.2a	AT	340848		Grass V., unpubl.				16.48525	48.19308	50
14.2a	AT	341584		Essl F. (1999)	7	806	Teucrio botryos-Andropogonetum ischaemii	16.155041	48.346961	56
14.2a	AT	341585		Essl F. (1999)	7	415	Teucrio botryos-Andropogonetum ischaemii	15.965029	48.349755	56
14.2a	AT	342750		Stark W. (2010)	1	1	Teucrio botryos-Andropogonetum ischaemii	16.12845	48.36679	51
14.2a	AT	342752		Stark W. (2010)	1	3	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	54
14.2a	AT	342753		Stark W. (2010)	1	4	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
14.2a	AT	342754		Stark W. (2010)	1	5	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	56
14.2a	AT	342756		Stark W. (2010)	1	7	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	56
14.2a	AT	342757		Stark W. (2010)	1	8	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	56
14.2a	AT	342759		Stark W. (2010)	1	10	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
14.2a	AT	342760		Stark W. (2010)	1	11	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
14.2a	AT	342762		Stark W. (2010)	1	13	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	51
14.2a	AT	342763		Stark W. (2010)	1	14	Teucrio botryos-Andropogonetum ischaemii	15.951	48.34602	51
14.2a	AT	342765		Stark W. (2010)	1	16	Teucrio botryos-Andropogonetum ischaemii	15.92828	48.361	56
14.2a	AT	360491		Kurmann J. (2013)				15.82414	48.37718	52
14.2a	AT	360505		Kurmann J. (2013)				15.82425	48.37304	52
14.2a	AT	365024		Willner W., unpubl.				16.85442992	48.14315991	56
14.2a	AT	365061		Kadlec G., unpubl.				16.11747001	48.35316	51
14.2a	AT	365062		Kadlec G., unpubl.				16.11462001	48.35929	51
14.2a	AT	365063		Kadlec G., unpubl.				16.11133001	48.35575	51
14.2a	AT	365064		Kadlec G., unpubl.				16.07099001	48.34751	56
14.2a	AT	365065		Kadlec G., unpubl.				16.06606001	48.34859	51
14.2a	AT	365069		Kadlec G., unpubl.				16.53869001	48.1647	56
14.2a	AT	365070		Kadlec G., unpubl.				16.52718001	48.16492	56
14.2a	AT	365071		Kadlec G., unpubl.				16.57612001	48.14988	56
14.2a	AT	365072		Kadlec G., unpubl.				16.57494001	48.14795	54
14.2b	AT	307395		Sauberer A. (1942)	8	1	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307396		Sauberer A. (1942)	8	2	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307397		Sauberer A. (1942)	8	3	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307398		Sauberer A. (1942)	8	4	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307399		Sauberer A. (1942)	8	5	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307400		Sauberer A. (1942)	8	6	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307401		Sauberer A. (1942)	8	7	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307402		Sauberer A. (1942)	8	8	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307403		Sauberer A. (1942)	8	9	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307405		Sauberer A. (1942)	8	11	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	307406		Sauberer A. (1942)	8	12	Andropogoneto-Teucrietum botrydis	16.5417	48.1583	58
14.2b	AT	312633		Margl H. (1973)	3	22		16.56667	48.13333	59
14.2b	AT	317612		Schratt-Ehrendorfer, unpubl.				16.54905278	48.16298303	58
14.2b	AT	317613		Schratt-Ehrendorfer, unpubl.				16.54933052	48.16298304	53