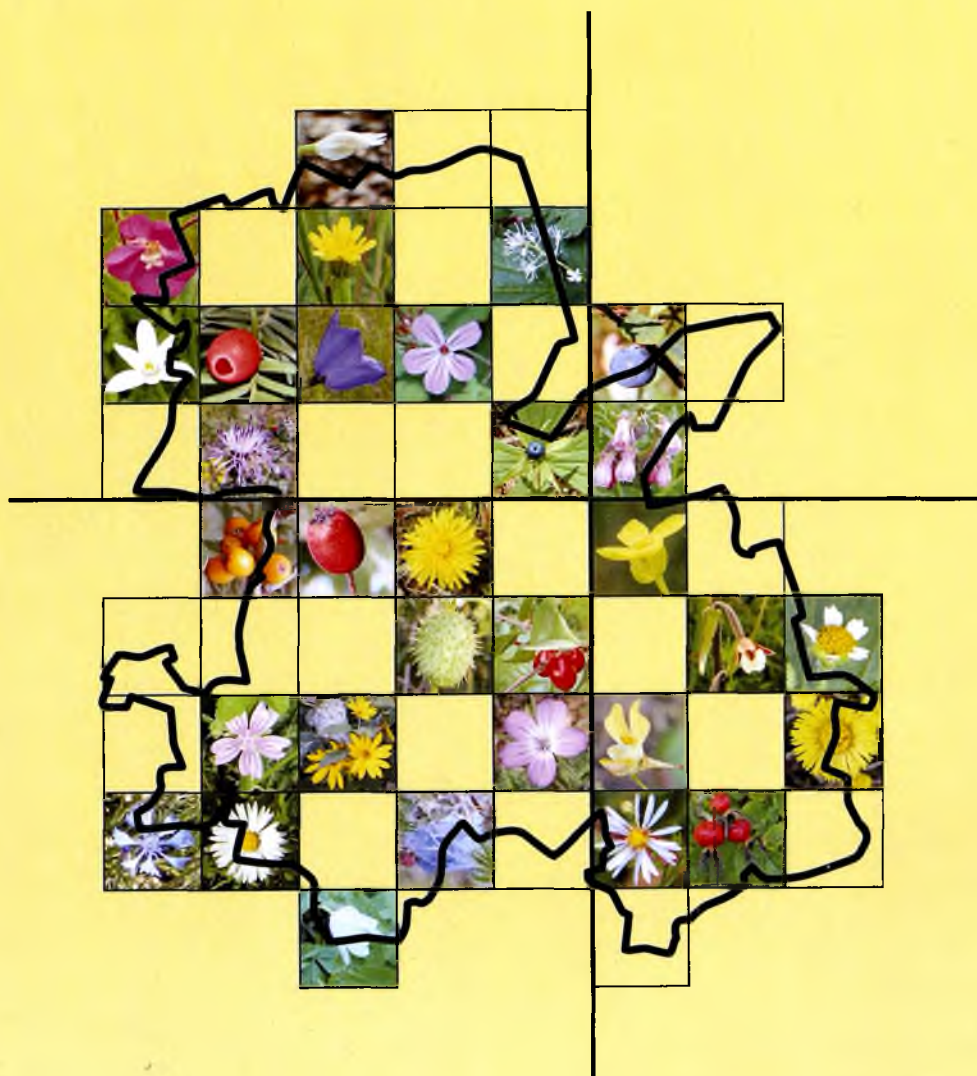


Alina Urbisz, Andrzej Urbisz

**ATLAS ROZMIESZCZENIA
ROŚLIN NACZYNIOWYCH W RYBNIKU
DISTRIBUTION ATLAS
OF VASCULAR PLANTS IN RYBNIK**



Katowice 2014

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ALINA URBISZ, ANDRZEJ URBISZ

KATOWICE 2014

WYDAWCA • THE PUBLISHER
CENTRUM DZIEDZICTWA PRZYRODY
GÓRNEGO ŚLĄSKA
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Uniwersytetu Śląskiego w Katowicach.

Recenzent • Reviewer: Jadwiga Anioł-Kwiatkowska

Redaktor • Editor:
Jerzy B. Parusel

ISBN 978-83-925142-9-9

Projekt okładki i opracowanie graficzne • Project of the cover
and graphic elaboration
Andrzej Urbisz, Agnieszka Świstak

Realizacja poligraficzna • Printing realization
Pracownia komputerowa Jacka Skalmierskiego
Gliwice 44-100, ul. Pszczyńska 44/9

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GÓRNEGO ŚLĄSKA
2014

Panu prof. Adamowi Zającowi z Instytutu Botaniki Uniwersytetu Jagiellońskiego
za zgodę na wykorzystanie danych, zawartych w bazie *Atlasu rozmieszczenia
roślin naczyniowych w Polsce*,

Pani prof. Jadwidze Anioł-Kwiatkowskiej za wykonanie recenzji,

Panu dr. Jerzemu Paruselowi za umożliwienie wydania tej monografii,

Panu mgr. Łukaszowi Folcikowi za przetłumaczenie tekstu na język angielski,

Panu mgr. Tadeuszowi Krotoskiemu za udostępnienie swoich niepublikowanych
danych,

Pani Agnieszce Świstak za przygotowanie składu książki,

Panu Jackowi Skalmierskiemu za pomoc przy jej wydaniu

oraz

Panu Prezydentowi Miasta Rybnika za wsparcie finansowe

składamy serdeczne podziękowania

Authors give their sincere thanks to:

Prof. Adam Zajac from the Institute of Botany, Jagiellonian University for permission to
use the data contained in *Atlas rozmieszczenia roślin naczyniowych w Polsce*
database,

Prof. Jadwiga Anioł-Kwiatkowska for a review,

Ph.D. Jerzy Parusel for allowing the release of this monograph,

MSc. Łukasz Folcik for English translation,

MSc. Tadeusz Krotoski for access to his unpublished data,

Mrs. Agnieszka Świstak for preparing the composition of the book,

Mr. Jacek Skalmierski for help with publishing

and

Mayor of Rybnik for the financial support.

**ATLAS ROZMIESZCZENIA
ROŚLIN NACZYNIOWYCH
W RYBNIKU**

ALINA URBISZ, ANDRZEJ URBISZ

SPIS TREŚCI

Wstęp.....	7
1. Teren badań.....	8
2. Metodyka.....	8
2.1. Źródła danych florystycznych.....	8
2.2. Kartowanie flory	9
2.3. Objaśnienia zastosowanych symboli i skrótów.....	10
2.4. Wykaz jednostek kartogramu i ich lokalizacja.....	13
3. Mapy rozmieszczenia gatunków.....	15
4. Struktura przestrzenna flory miasta Rybnik.....	95
4.1. Bogactwo florystyczne.....	95
4.2. Stopień synantropizacji flory.....	96
4.3. Gatunki chronione i zagrożone.....	97
4.4. Tereny cenne pod względem botanicznym.....	98
5. Podsumowanie.....	103
Literatura.....	109
Skorowidz rodzajów.....	114

**DISTRIBUTION ATLAS
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ALINA URBISZ, ANDRZEJ URBISZ

TABLE OF CONTENTS

Introduction.....	11
1. Study area.....	11
2. Methods.....	12
2.1. Sources of floristic data.....	12
2.2. Mapping of the flora.....	12
2.3. Key for used symbols and abbreviations.....	13
2.4. List of cartogram units and its location.....	13
3. Species distribution maps.....	15
4. Spatial structure of the vascular plant flora of Rybnik.....	104
4.1. Floristic richness.....	104
4.2. Level of synanthropization of the flora.....	104
4.3. Protected and endangered plants.....	104
4.4. Botanically valuable areas.....	105
5. Conclusions.....	108
References.....	109
Index of genera.....	114

WSTĘP

Atlas rozmieszczenia roślin naczyniowych w Rybniku, to kolejne, wydane w 2014 roku opracowanie, poświęcone roślinom naczyniowym, które obecnie występują na jego terenie. Pierwszym z nich jest książka zatytułowana *Rośliny naczyniowe Rybnika*, w której możemy znaleźć ogólne informacje dotyczące Rybnika oraz jego szaty roślinnej, ale przede wszystkim pełny wykaz 1264 gatunków, które zostały odnotowane w jego granicach od połowy XIX wieku. Możemy tam również znaleźć rozdziały dotyczące gatunków chronionych, znajdujących się na czerwonej liście województwa śląskiego oraz gatunków inwazyjnych. Natomiast niniejszy atlas zawiera mapy rozmieszczenia 946 trwale zadomowionych gatunków, odnotowanych na terenie Rybnika, począwszy od 1990 roku. Przedstawiono w nim także analizę rozmieszczenia gatunków występujących współcześnie w obrębie granic miasta.

Zamieszczone w *Atlasie* mapy zostały wykonane metodą kartogramu, która polega na podziale terenu badań na określoną liczbę pól badawczych (jednostek kartogramu) o jednakowej powierzchni oraz kształcie (są to najczęściej kwadraty). Następnie prowadzone są badania terenowe, które polegają na wykonaniu spisów gatunków roślin w każdej z wyróżnionych jednostek kartogramu. Uzyskane w ten sposób dane można łatwo przedstawić w formie graficznej, jako schematyczne mapy rozmieszczenia gatunków. W latach 80-tych XX wieku zaczęły się pojawiać pierwsze, wykonane tą metodą opracowania, najpierw w innych krajach (Jung 1982; Burton 1983; Düll, Kutzelnigg 1987; Celesti Grapow 1995), a niewiele później także w Polsce (Jackowiak 1993; Sudnik-Wójcikowska 1987; Tokarska-Guzik 1999; Urbisz 2001; Witosławski 2006; Zając i in. 2006; Urbisz 2012 i inne).

Dane przedstawione w *Atlasie* oparte są na obszernym materiale (ponad 13 000 notowań florystycznych), zebranych głównie w trakcie własnych badań terenowych, ale także podanym na podstawie najnowszej literatury, zbiorów zielnikowych oraz niepublikowanych badań innych autorów.

Celem opracowania jest przedstawienie rozmieszczenia poszczególnych gatunków roślin na terenie miasta i wskazanie obszarów szczególnie cennych pod względem botanicznym.

1. TEREN BADAŃ

Miasto Rybnik jest położone w południowej Polsce w województwie śląskim, około 50 km na południowy-zachód od Katowic. Zajmuje powierzchnię 148 km² i liczy około 138 000 mieszkańców. Jest położone na Płaskowyżu Rybnickim – mezoregionie, należącym do makroregionu Wyżyny Śląskiej, podprowincji Wyżyna Śląsko-Krakowska i prowincji Wyżyny Polskie. Jedynie północna część miasta (okolice Jeziora Rybnickiego) znajduje się w mezoregionie Kotlina Raciborska, makroregionie Nizina Śląska, podprowincji Niziny Środkowopolskie i prowincji Nizina Środkowoeuropejska (Kondracki 1988).

Teren miasta położony jest na wysokości od 205 do 305 m n.p.m (Czuczvara i in. 2011). Najczęściej występują tu gleby bielcowe wytworzone z piasków o odczynie kwaśnym, a nieco rzadziej gleby brunatne. Główną rzeką przepływającą przez Rybnik jest Ruda. Jej lewobrzeżne dopływy to Nacyna, Potok Gzel, Potok Boguszowicki i Potok Kłokociński, a dopływy prawobrzeżne to Potok Grabownia, Potok z Kamienia i Potok Przegędza. Długość okresu wegetacyjnego wynosi 211–230 dni, średnia roczna temperatura 7–8,5°C, a opady 700–800 mm rocznie. Przeważają wiatry zachodnie i południowo-zachodnie (Ligęza 1970).

2. METODYKA

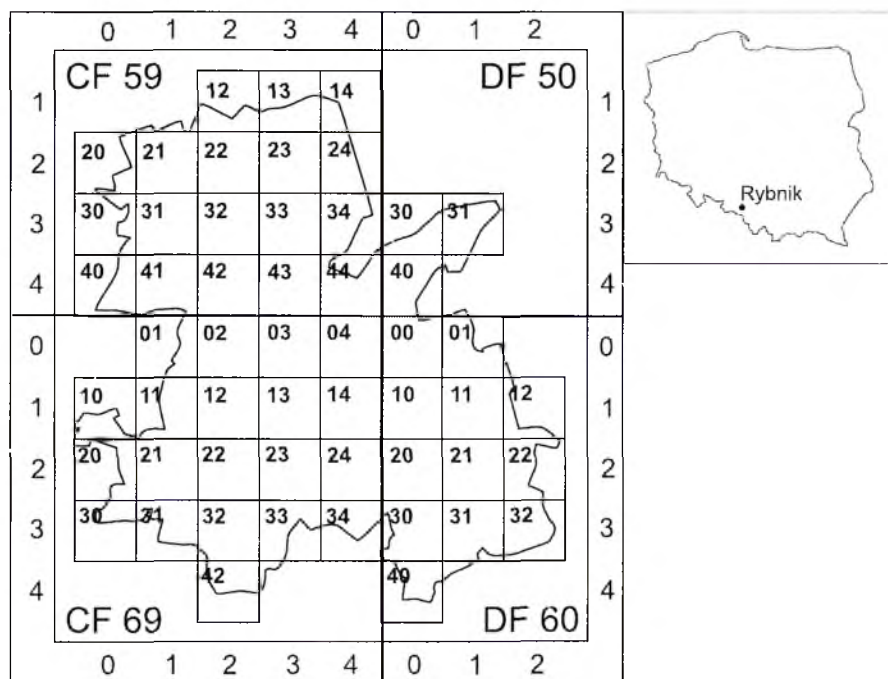
2.1. ŹRÓDŁA DANYCH FLORYSTYCZNYCH

Historyczne opracowania flory Śląska (Schwenckfeld 1600; Mattuschka 1776, Krockner 1787–1823; Grabowski 1843; Wimmer 1857; Uechtritz 1863, 1864a,b, 1865, 1868, 1872; Fritze 1868; Engler 1870; Fiek 1881; Schube 1903, 1904, 1904–1925) dostarczają nam wielu informacji na temat rozmieszczenia gatunków roślin, które występowały tu kilkadziesiąt, a nawet kilkaset lat temu. Jednakże pod wpływem działalności człowieka, skład gatunkowy flory określonego obszaru ulega dużym zmianom i dlatego w celu przedstawienia aktualnego rozmieszczenia gatunków roślin, konieczne są współczesne badania terenowe. W niniejszym atlasie, oprócz własnych danych florystycznych, zostały uwzględnione stanowiska pochodzące z literatury (Cabała 1990; Celiński i in. 1993, 1994, 1995, 1998; Stebel, Domański 1993; Rostański 1994; Urbisz 1996, 2001; Domański i in. 1997; Stebel i in. 1997; Urbisz i in. 1998, 2003, 2005; Krotoski 2001, 2005a,b, 2007, 2008, 2009, 2010a,b, 2012a,b, 2013; Rok, Henel 2001; Sojka 2001, 2005; Stankiewicz 2002; Węgrzynek 2003; Zalewska-Gałosz 2008 i inne), prac licencjackich, magisterskich i doktorskich (Szendera 1997; Ziętara 2004; Brauner 2006; Korsak 2011), zbiorów zielnikowych oraz bazy ATPOL, podane lub opublikowane po 1989 roku przez innych autorów.

2.2. KARTOWANIE FLORY

Badania florystyczne były prowadzone w latach 1990–2014 z zastosowaniem metody kartogramu. Teren miasta został podzielony zgodnie z założeniami metodycznymi „Atlasu rozmieszczenia roślin naczyniowych w Polsce” – ATPOL (Zajac 1978) na podstawowe pola badawcze, którymi były kwadraty o boku 2 km. Uwzględniono wszystkie jednostki kartogramu, których przynajmniej 10% powierzchni leżały w obrębie granic miasta – w sumie ich liczba wyniosła 53. Podział obszaru Rybnika na wyróżnione jednostki kartogramu przedstawiono na Ryc. 1.

Własne badania terenowe prowadzono we wszystkich polach badawczych, odwiedzając każde z nich kilkakrotnie w różnych okresach sezonu wegetacyjnego. Obserwacje prowadzono wykorzystując plan miasta Rybnik oraz mapy topograficzne w skali 1:50 000 oraz 1:25 000. Posługiwano się listami florystycznymi, na których odnotowywano gatunki roślin, występujące w poszczególnych jednostkach kartogramu. W atlasie uwzględniono wyłącznie gatunki trwale zadomowione (Mirek i in. 2002; Tokarska-Guzik i in. 2012), których występowanie na terenie Rybnika potwierdzono po 1989 roku. Każdy gatunek odnotowywano w danym kwadracie tylko raz – w sumie zebrano ponad 13 000 notowań florystycznych.



Ryc. 1. Podział badanego terenu na podstawowe jednostki kartogramu zgodnie z Atlasek rozmieszczenia roślin naczyniowych w Polsce – ATPOL (Zajac, Zajac 2001).

Fig. 1. Division of the study area into basic cartogram units according to the Distribution Atlas of Vascular Plants in Poland – ATPOL (Zajac, Zajac 2001).

2.3. OBJAŚNIENIA ZASTOSOWANYCH SYMBOLI I SKRÓTÓW

Nazewnictwo gatunków roślin przyjęto za „Krytyczną listą roślin naczyniowych Polski” (Mirek i in. 2002), a ich nazwy podano w porządku alfabetycznym.

Stanowiska poszczególnych gatunków oznaczono na mapkach kropką – ●.

Przed nazwami gatunków zastosowano następujące symbole:

* – archeofit

** – kenofit

[*] – status gatunku niepewny

Δ – gatunek rodzimy, posiadający na badanym terenie głównie stanowiska synantropijne

INTRODUCTION

Distribution atlas of vascular plants in Rybnik, is another issued in 2014 monograph dedicated to vascular plants that currently occur in the city area. The first is *Vascular plants of Rybnik* in which the general information about Rybnik and its vegetation can be found, moreover a complete list of 1264 species that have been recorded within its borders since the Mid-19th Century is given. There are chapters on invasive alien species, protected species and plants included in The Red List of Vascular Plants of Silesian Voivodship. This book contains 946 distribution maps of permanently established species recorded in Rybnik, starting in 1990. It also includes distribution analysis of presently occurring species. For making the maps cartogram method was used. The study area was divided into units equal in size and shape (usually squares). The presence of vascular plant species was recorded systematically within each cartogram unit. The data obtained this way can be easily graphically presented as a schematic map of the species distribution. In the 80s of the 20th Century first studies based on this method were published, firstly in other countries (Jung 1982; Burton 1983; Düll, Kutzelnigg 1987; Celesti Grapow 1995) and then in Poland (Jackowiak 1993; Sudnik-Wójcikowska 1987; Tokarska-Guzik 1999; Urbisz 2001; Witosławski 2006; Zając et al. 2006; Urbisz 2012 and others).

The data presented in the Atlas are based on large material (over 13000 floristic data), collected mainly during own field studies but also based on literature, herbarium collections and unpublished other authors' studies.

The aim of this monograph is to present the individual species distribution within the city administrative boundaries and to identify botanically valuable areas.

1. STUDY AREA

Rybnik is located in the south-western part of the Silesian Voivodeship (Southern Poland), about 50 km south-west from Katowice. It occupies an area about 148km² and is inhabited by 138 000 people. According to the division of Poland into physical-geographical regions (Kondracki 1988), almost total area of the city is located in the

Rybnik Plateau mesoregion, Silesian Uplands macroregion, Silesia-Cracow Uplands subprovince and Polish Uplands province. Only the northern part of Rybnik is located in Racibórz Basin – mesoregion which is a part of Silesian Lowlands macroregion, Central Poland Lowlands subprovince and Central European Lowlands province.

The area of the city is situated at 205 to 305 m above sea level (Czuczvara et al. 2011). In the soil cover of the city, podzols derived from acid sands, brown soils and alluvial soils in river valleys can be distinguished. The main river in Rybnik is Ruda – its left bank tributaries are Nacyna (with its tributaries – Potok Chwałowicki, Potok Niedobczycki and Potok Radziejowski), Potok Gzel, Potok Boguszowicki and Potok Kłokociński. The right bank tributaries are: Potok Grabownia, Potok z Kamienia and Potok Przegędza. The growing season lasts 211–230 days, the average annual temperature balances from 7 to 8.5°C, an average annual precipitation is 700–800 mm and western and south-western winds are dominating (Ligeża 1970).

2. METHODS

2.1. SOURCES OF FLORISTIC DATA

Historical monographs on the Silesian flora (Schwenckfeld 1600; Mattuschka 1776 Krockner 1787–1823; Grabowski 1843; Wimmer 1857; Uechtritz 1863, 1864, 1865 b, 1868, 1872; Fritze 1868, Engler 1870; Fiek 1881; Schube 1903, 1904, 1904–1925) provide a lot of information on the plant species distribution tens or even hundreds years ago. However continuous human pressure causes significant changes in species composition of a given area, therefore the studies on the current trends and patterns in species distribution should be carried out. In this Atlas, beside the autor's data, all localities given after 1989 in literature (Cabała 1990; Celiński et al. 1993, 1994, 1995, 1998; Stebel, Domański 1993; Rostański 1994; Urbisz 1996, 2001; Domański et al. 1997; Stebel et al. 1997; Urbisz et al. 1998, 2003, 2005; Krotoski 2001, 2005a,b, 2007, 2008, 2009, 2010a,b, 2012a,b, 2013; Rok, Henel 2001; Sojka 2001, 2005; Stankiewicz 2002; Węgrzynek 2003; Zalewska-Gałosz 2008 and others), BA, MA and PhD thesis (Szendera 1997; Ziętara 2004; Brauner 2006; Korsak 2011), herbarium collections and ATPOL database were included.

2.2. MAPPING OF THE FLORA

Field studies were carried out from 1990 to 2014. Cartogram method was used. The study area was divided into units of the same area. The area of the city was divided into 2 km² squares according to a system proposed in “Distribution Atlas of Vascular Plants in Poland – ATPOL” (Zajac 1978) All cartogram units covering at least 10% of the city area were analysed – finally 53 units. Distribution of cartogram units and its designations

according to ATPOL methods are shown in Fig. 1 – see page 9.

The presence of vascular plant species was recorded systematically within each unit several times, in different phenological aspects of growing season. Observations were made using the list of species which occurrence was reported once in each cartogram unit. Finally over 13000 floristic data were collected. Only permanently established species (Mirek et al. 2002; Tokarska-Guzik et al. 2012), which was confirmed in Rybnik after 1989 in this atlas were included. During botanical survey, 1:50 000, 1:25 000 topographic maps and the plan of Rybnik were used.

2.3. KEY FOR USED SYMBOLS AND ABBREVIATIONS

Nomenclature of plant species follows „Flowering plants and pteridophytes of Poland. A checklist” (Mirek et al. 2002). Species are ranked in alphabetical order.

Localities of individual species are shown by a dot on the map – ●.

The following symbols were applied before names of species:

* – archaeophyte

** – kenophyte

[*] – status of species unknown/uncertain

Δ – native species that occurs mainly in synanthropic sites in the study area

2.4. WYKAZ JEDNOSTEK KARTOGRAMU I ICH LOKALIZACJA (LIST OF CARTOGRAM UNITS AND ITS LOCATION)

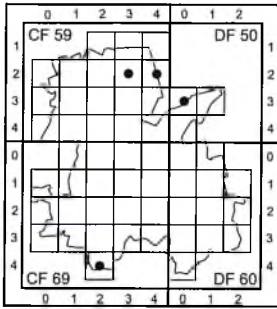
CF5912	na N od Stodół-Bugłowca	(N of Stodoły-Bugłowiec)
CF5913	na N od Ochojca	(N of Ochojec)
CF5914	na NE od Ochojca	(NE of Ochojec)
CF5920	na NW od Stodół	(NW of Stodoły)
CF5921	na N od Stodół	(N of Stodoły)
CF5922	Stodoły Bugłowiec	(Stodoły Bugłowiec)
CF5923	Ochojec	(Ochojec)
CF5924	na E od Ochojca	(E of Ochojec)
CF5930	na NW od Chwałęcic	(NW of Chwałęcice)
CF5931	na N od Chwałęcic	(N of Chwałęcice)
CF5932	Grabownia Stara	(Grabownia Stara)
CF5933	Grabownia Nowa	(Grabownia Nowa)
CF5934	na E od Golejowa	(E of Golejów)
CF5940	na SW od Chwałęcic	(SW of Chwałęcice)
CF5941	na S od Chwałęcic	(S of Chwałęcice)
CF5942	Orzepowice	(Orzepowice)
CF5943	Kuźnia Rybnicka	(Kuźnia Rybnicka)

Distribution atlas of vascular plants in Rybnik

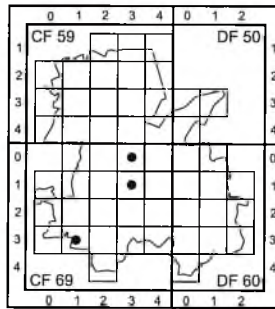
CF5944	na E od Wielopola	(E of Wielopole)
CF6901	Zebrzydowice	(Zebrzydowice)
CF6902	na E od Zebrzydowic	(E of Zebrzydowice)
CF6903	Rybnik Wawok	(Rybnik Wawok)
CF6904	Rybnik Paruszowiec	(Rybnik Paruszowiec)
CF6910	Buzowice	(Buzowice)
CF6911	na S od Zebrzydowic	(S of Zebrzydowice)
CF6912	na N od Rybnik Wrzosa	(N of Rybnik Wrzosa)
CF6913	Rybnik centrum	(Rybnik center)
CF6914	na S od Paruszowca	(S of Paruszowiec)
CF6920	na W od Niewiadomia	(W of Niewiadom)
CF6921	Niewiadom	(Niewiadom)
CF6922	Niedobczyce	(Niedobczyce)
CF6923	na E od Niedobczyc	(E of Niedobczyce)
CF6924	Rybnik Brzeziny	(Rybnik Brzeziny)
CF6930	na S od Niewiadomia	(S of Niewiadom)
CF6931	Rymer	(Rymer)
CF6932	Popielów	(Popielów)
CF6933	Radziejów	(Radziejów)
CF6934	na E od Chwałowic	(E of Chwałowice)
CF6942	na S od Popielowa	(S of Popielów)
DF5030	Rybnik Świerki	(Rybnik Świerki)
DF5031	Rybnik Kamień	(Rybnik Kamień)
DF5040	Rybnik Młyny	(Rybnik Młyny)
DF6000	na E od Paruszowca	(E of Paruszowiec)
DF6001	na S od Przegędzy	(S of Przegęda)
DF6010	Ligocka Kuźnia	(Ligocka Kuźnia)
DF6011	Huta Gotartowicka	(Huta Gotartowicka)
DF6012	na E od Huty Gotartowickiej	(E of Huta Gotartowicka)
DF6020	na W od Gotartowic	(W of Gotartowice)
DF6021	Gotartowice	(Gotartowice)
DF6022	na E od Gotartowic	(E of Gotartowice)
DF6030	Nowy Dwór	(Nowy Dwór)
DF6031	Kłokocin	(Kłokocin)
DF6032	na E od Kłokocina	(E of Kłokocin)
DF6040	na S od Nowy Dwór	(S of Nowy Dwór)

3. MAPY ROZMIESZCZENIA GATUNKÓW (SPECIES DISTRIBUTION MAPS)

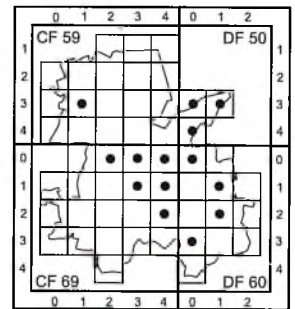
Distribution atlas of vascular plants in Rybník



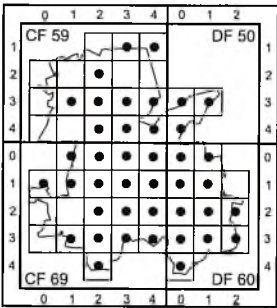
Abies alba



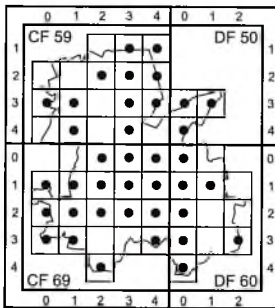
Acer campestre



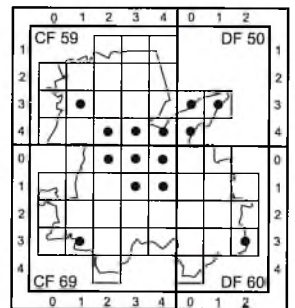
****Acer negundo**



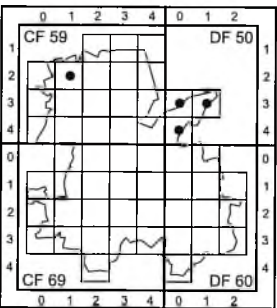
Acer platanoides



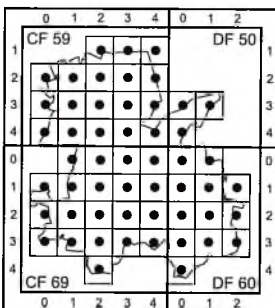
Acer pseudoplatanus



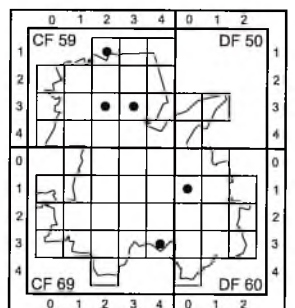
****Acer saccharinum**



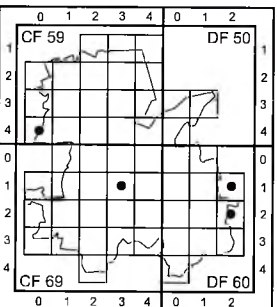
Achillea collina



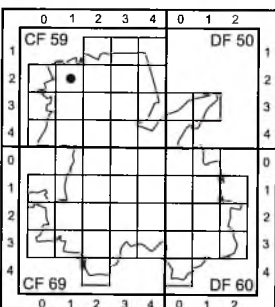
Achillea millefolium



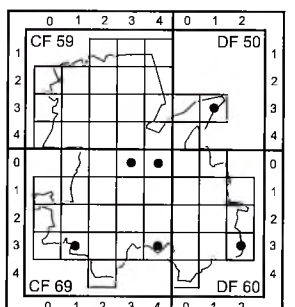
Achillea pannonica



Achillea ptarmica

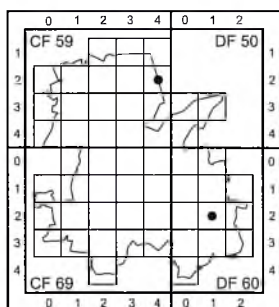


Acinos arvensis

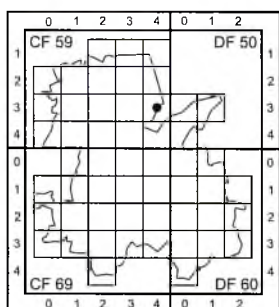


****Acorus calamus**

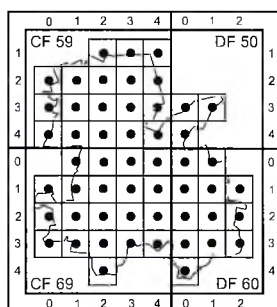
Atlas rozmieszczenia roślin naczyniowych w Rybniku



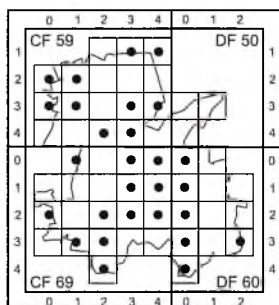
Actaea spicata



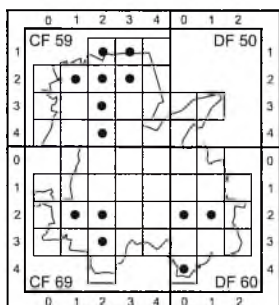
Adoxa moschatellina



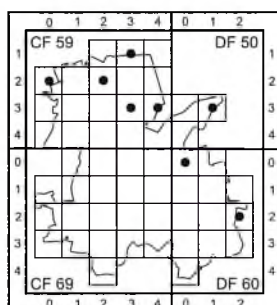
Aegopodium podagraria



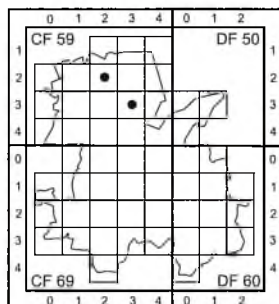
***Aesculus
hippocastanum*



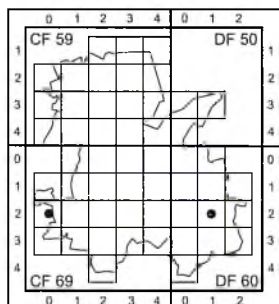
Aethusa cynapium



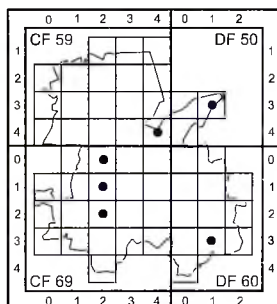
Agrimonia eupatoria



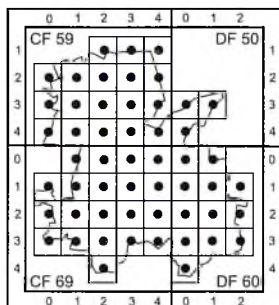
Agrimonia procera



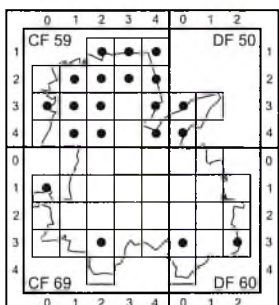
**Agrostemma githago*



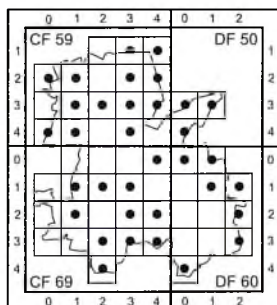
Agrostis canina



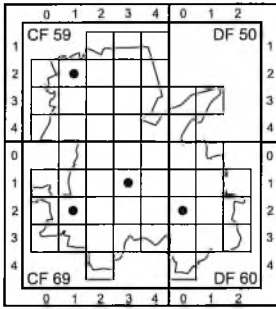
Agrostis capillaris



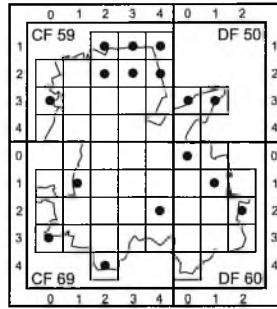
Agrostis gigantea



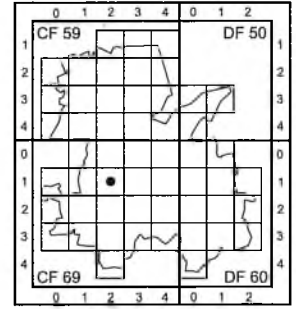
Agrostis stolonifera



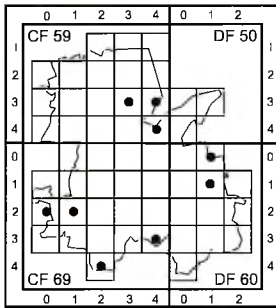
*******Ailanthus altissima*



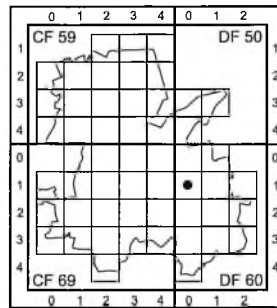
Ajuga reptans



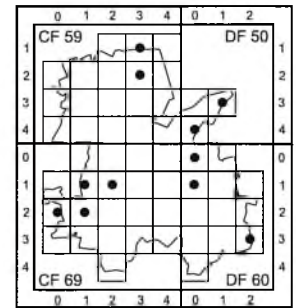
Alchemilla acutiloba



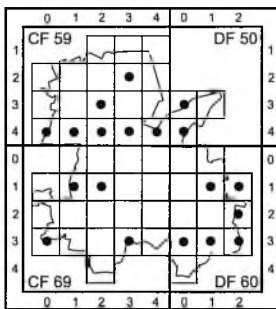
Alchemilla glabra



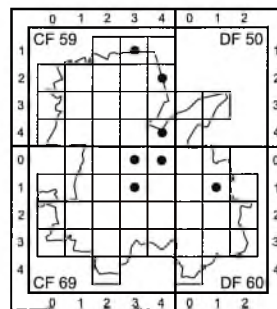
Alchemilla gracilis



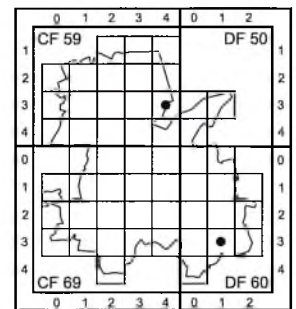
Alchemilla monticola



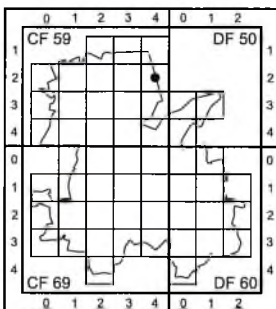
*Alisma
plantago-aquatica*



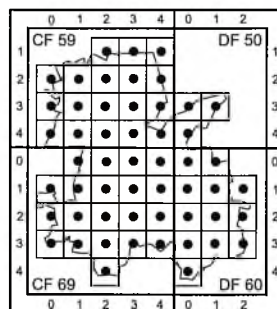
Alliaria petiolata



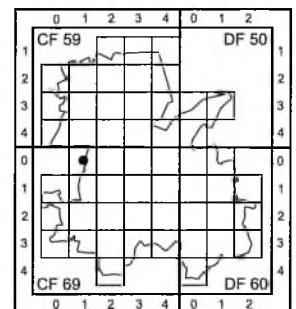
Allium ursinum



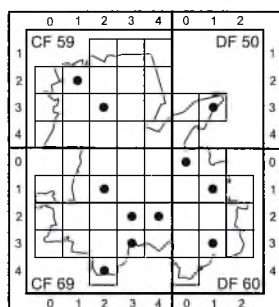
Allium vineale



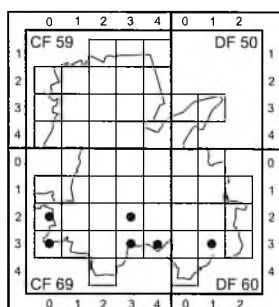
Alnus glutinosa



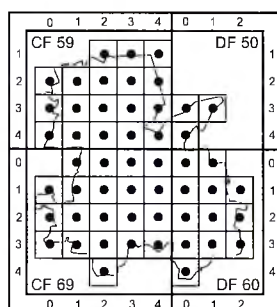
Alnus incana



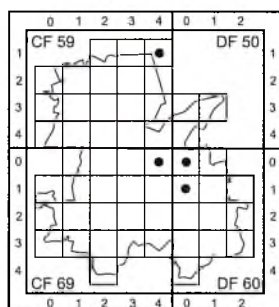
Alopecurus aequalis



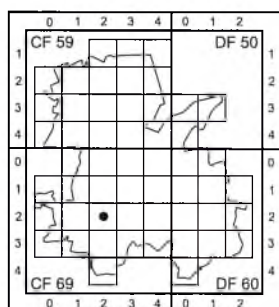
Alopecurus geniculatus



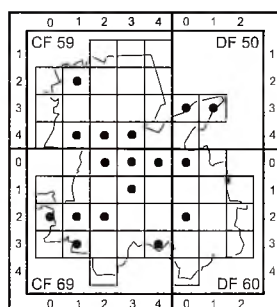
Alopecurus pratensis



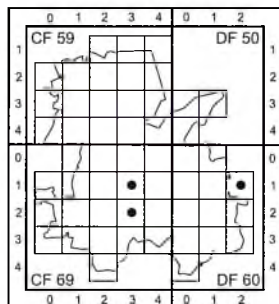
** *Amaranthus albus*



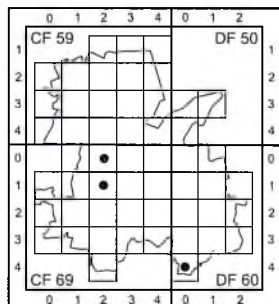
** *Amaranthus lividus*



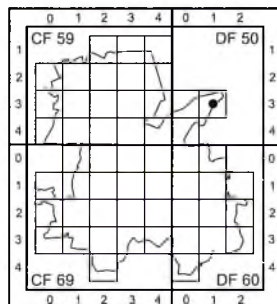
** *Amaranthus retroflexus*



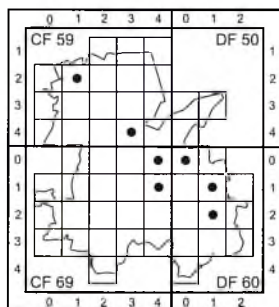
** *Amelanchier spicata*



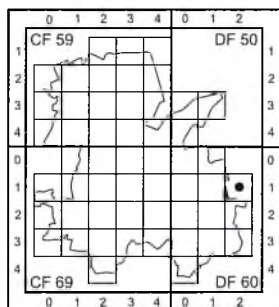
* *Anagallis arvensis*



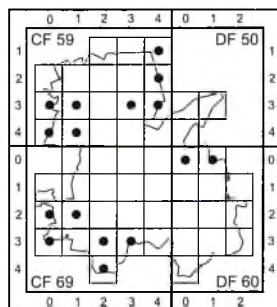
** *Anaphalis margaritacea*



* *Anchusa arvensis*

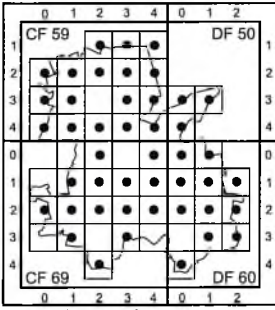


Andromeda polifolia

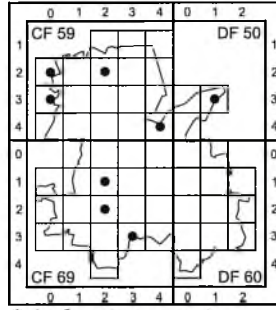


Anemone nemorosa

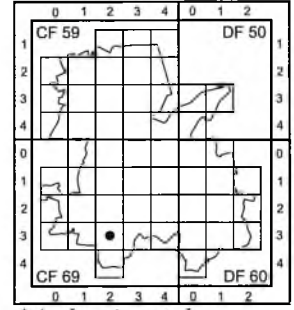
Distribution atlas of vascular plants in Rybník



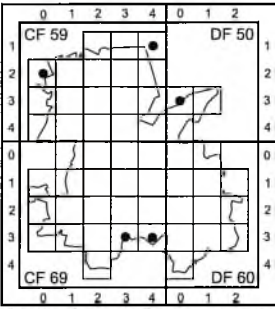
Angelica sylvestris



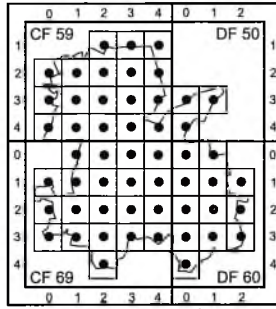
**Anthemis arvensis*



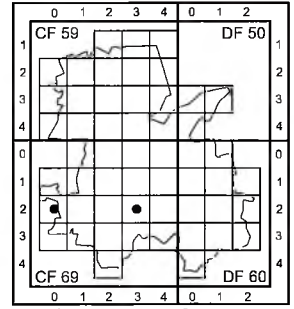
**Anthemis cotula*



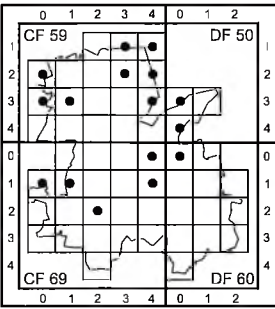
***Anthoxanthum aristatum*



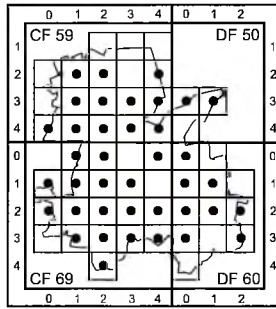
Anthoxanthum odoratum



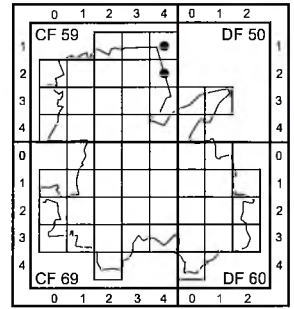
Anthriscus nitida



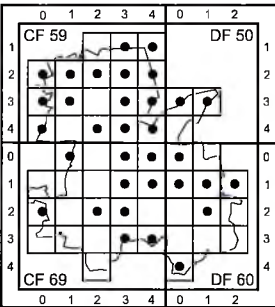
Anthriscus sylvestris



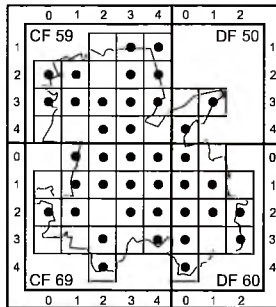
**Apera spica-venti*



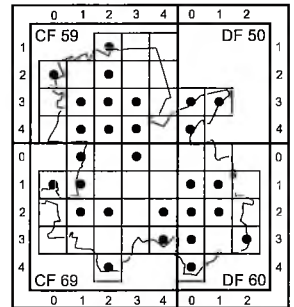
Aquilegia vulgaris



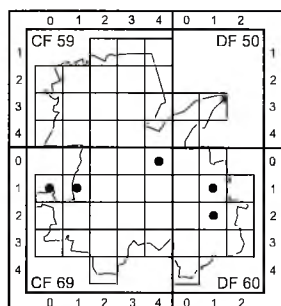
Arabidopsis thaliana



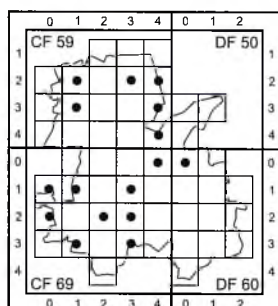
Arctium lappa



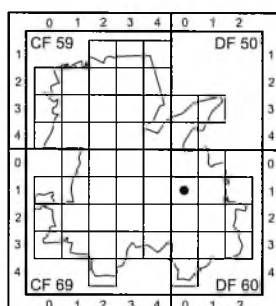
Arctium minus



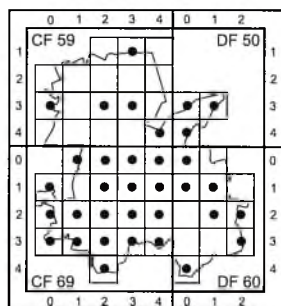
Arctium tomentosum



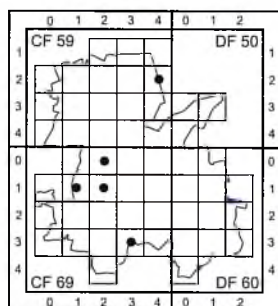
Arenaria serpyllifolia



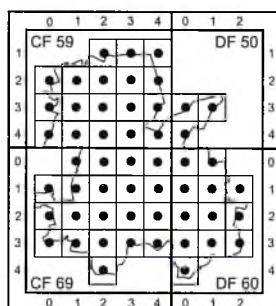
Armeria maritima
subsp. *elongata*



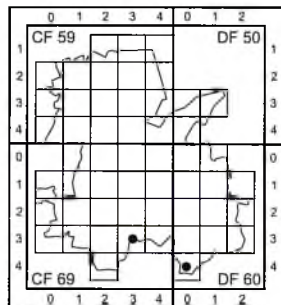
**Armoracia rusticana*



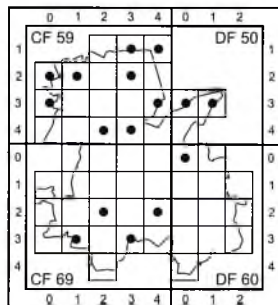
Arnoseris minima



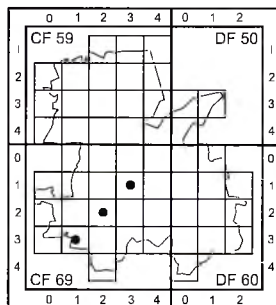
Arrhenatherum elatius



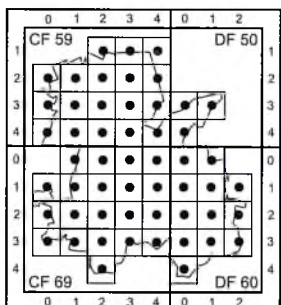
***Artemisia abrotanum*



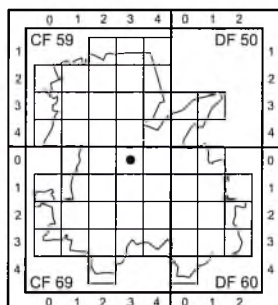
**Artemisia absinthium*



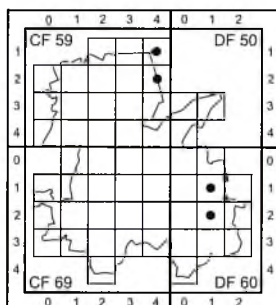
Artemisia campestris



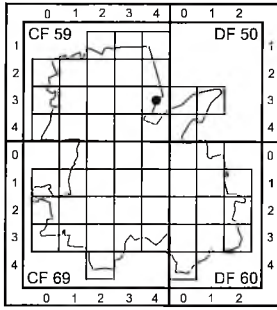
Artemisia vulgaris



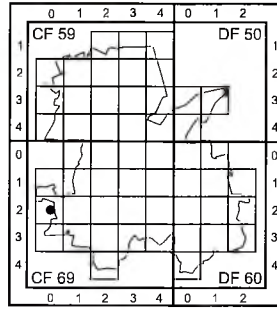
Δ *Aruncus sylvestris*



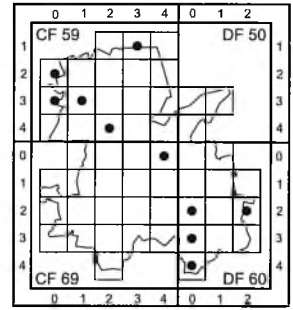
Asarum europaeum



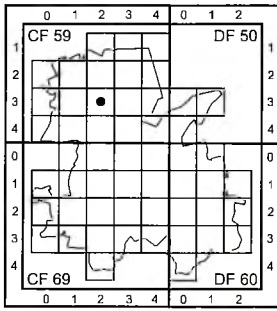
Asparagus officinalis



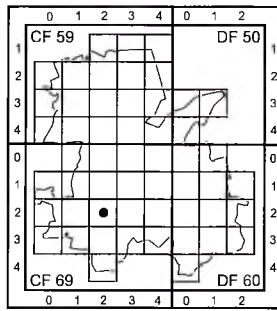
***Aster lanceolatus*



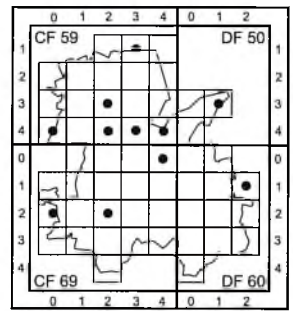
***Aster novi-belgii*



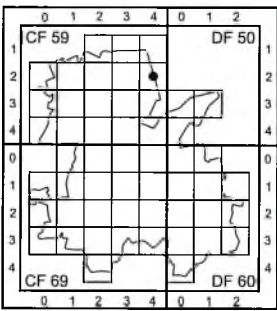
***Aster x salignus*



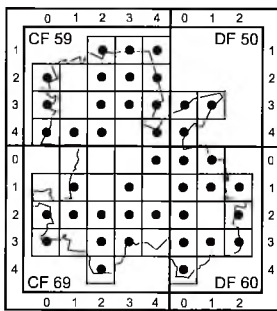
Astragalus cicer



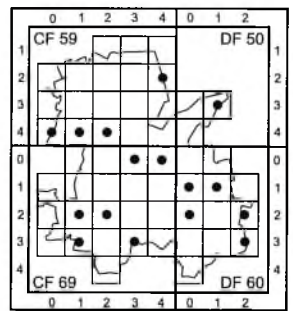
Astragalus glycyphyllos



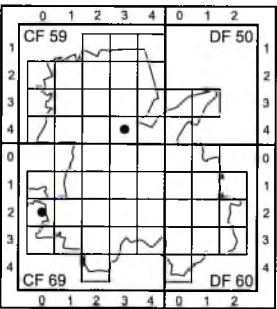
Astrantia major



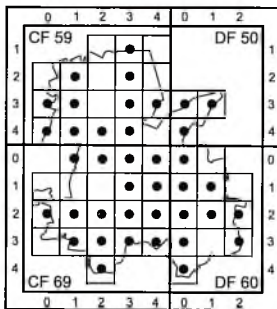
Athyrium filix-femina



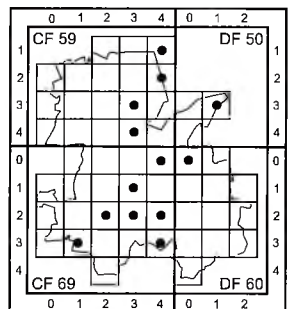
***Atriplex hortensis*



**Atriplex nitens*

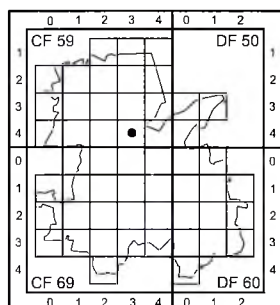


Atriplex patula

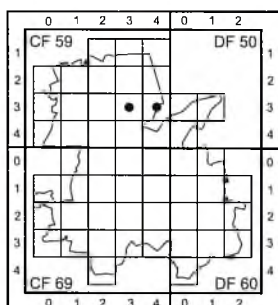


Atriplex prostrata subsp.
latifolia

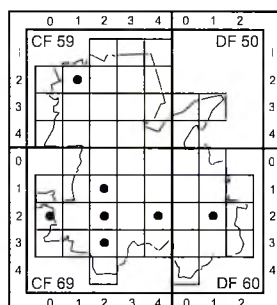
Atlas rozmieszczenia roślin naczyniowych w Rybniku



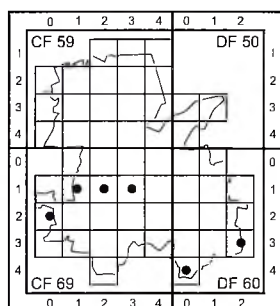
*******Atriplex prostrata*
subsp. *polonica*



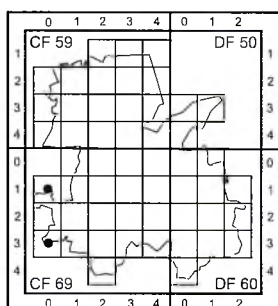
Atropa belladonna



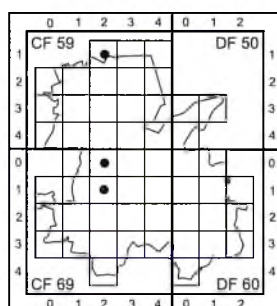
******Avena fatua*



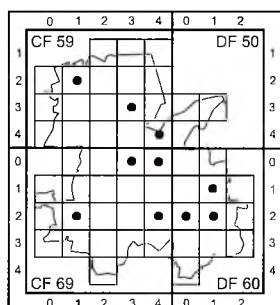
******Avena strigosa*



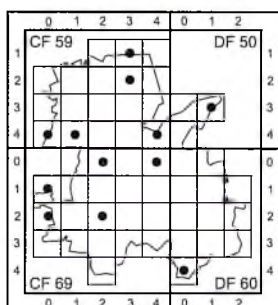
******Avena x vilis*



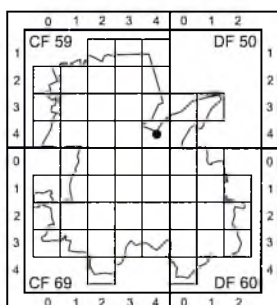
Avenula pubescens



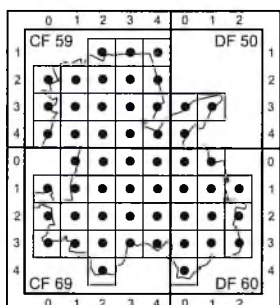
******Ballota nigra*



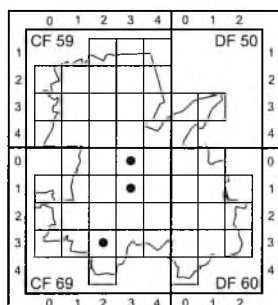
Barbarea vulgaris subsp.
vulgaris



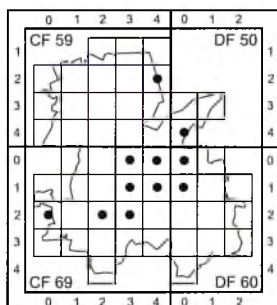
Batrachium aquatile



Bellis perennis

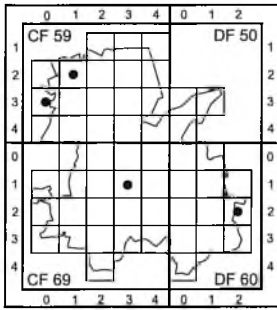


Berberis vulgaris

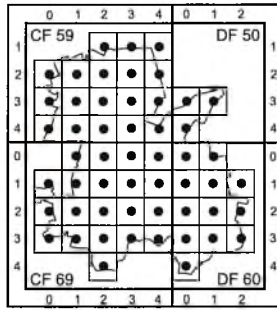


[*]*Berteroa incana*

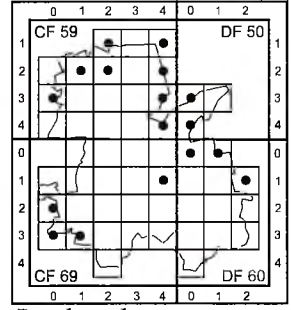
Distribution atlas of vascular plants in Rybník



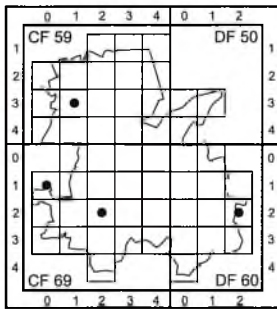
Betonica officinalis



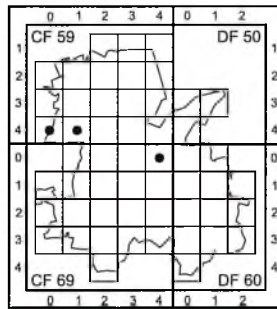
Betula pendula



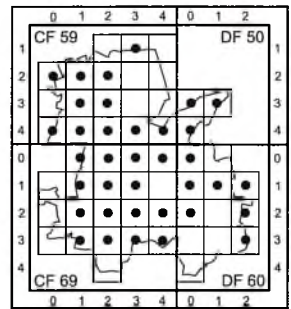
Betula pubescens



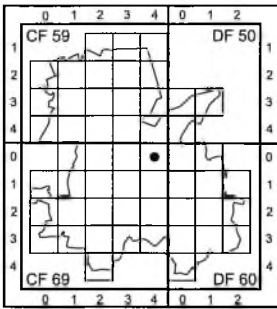
Bidens cernua



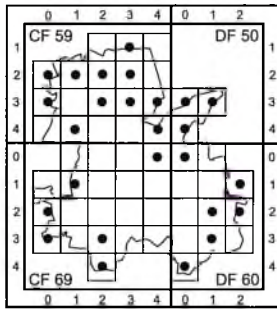
*******Bidens connata*



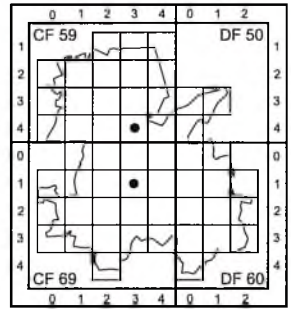
*******Bidens frondosa*



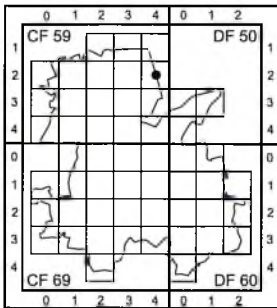
*******Bidens radiata*



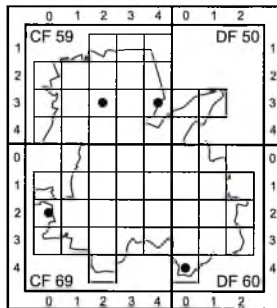
Bidens tripartita



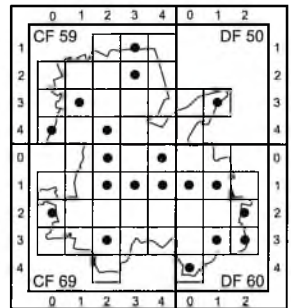
Bolboschoenus maritimus



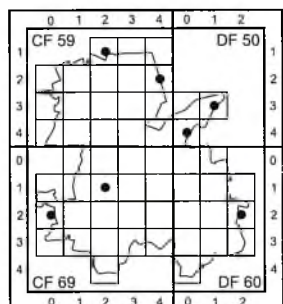
Brachypodium sylvaticum



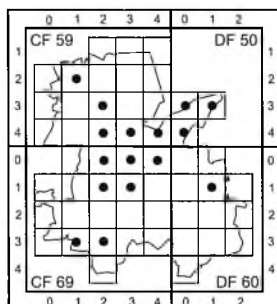
*******Brassica rapa*



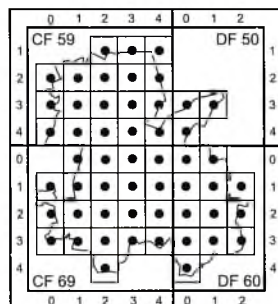
*******Brassica napus*



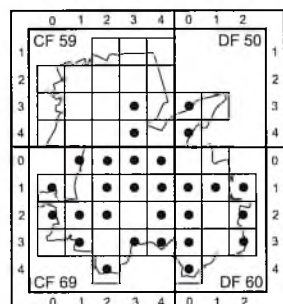
Briza media



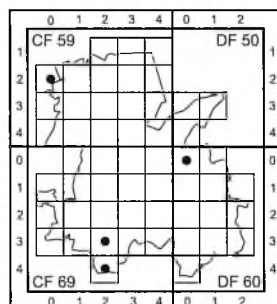
*******Bromus carinatus*



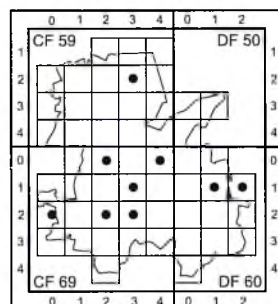
Bromus hordeaceus



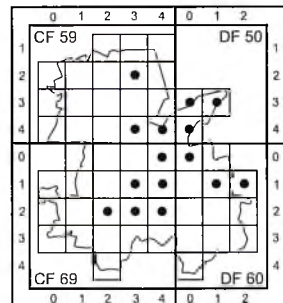
[*]*Bromus inermis*



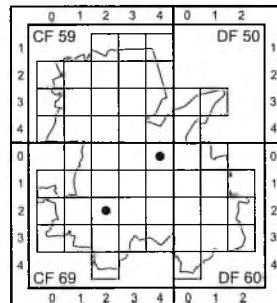
******Bromus secalinus*



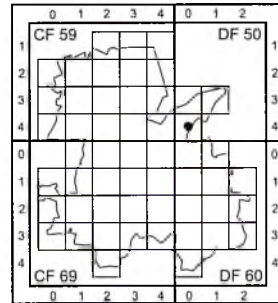
******Bromus sterilis*



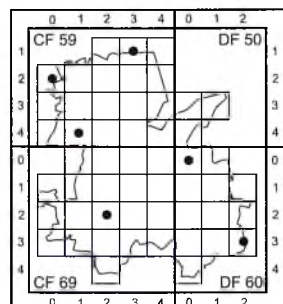
******Bromus tectorum*



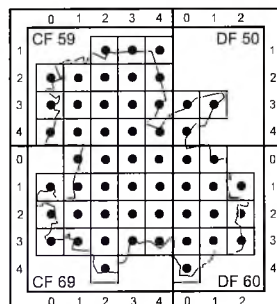
*******Bunias orientalis*



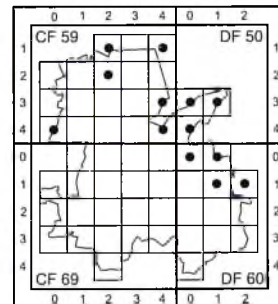
Calamagrostis arundinacea



Calamagrostis canescens

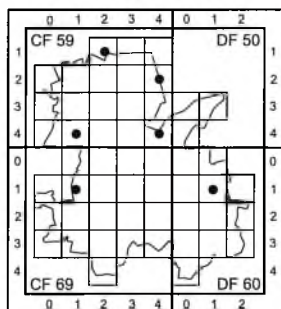


Calamagrostis epigejos

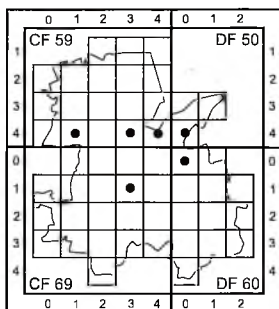


Calamagrostis villosa

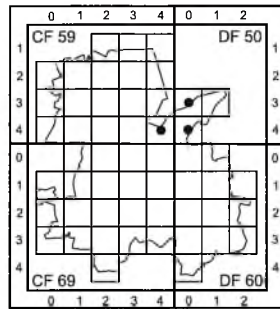
Distribution atlas of vascular plants in Rybník



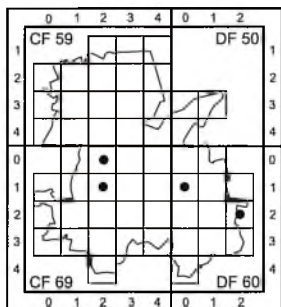
Calla palustris



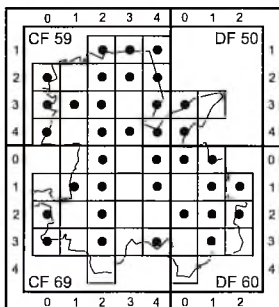
Callitriche cophocarpa



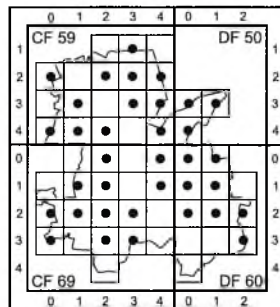
Callitriche hamulata



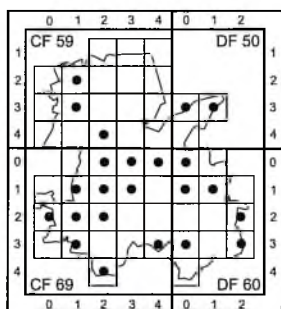
Callitriche verna s. str.



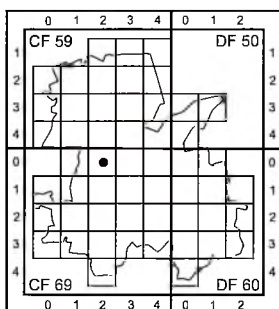
Calluna vulgaris



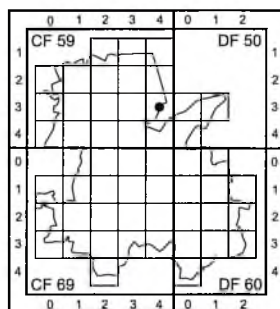
Caltha palustris



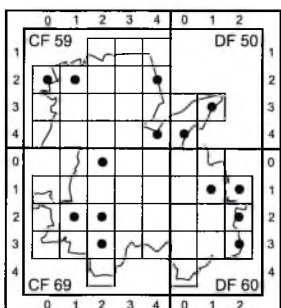
Calystegia sepium



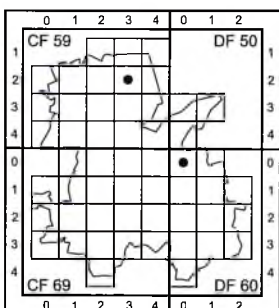
**Camelina microcarpa*
subsp. *sylvestris*



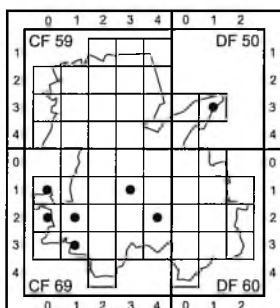
Campanula glomerata



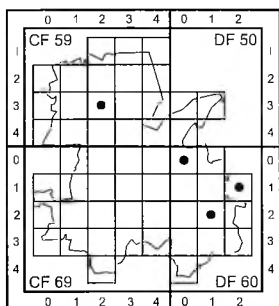
Campanula patula



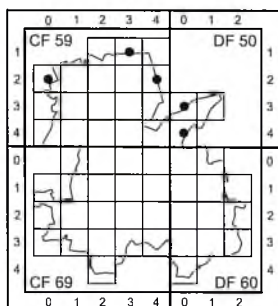
Campanula persicifolia



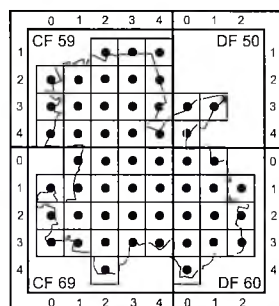
Campanula
rapunculoides



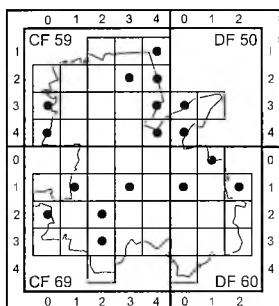
Campanula rotundifolia



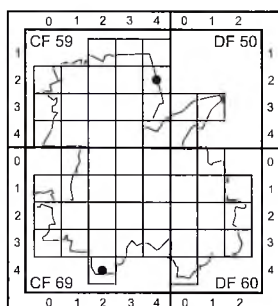
Campanula trachelium



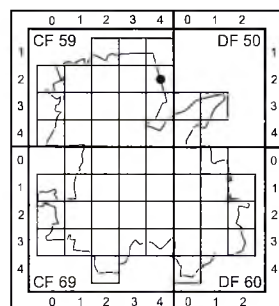
**Capsella bursa-pastoris*



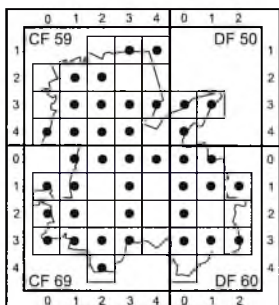
Cardamine amara



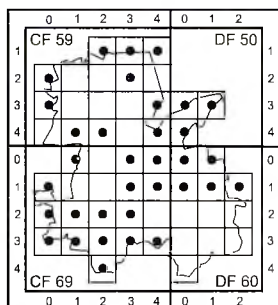
Cardamine flexuosa



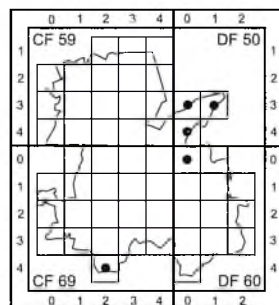
Cardamine impatiens



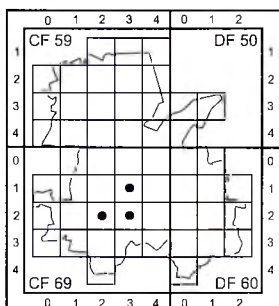
Cardamine pratensis



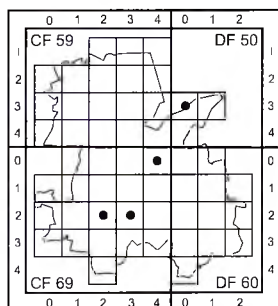
Cardaminopsis arenosa



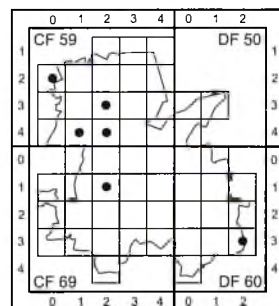
Cardaminopsis halleri



***Cardaria draba*

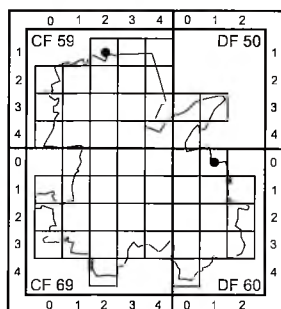


**Carduus acanthoides*

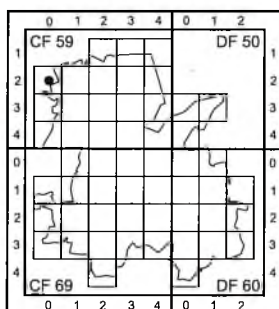


Carex acutiformis

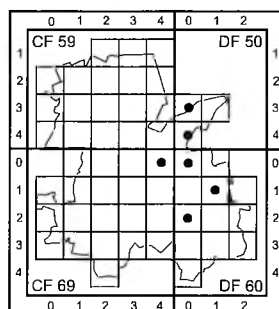
Distribution atlas of vascular plants in Rybník



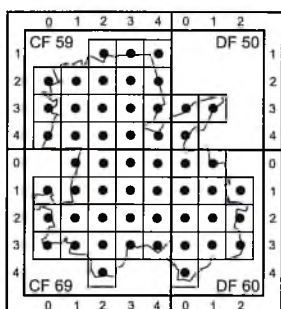
Carex appropinquata



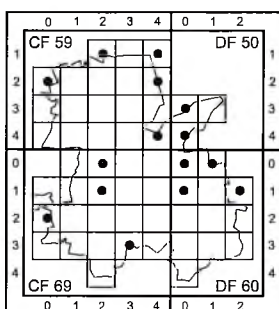
Carex x arthuriana



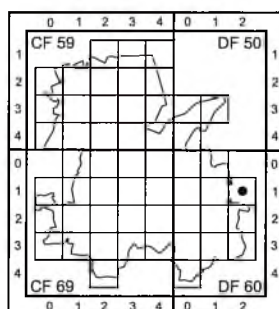
Carex bohémica



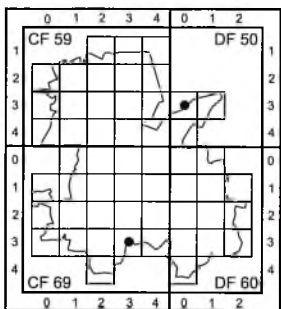
Carex brizoides



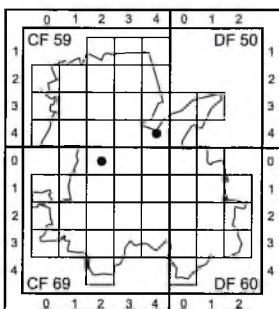
Carex canescens



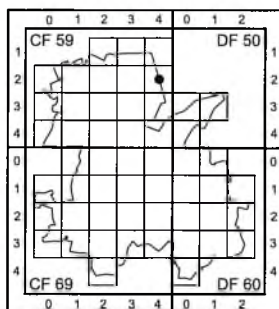
Carex caryophylla



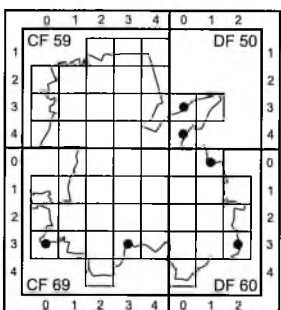
Carex demissa



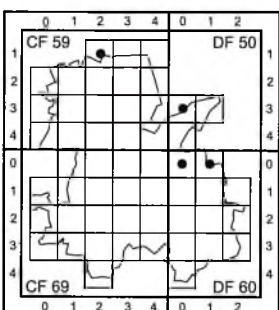
Carex diandra



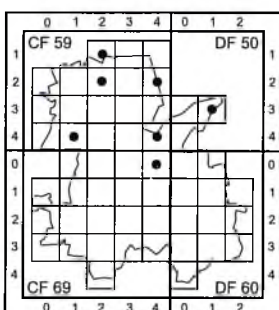
Carex disticha



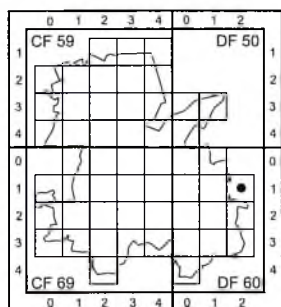
Carex echinata



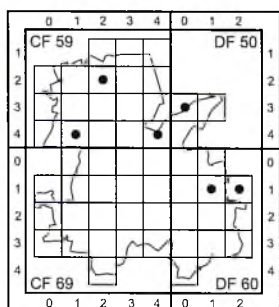
Carex elata



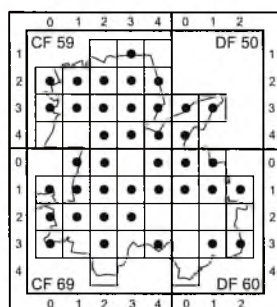
Carex elongata



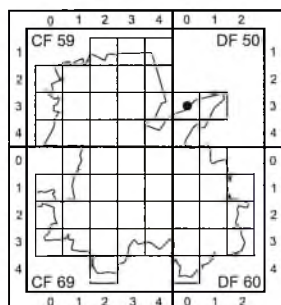
Carex ericetorum



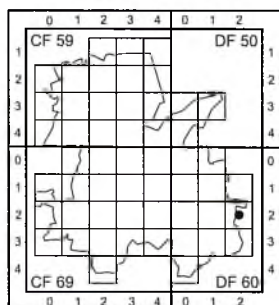
Carex gracilis



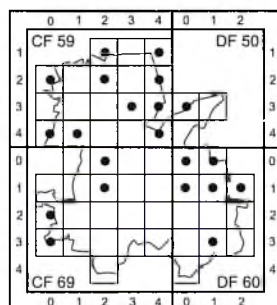
Carex hirta



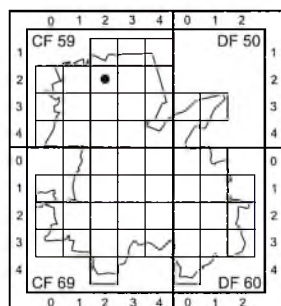
Carex hostiana



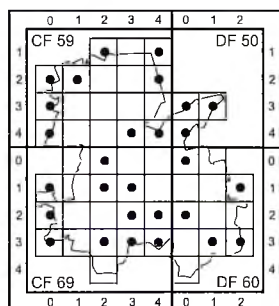
Carex lasiocarpa



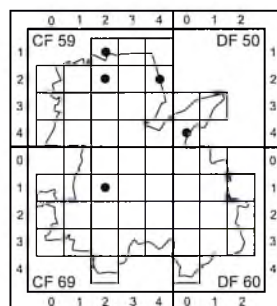
Carex nigra



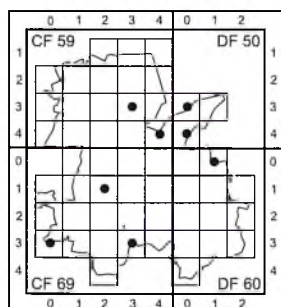
Carex xohmullerana



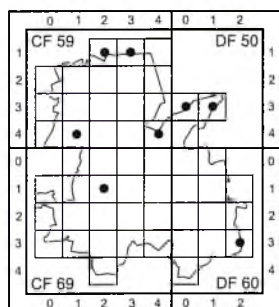
Carex ovalis



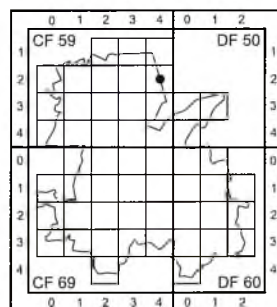
Carex pallescens



Carex panicea

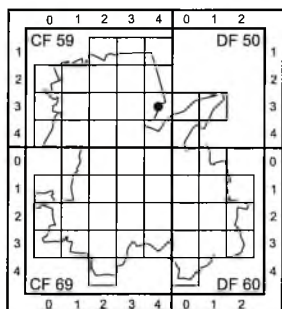


Carex paniculata

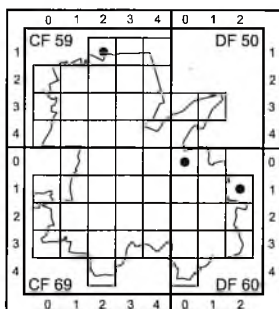


Carex pendula

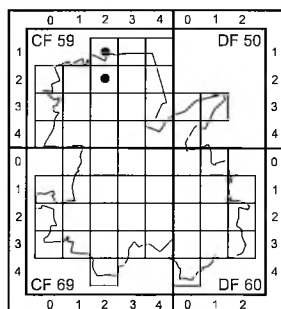
Distribution atlas of vascular plants in Rybník



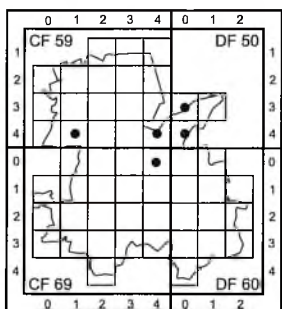
Carex pilosa



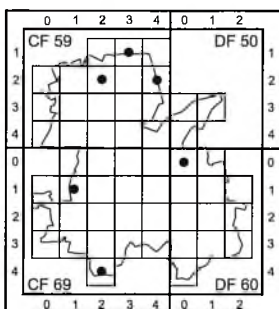
Carex pilulifera



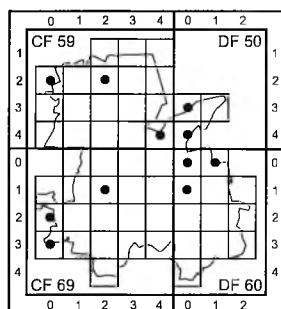
Carex praecox



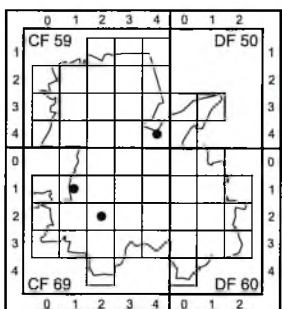
Carex pseudocyperus



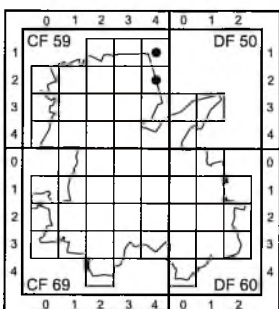
Carex remota



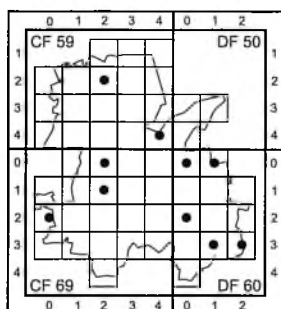
Carex rostrata



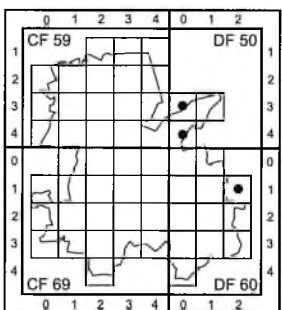
Carex spicata



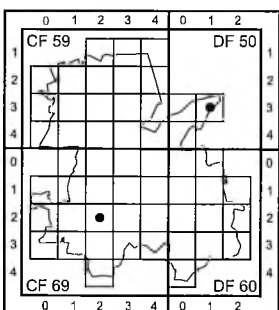
Carex sylvatica



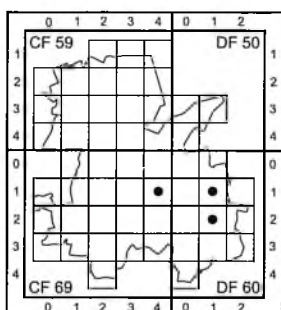
Carex vesicaria



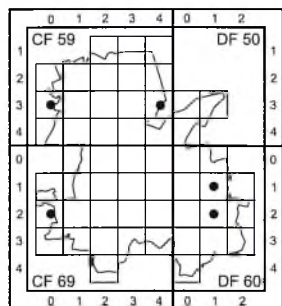
Carex viridula



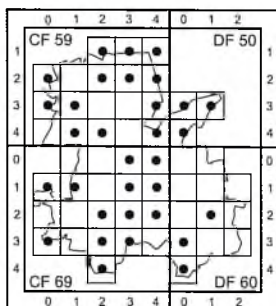
Carex vulpina



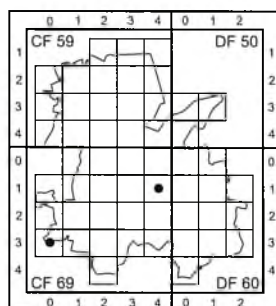
Carlina acaulis



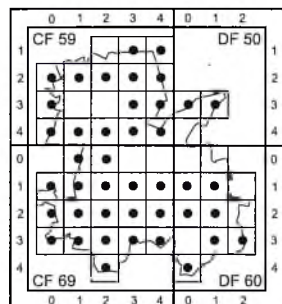
Carlina vulgaris



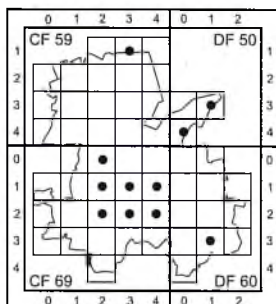
Carpinus betulus



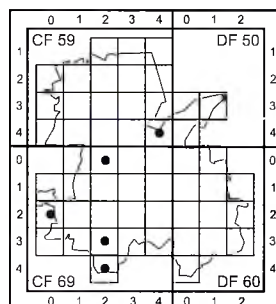
Carum carvi



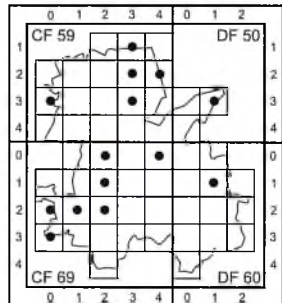
**Centaurea cyanus*



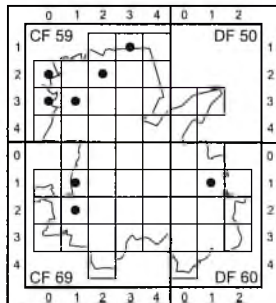
Centaurea jacea



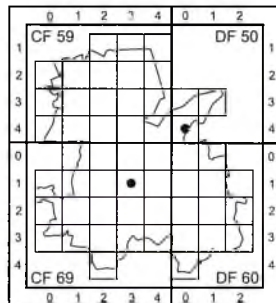
Centaurea oxylepis



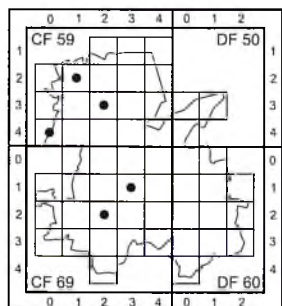
Centaurea phrygia



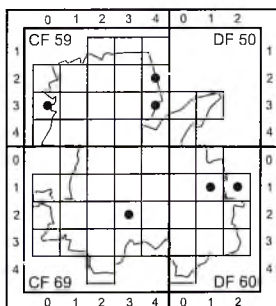
Centaurea pseudophrygia



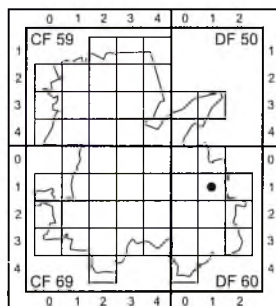
Centaurea scabiosa



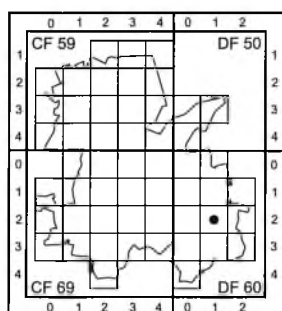
Centaurea stoebe



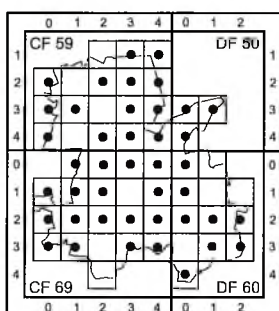
Centaurium erythraea



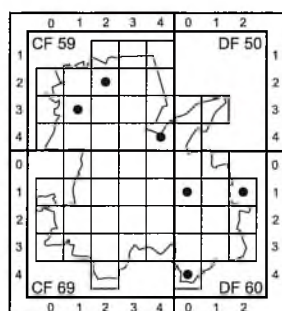
Centaurium pulchellum



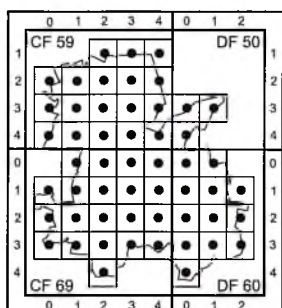
Cephalanthera longifolia



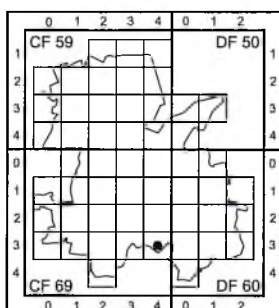
Cerastium arvense



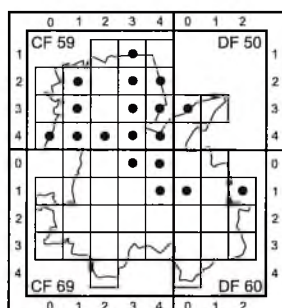
Cerastium glomeratum



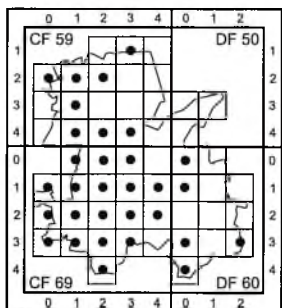
Cerastium holosteoides



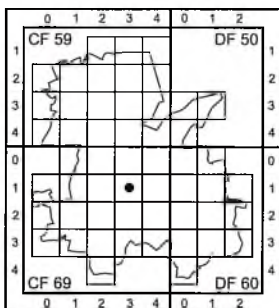
Cerastium pumilum



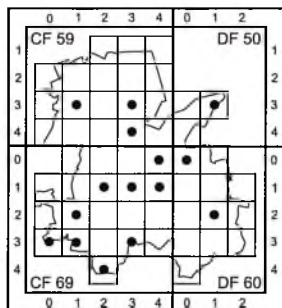
Cerastium semidecandrum



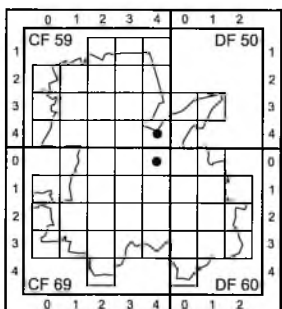
Cerasus avium



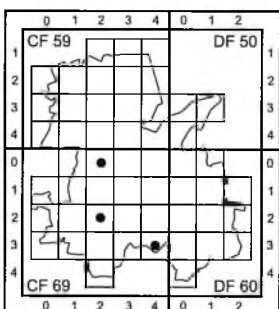
*******Cerasus mahaleb*



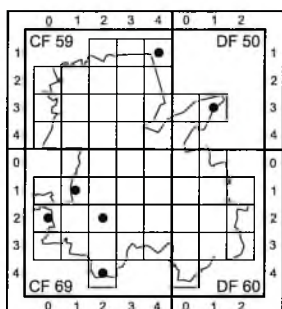
*******Cerasus vulgaris subsp. vulgaris*



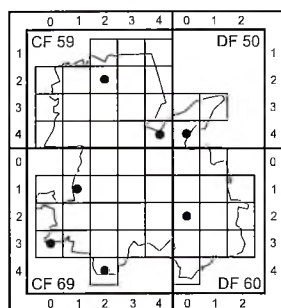
Ceratophyllum demersum



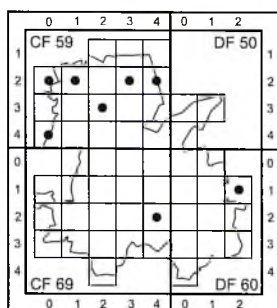
Chaenorhinum minus



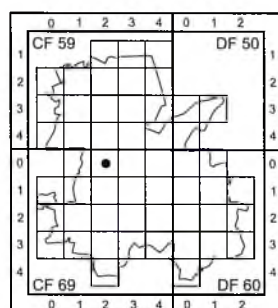
Chaerophyllum aromaticum



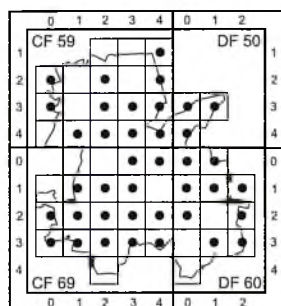
Chaerophyllum hirsutum



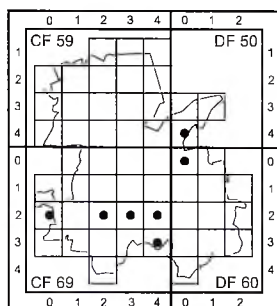
Chamaecytisus ratisbonensis



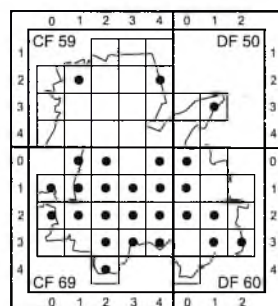
Chamaecytisus supinus



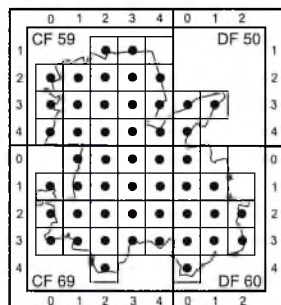
Chamaenerion angustifolium



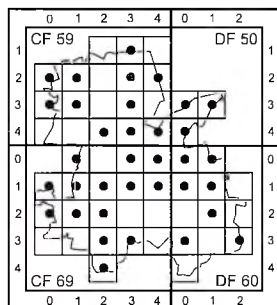
Chamaenerion palustre



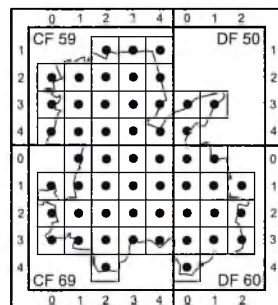
**Chamomilla recutita*



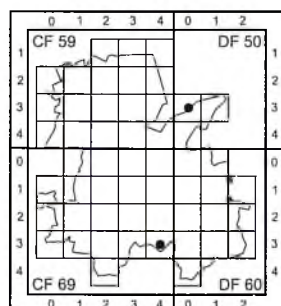
***Chamomilla suaveolens*



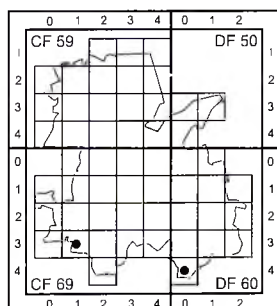
Chelidonium majus



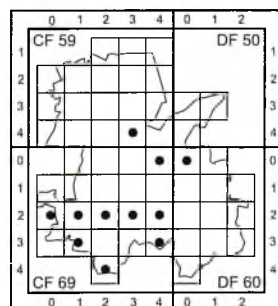
Chenopodium album



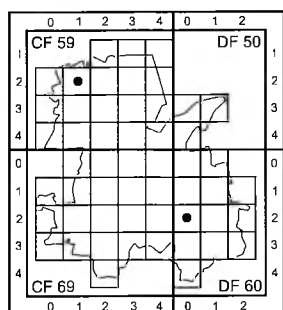
***Chenopodium botrys*



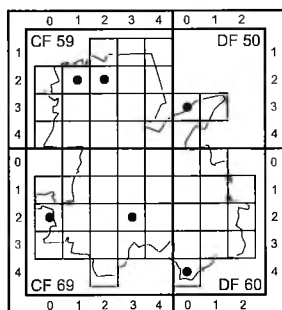
**Chenopodium ficifolium*



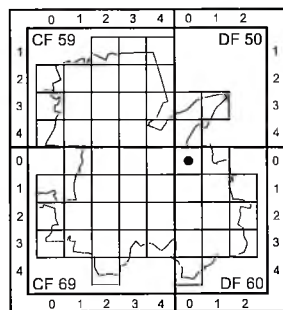
Chenopodium glaucum



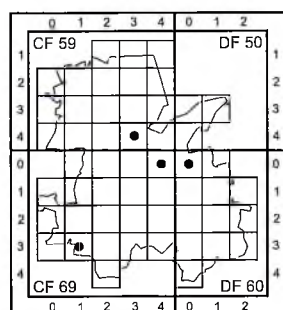
**Chenopodium hybridum*



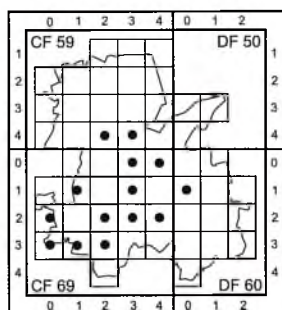
Chenopodium polyspermum



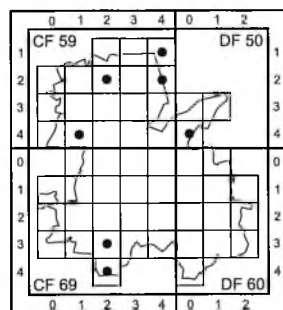
***Chenopodium pumilio*



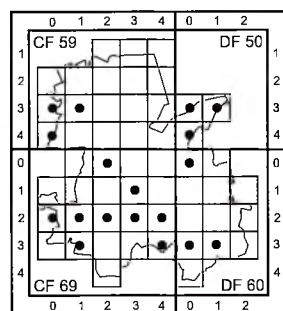
Chenopodium rubrum



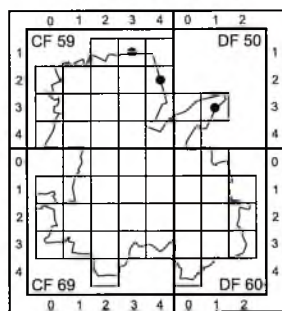
***Chenopodium strictum*



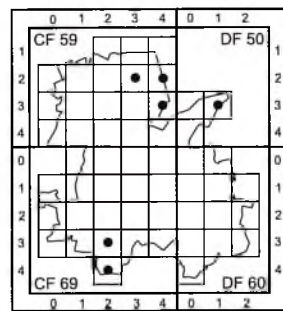
Chrysosplenium alternifolium



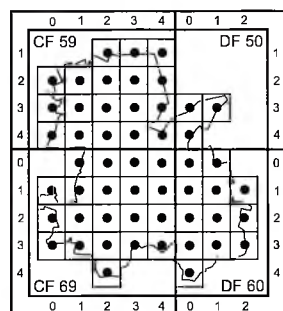
**Cichorium intybus*



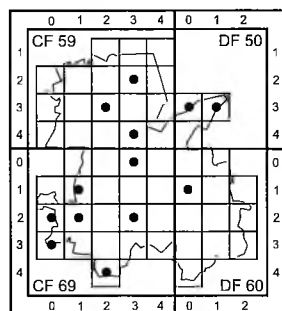
Circaea alpina



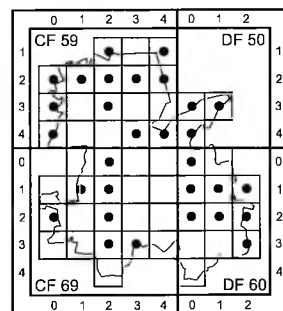
Circaea lutetiana



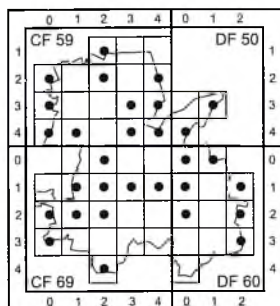
Cirsium arvense



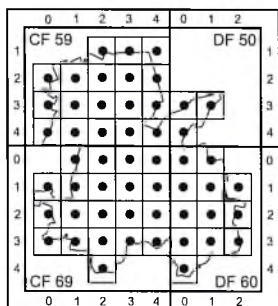
Cirsium oleraceum



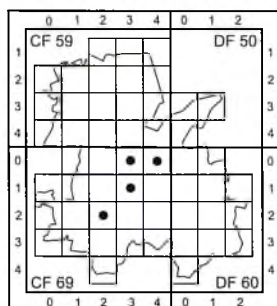
Cirsium palustre



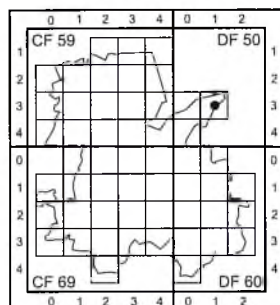
Cirsium rivulare



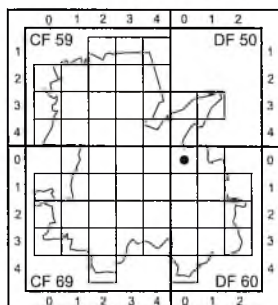
[*]*Cirsium vulgare*



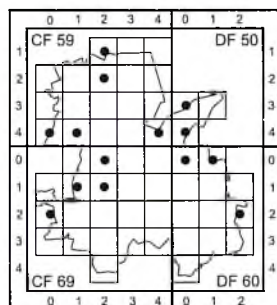
***Clematis vitalba*



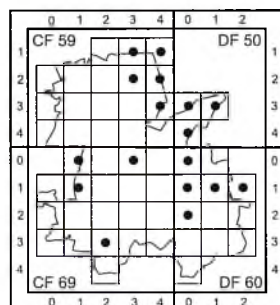
Clinopodium vulgare



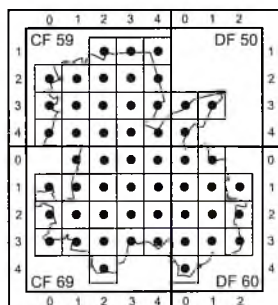
Δ *Colchicum autumnale*



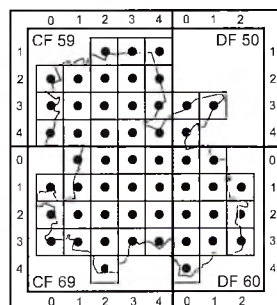
Comarum palustre



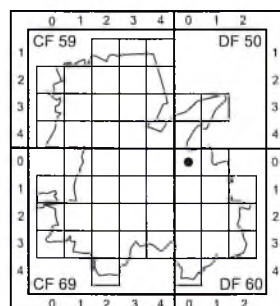
Δ *Convallaria majalis*



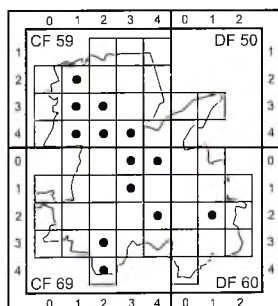
**Convolvulus arvensis*



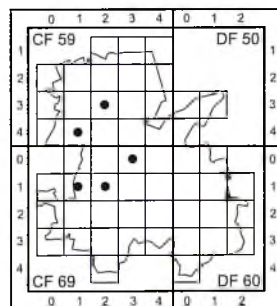
***Coryza canadensis*



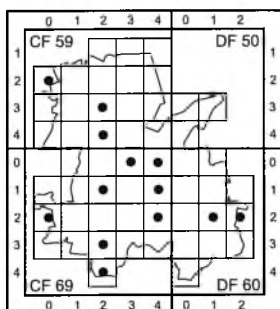
***Corispermum leptopterum*



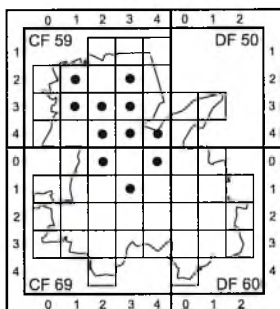
***Cornus alba*



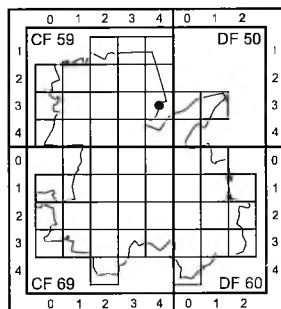
Cornus sanguinea



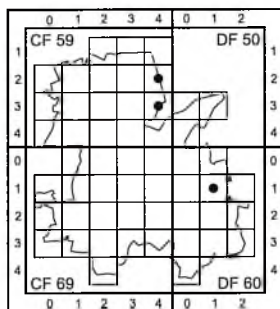
****** *Cornus sericea*



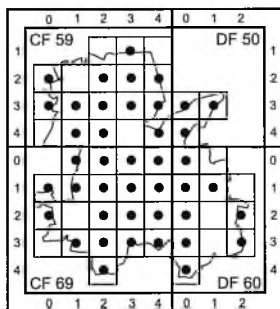
Coronilla varia



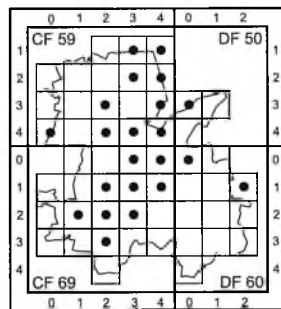
Corydalis cava



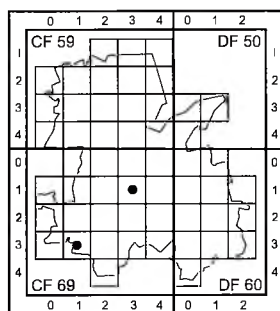
Corydalis solidia



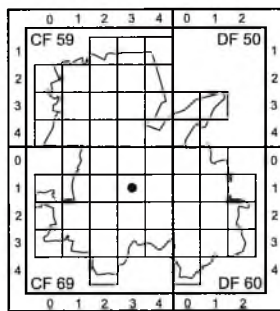
Corylus avellana



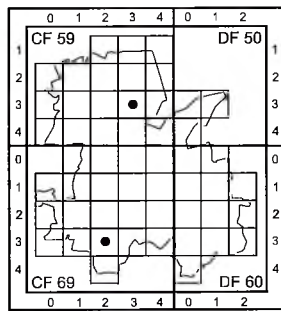
Corynephorus canescens



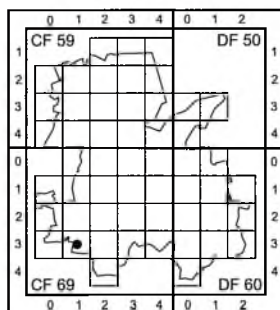
****** *Cotoneaster divaricatus*



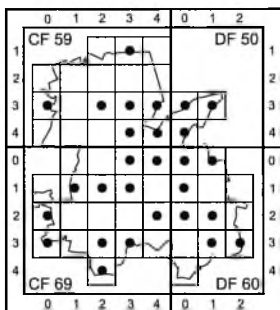
****** *Cotoneaster lucidus*



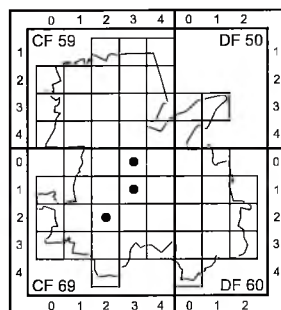
Crataegus laevigata



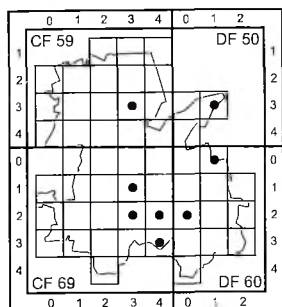
Crataegus macrocarpa



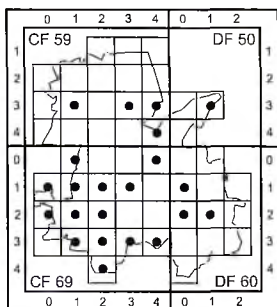
Crataegus monogyna



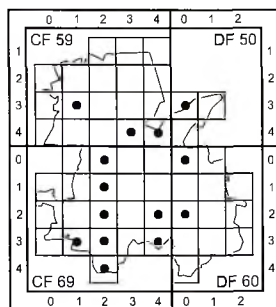
****** *Crataegus pedicellata*



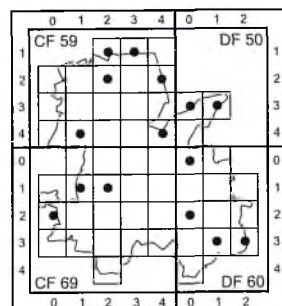
Crataegus rhipidophylla
var. *rhipidophylla*



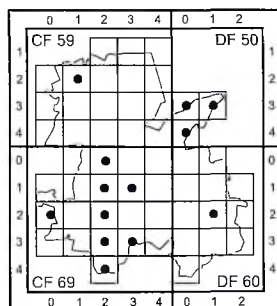
Crepis biennis



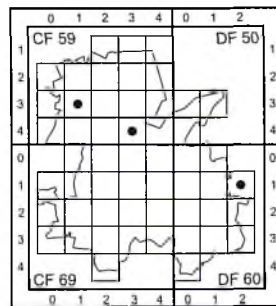
Crepis capillaris



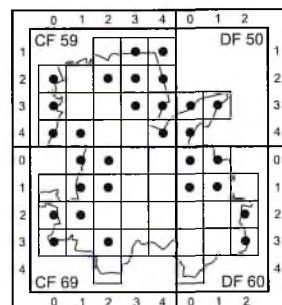
Crepis paludosa



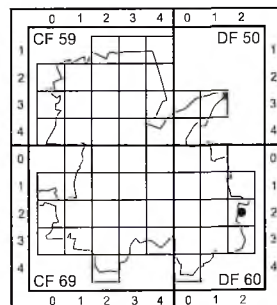
Crepis tectorum



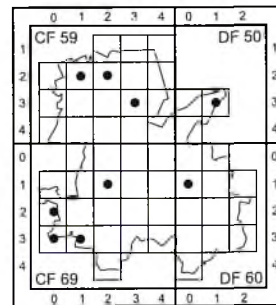
****Crocus vernus**



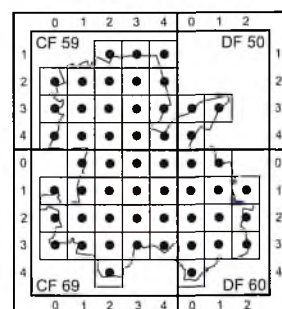
Crucjata glabra



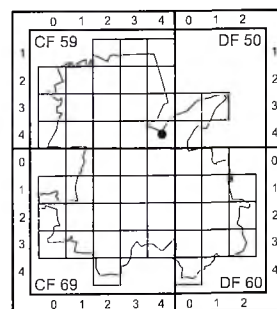
Cuscuta epithymum



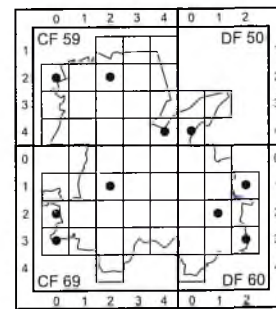
Cynosurus cristatus



Dactylis glomerata

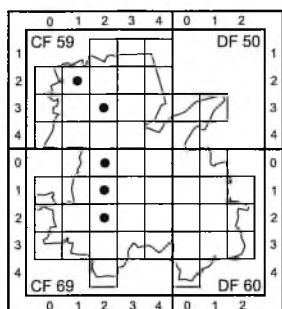


Dactylis polygama

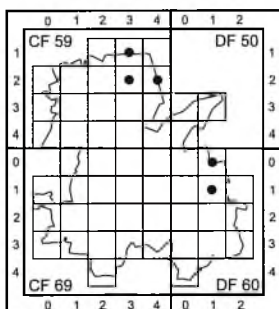


Dactylorhiza majalis

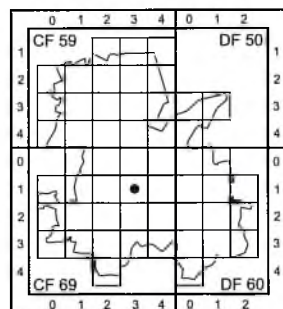
Distribution atlas of vascular plants in Rybník



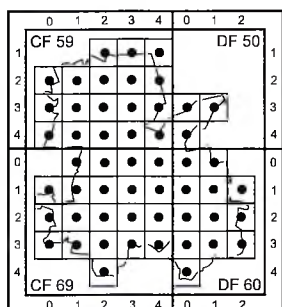
Danthonia decumbens



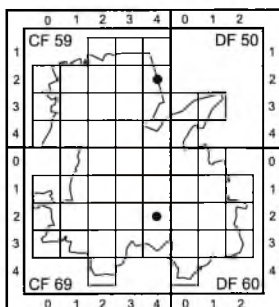
Daphne mezereum



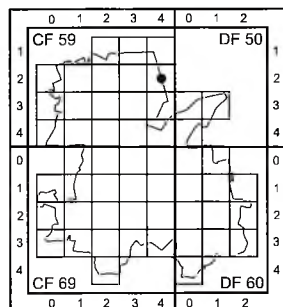
****Datura stramonium**



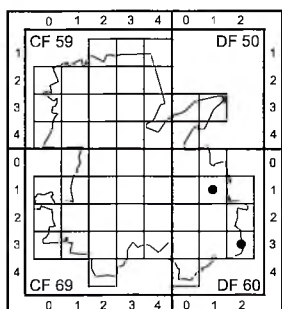
Daucus carota



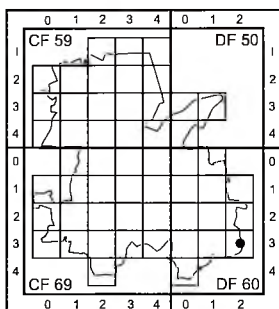
Dentaria bulbifera



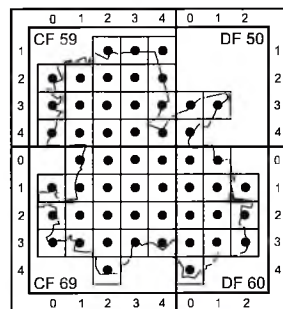
Dentaria enneaphyllos



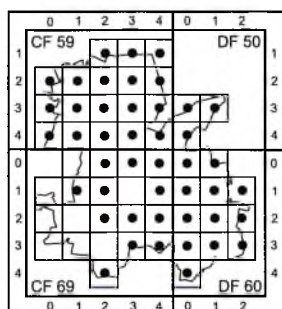
Dentaria glandulosa



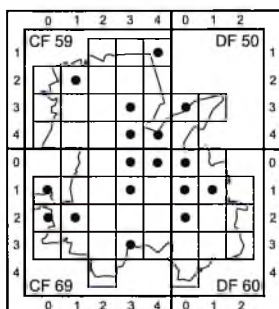
Dentaria x paxiana



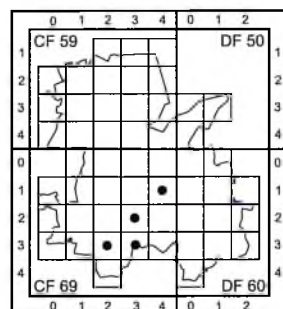
Deschampsia caespitosa



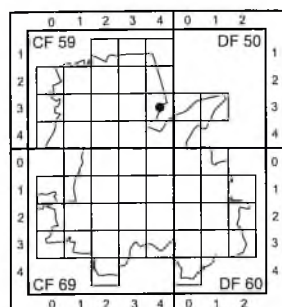
Deschampsia flexuosa



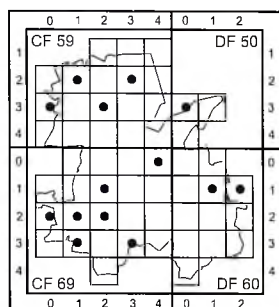
***Descurainia sophia**



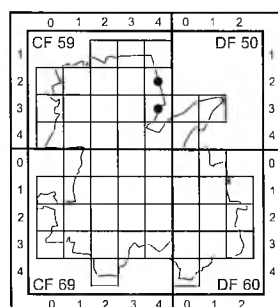
****Dianthus barbatus**



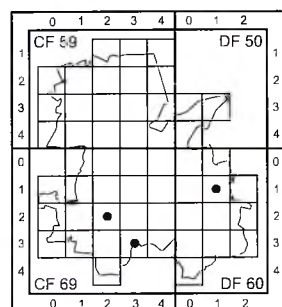
Dianthus carthusianorum



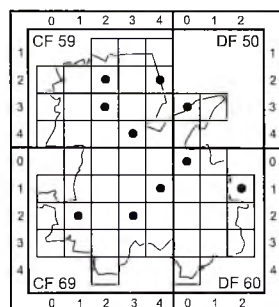
Dianthus deltooides



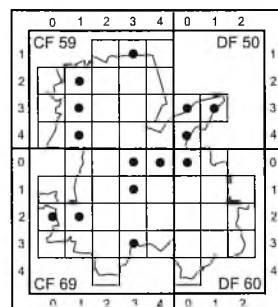
Digitalis grandiflora



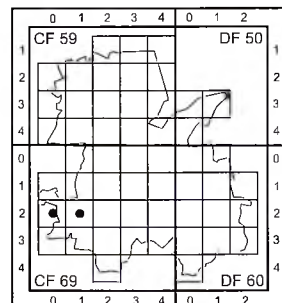
*******Digitalis purpurea*



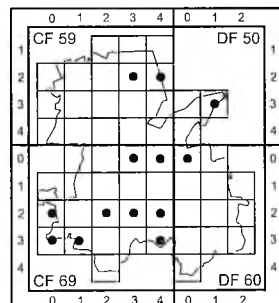
******Digitalaria ischaemum*



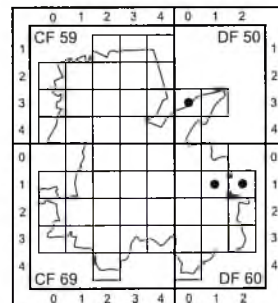
******Digitalaria sanguinalis*



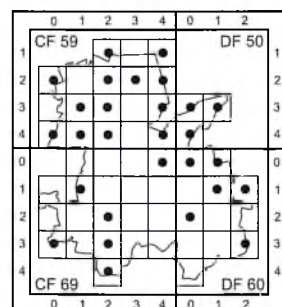
*******Diplotaxis muralis*



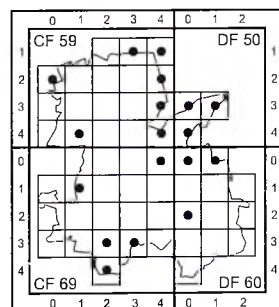
Dipsacus fullonum



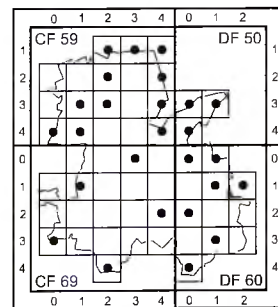
Drosera rotundifolia



Dryopteris carthusiana

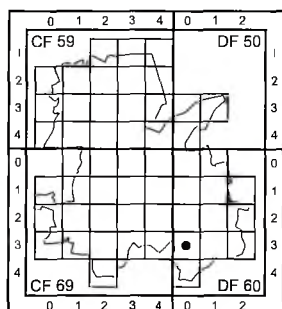


Dryopteris dilatata

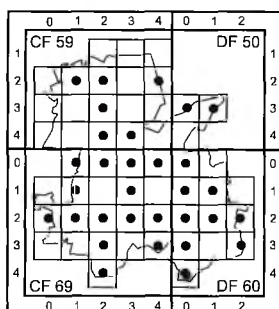


Dryopteris filix-mas

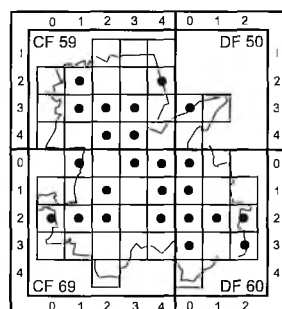
Distribution atlas of vascular plants in Rybník



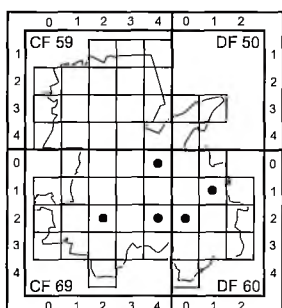
*******Duchesnea indica*



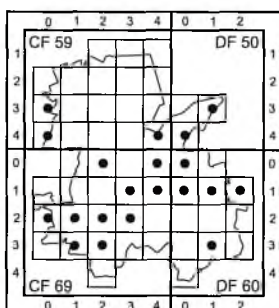
******Echinochloa crus-galli*



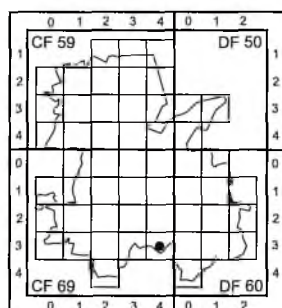
*******Echinocystis lobata*



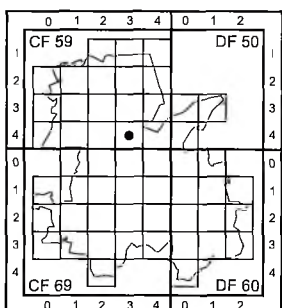
*******Echinops sphaerocephalus*



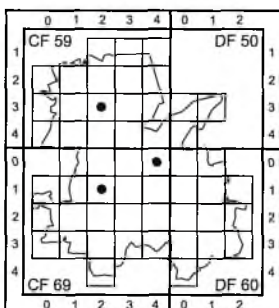
Echium vulgare



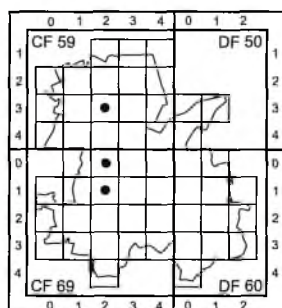
*******Elaeagnus angustifolia*



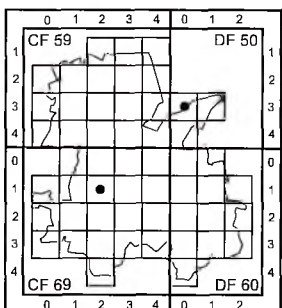
*******Elaeagnus commutata*



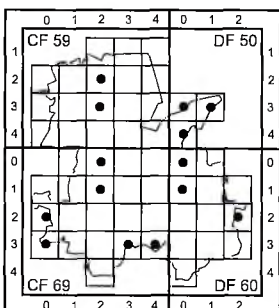
Eleocharis acicularis



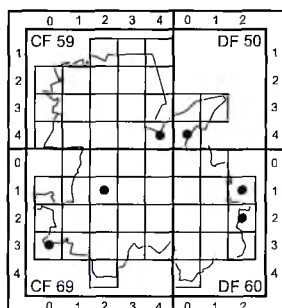
Eleocharis mamillata



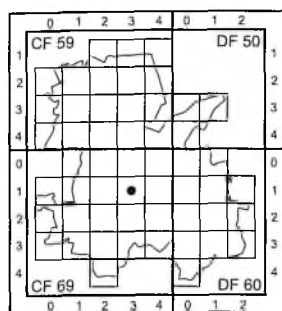
Eleocharis ovata



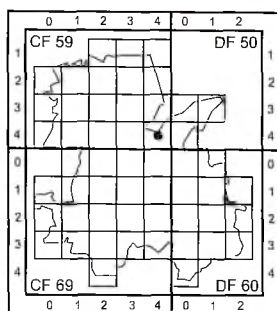
Eleocharis palustris



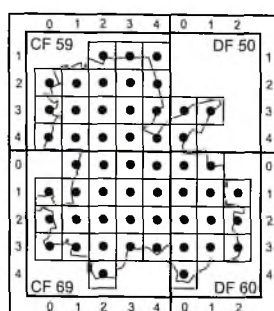
*******Elodea canadensis*



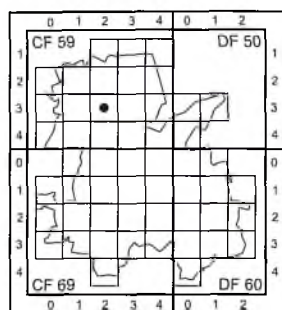
****Elsholtzia ciliata**



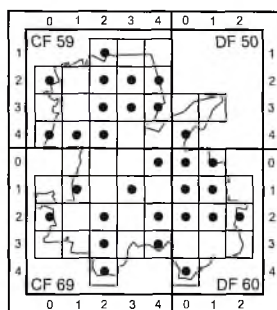
Elymus caninus



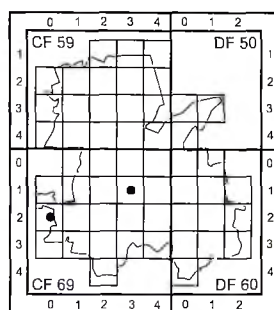
Elymus repens



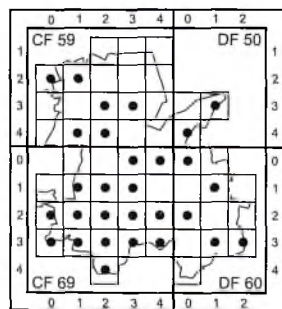
Epilobium adnatum



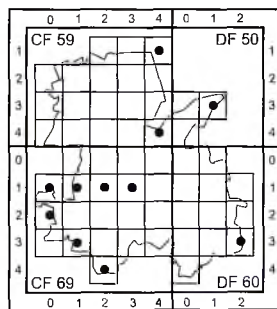
****Epilobium ciliatum**



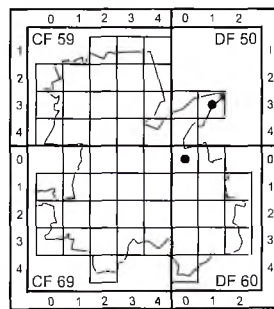
Epilobium collinum



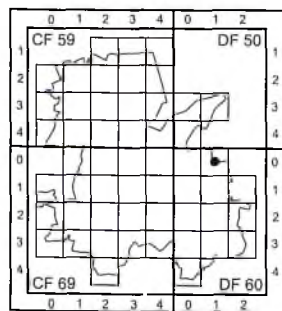
Epilobium hirsutum



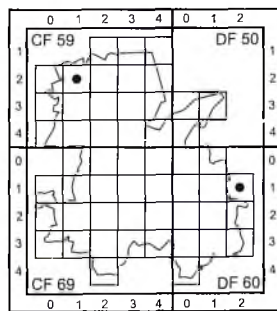
Epilobium montanum



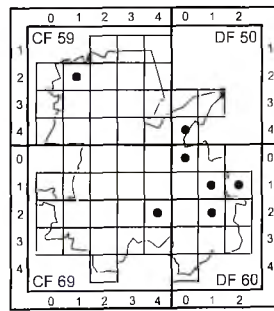
Epilobium palustre



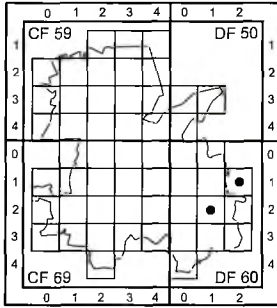
Epilobium roseum



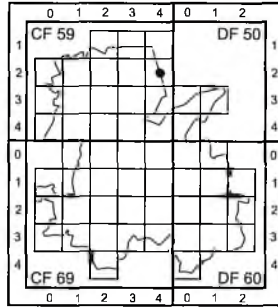
Epipactis atrorubens



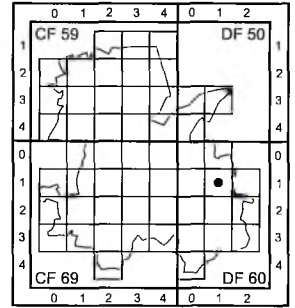
Epipactis helleborine



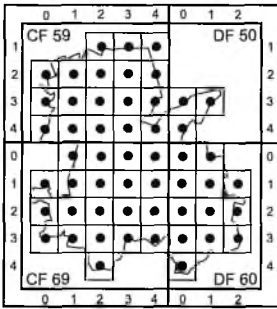
Epipactis palustris



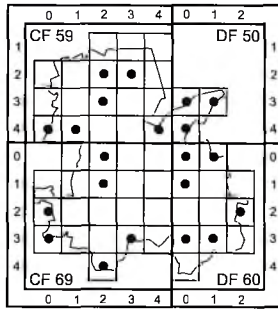
Epipactis purpurata



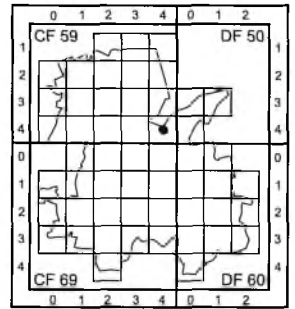
Epipactis
x schmalhauseni



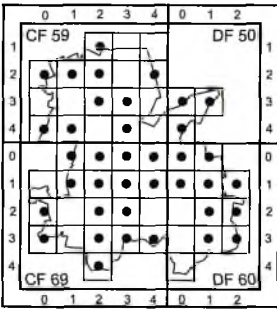
Equisetum arvense



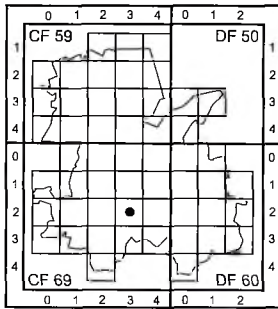
Equisetum fluviatile



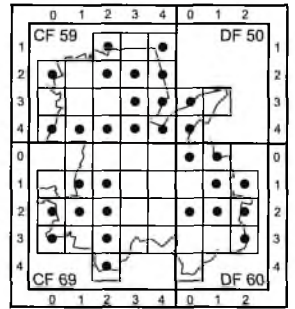
Equisetum hyemale



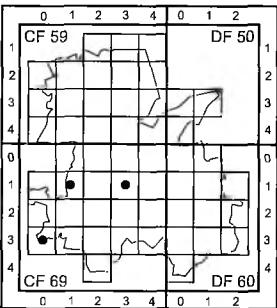
Equisetum palustre



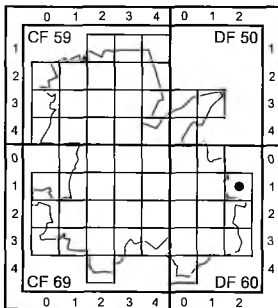
Equisetum ramosissimum



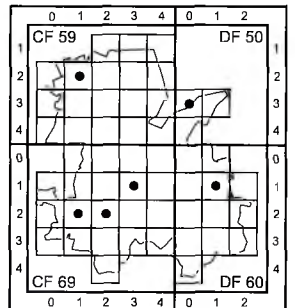
Equisetum sylvaticum



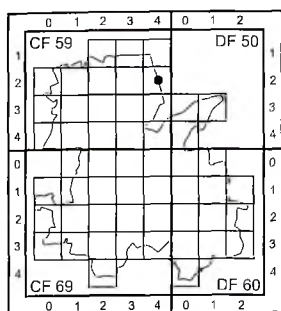
Equisetum telmateia



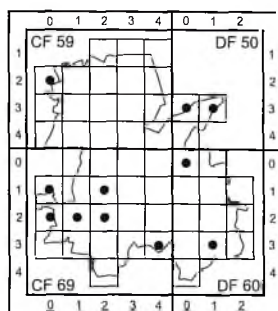
Equisetum variegatum



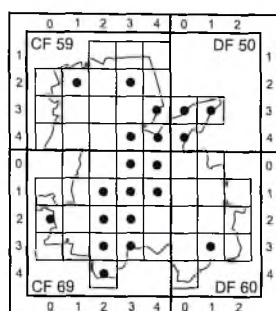
*******Eragrostis minor*



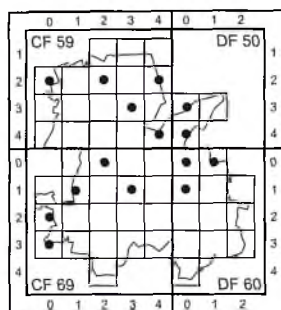
****Erechites hieracifolia**



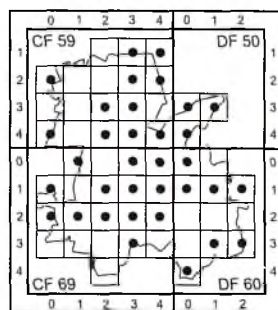
Erigeron acris



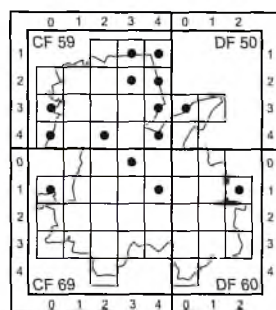
****Erigeron annuus**



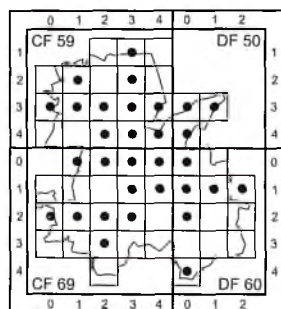
*Eriophorum
angustifolium*



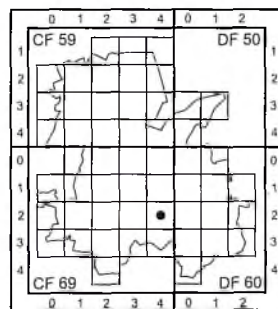
Erodium cicutarium



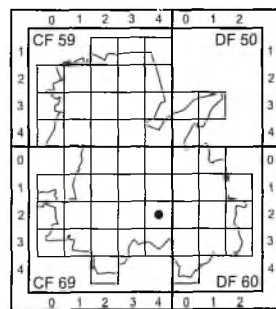
Erophila verna



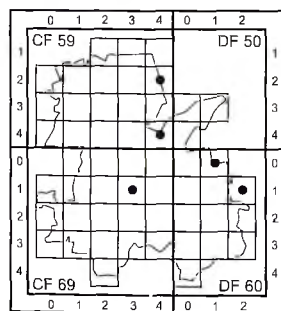
**[*]Erysimum
cheiranthoides**



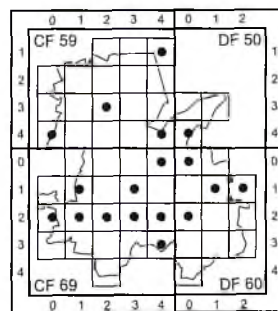
Erysimum hieracifolium



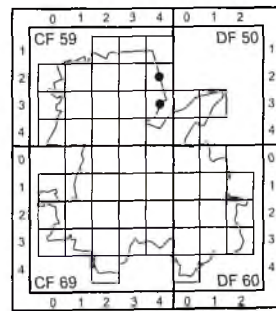
****Erysimum
marschallianum**



Euonymus europaea

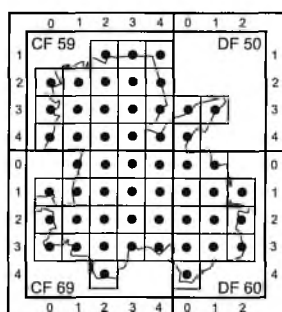


Eupatorium cannabinum

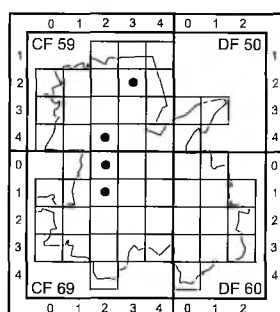


Euphorbia amygdaloides

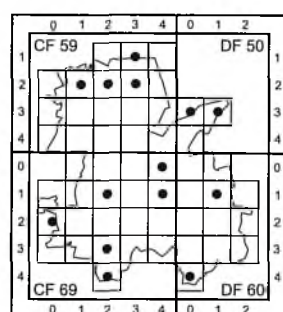
Distribution atlas of vascular plants in Rybník



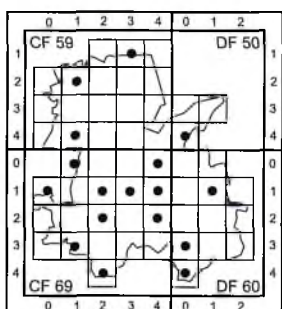
Euphorbia cyparissias



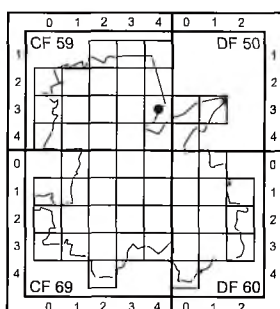
Euphorbia esula



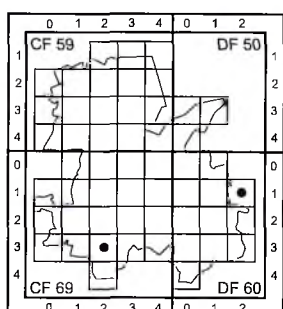
**Euphorbia helioscopia*



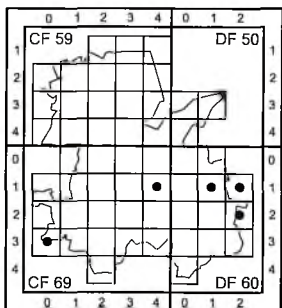
**Euphorbia peplus*



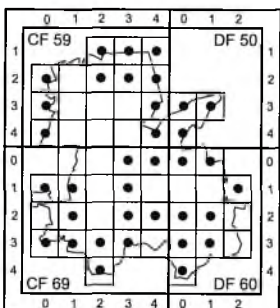
[*]*Euphorbia platyphyllos*



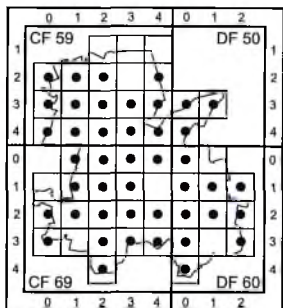
Euphrasia rostkoviana



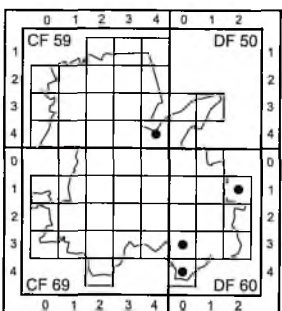
Euphrasia stricta



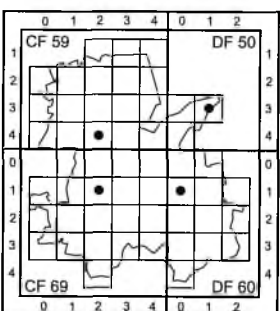
Fagus sylvatica



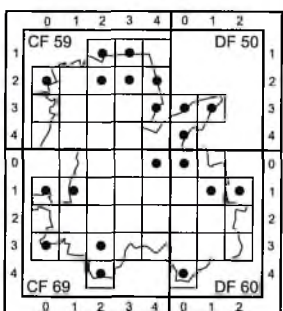
**Fallopia convolvulus*



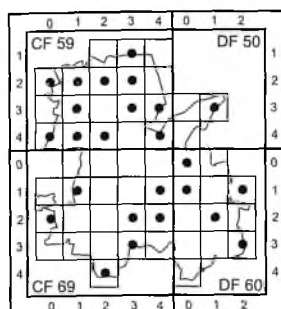
Fallopia dumetorum



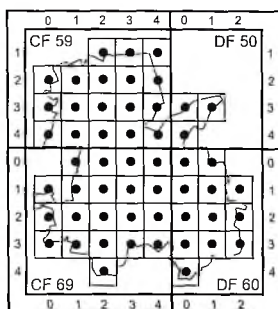
Festuca arundinacea



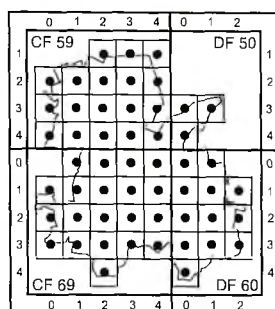
Festuca gigantea



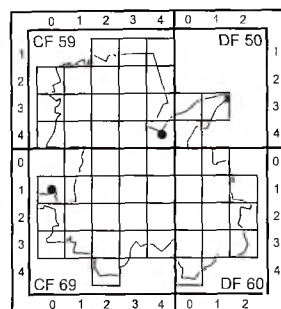
Festuca ovina



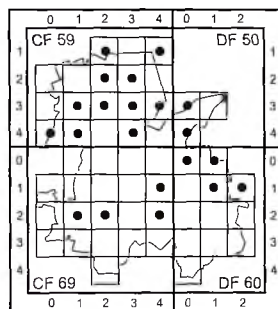
Festuca pratensis



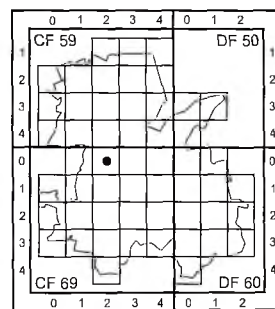
Festuca rubra



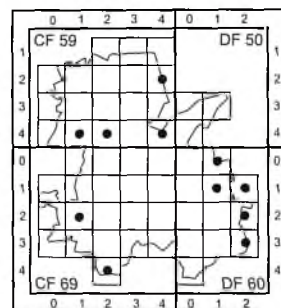
Festuca rupicola



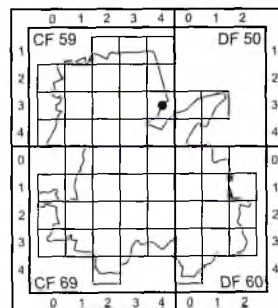
Festuca trachyphylla



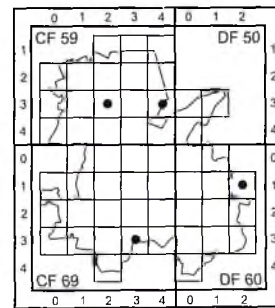
Festuca valesiaca



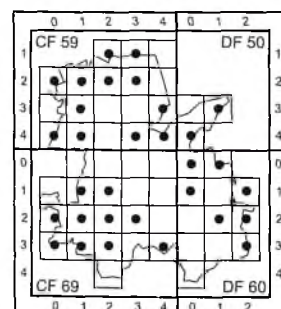
Ficaria verna



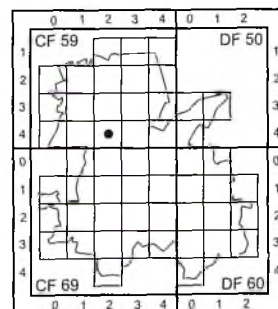
Filago arvensis



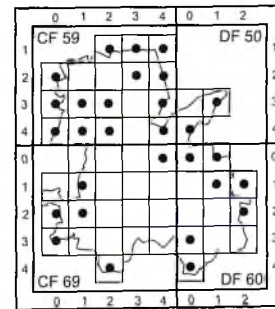
Filago minima



Filipendula ulmaria

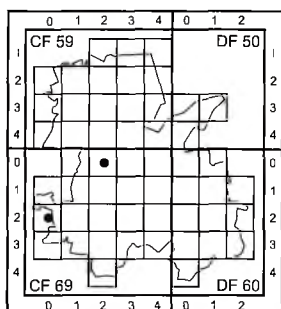


Fragaria moschata

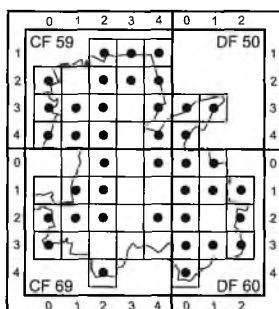


Fragaria vesca

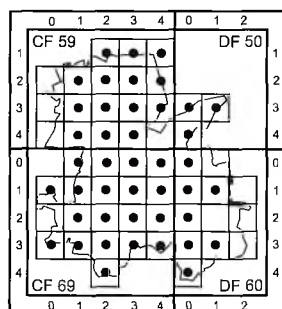
Distribution atlas of vascular plants in Rybník



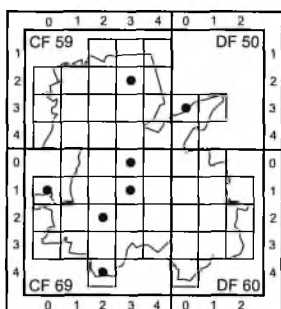
Fragaria viridis



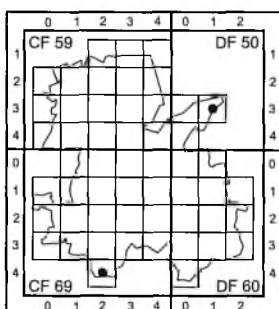
Frangula alnus



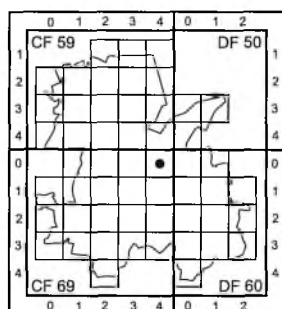
Fraxinus excelsior



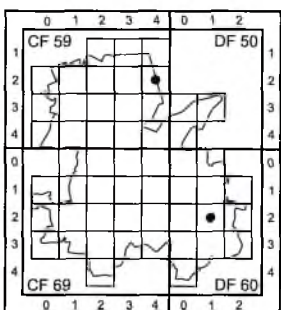
***Fraxinus pennsylvanica*



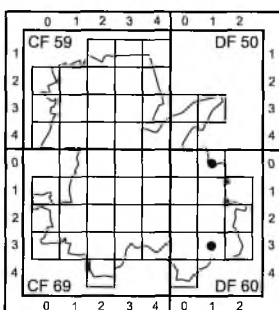
**Fumaria officinalis*



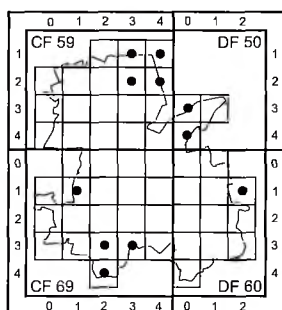
**Fumaria schleicheri*



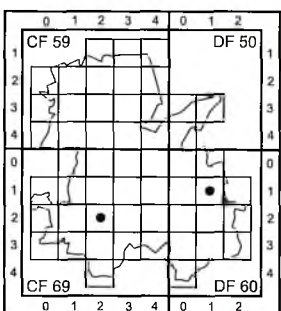
Gagea lutea



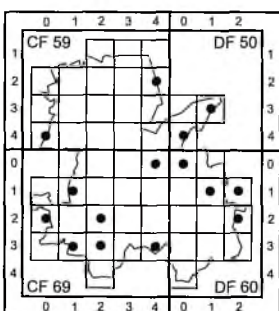
Δ *Galanthus nivalis*



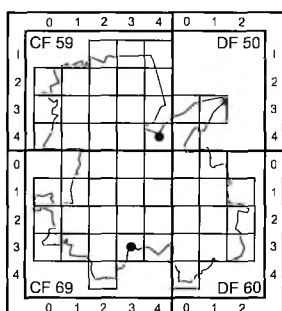
Galeobdolon luteum



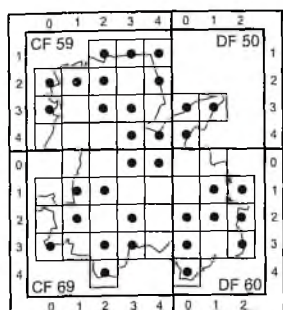
***Galeopsis angustifolia*



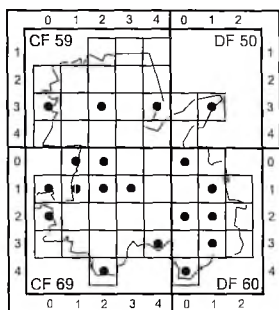
Galeopsis bifida



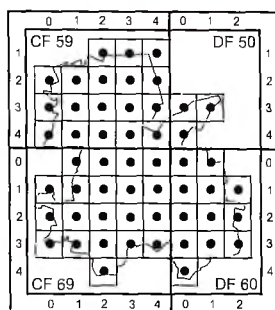
[*]*Galeopsis ladanum*



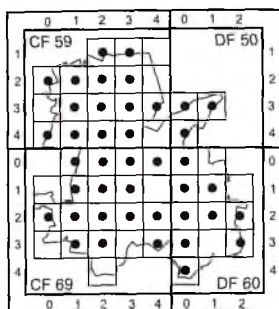
Galeopsis pubescens



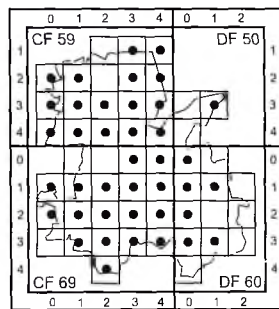
Galeopsis tetrahit



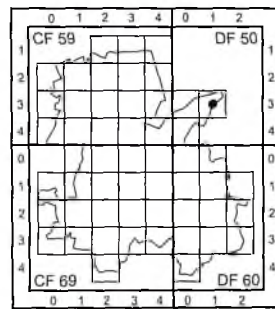
***Galinsoga ciliata*



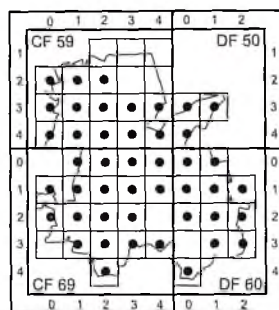
***Galinsoga parviflora*



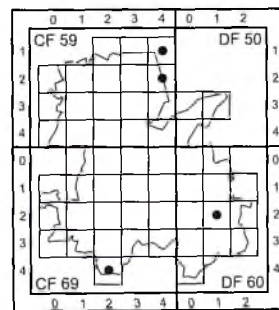
Galium aparine



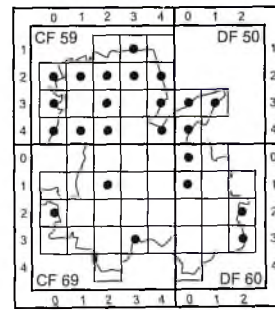
Galium boreale



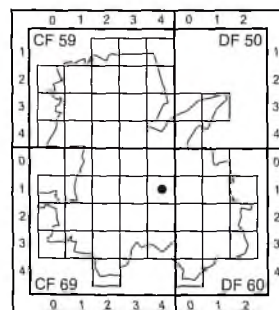
Galium mollugo



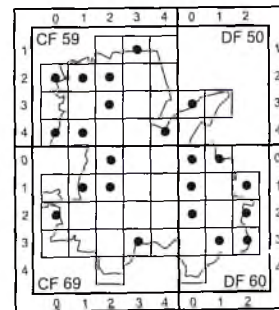
Galium odoratum



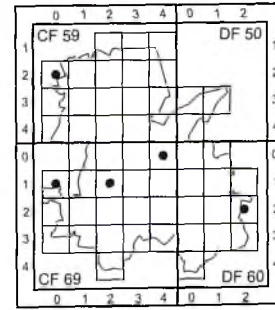
Galium palustre



Galium saxatile

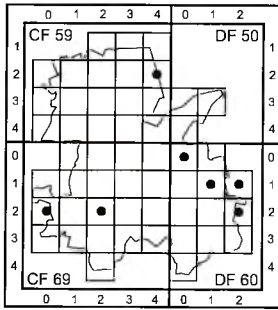


Galium uliginosum

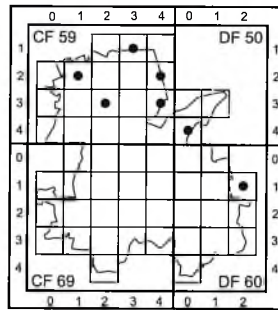


Galium verum

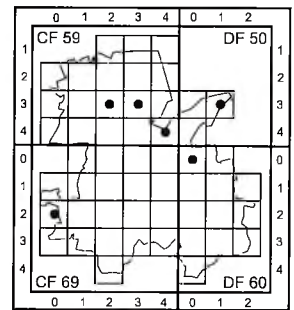
Distribution atlas of vascular plants in Rybník



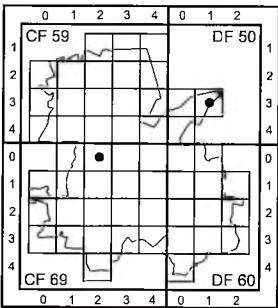
Genista germanica



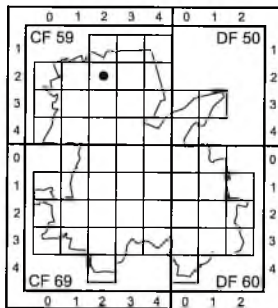
Genista pilosa



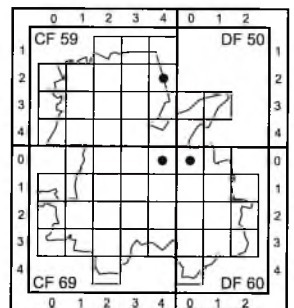
Genista tinctoria



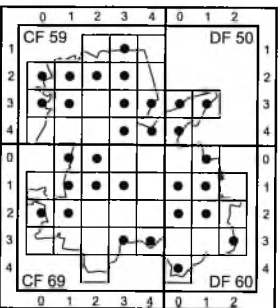
[*]*Geranium columbinum*



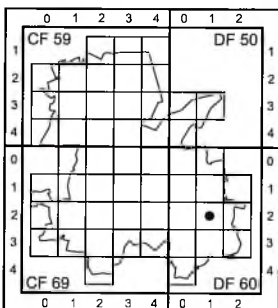
**Geranium dissectum*



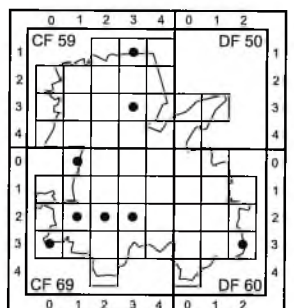
**Geranium molle*



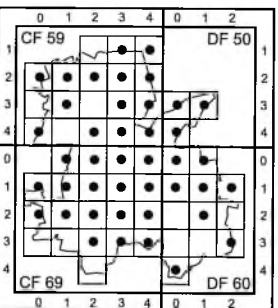
Geranium palustre



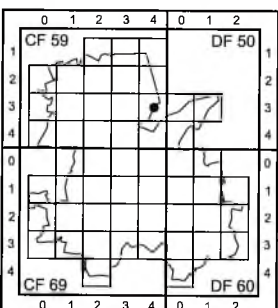
Geranium phaeum



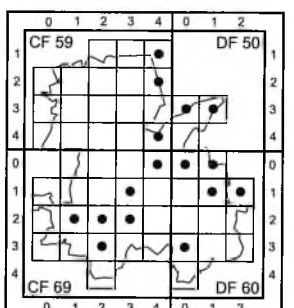
Geranium pratense



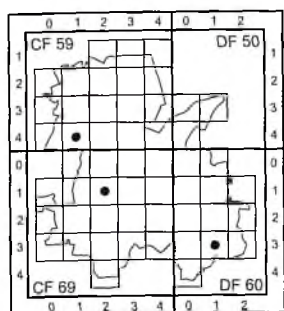
**Geranium pusillum*



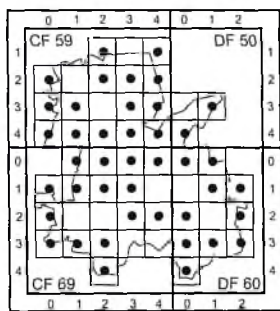
***Geranium pyrenaicum*



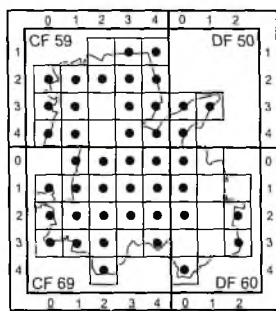
Geranium robertianum



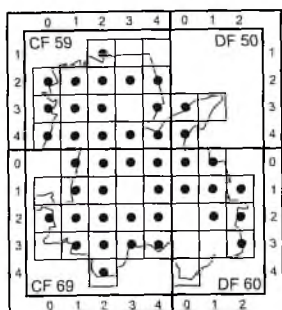
Geum rivale



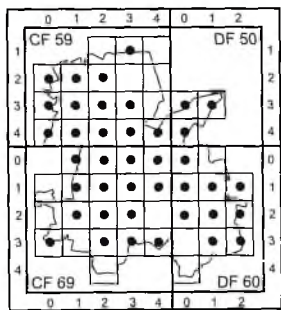
Geum urbanum



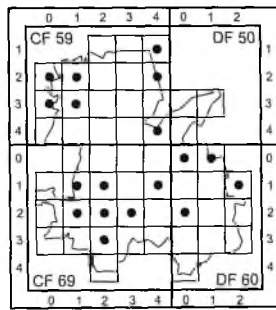
Glechoma hederacea



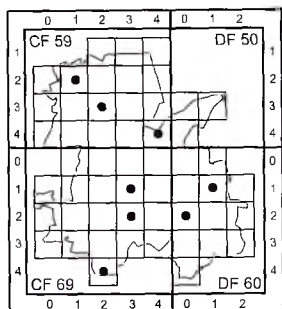
Glyceria fluitans



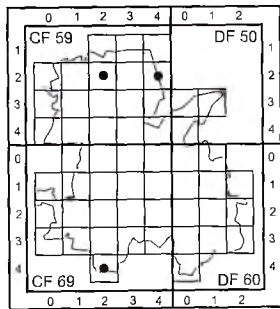
Glyceria maxima



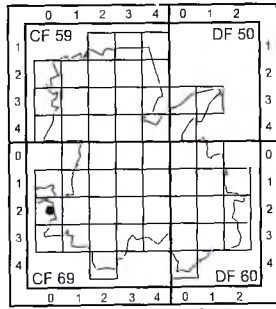
Gnaphalium sylvaticum



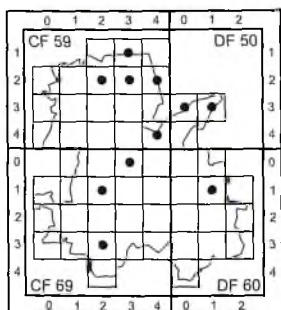
Gnaphalium uliginosum



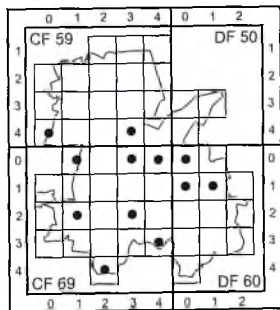
*Gymnocarpium
dryopteris*



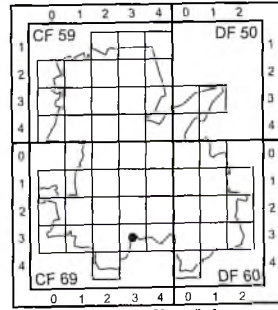
Gypsophila muralis



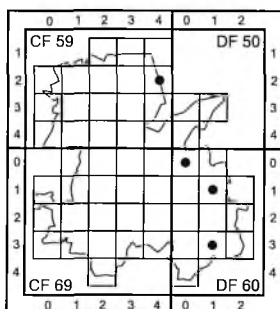
Δ *Hedera helix*



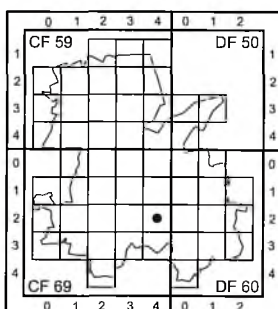
****Helianthus tuberosus**



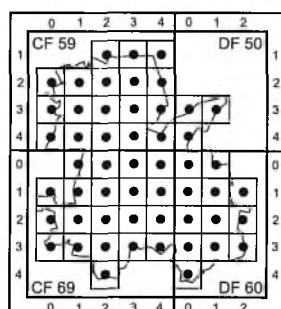
****Hemerocallis fulva**



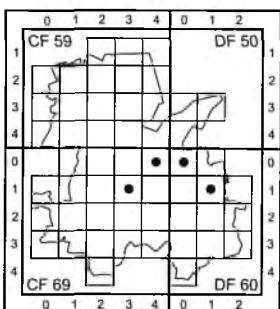
Hepatica nobilis



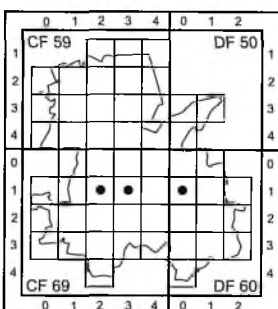
****Heracleum sosnowskyi**



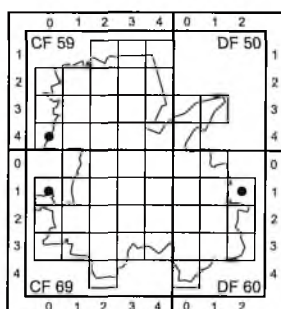
Heracleum sphondylium



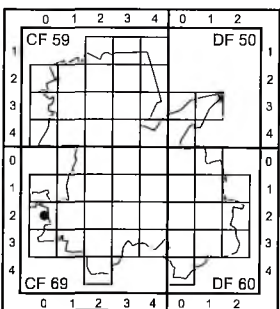
Herniaria glabra



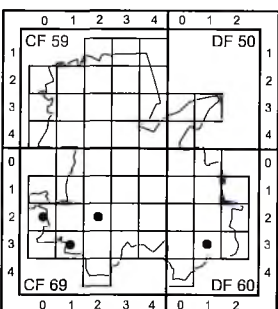
****Hesperis matronalis**



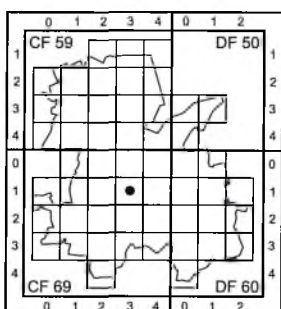
Hieracium barbatum



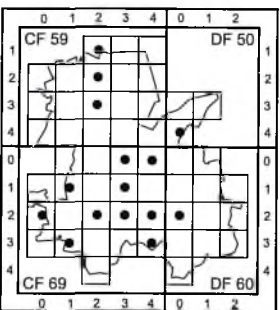
Hieracium bauihii



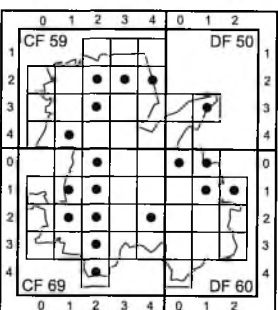
Hieracium xbracchiatum



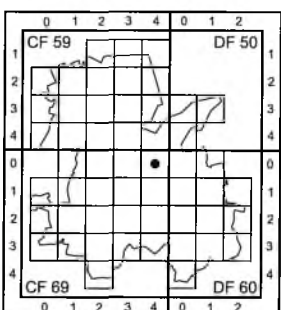
Hieracium xflagellare



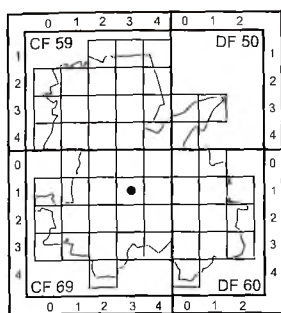
Hieracium lachenalii



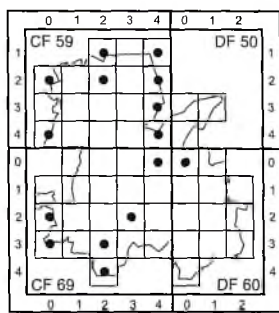
Hieracium laevigatum



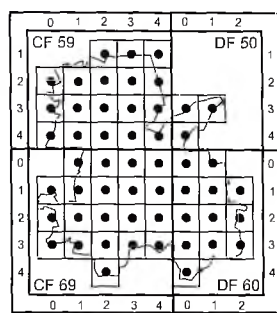
Hieracium xlaurinum



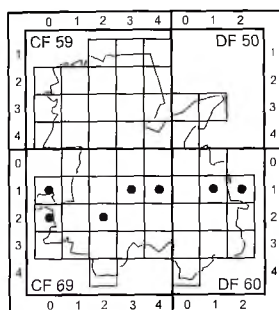
Hieracium × *longiscapum*



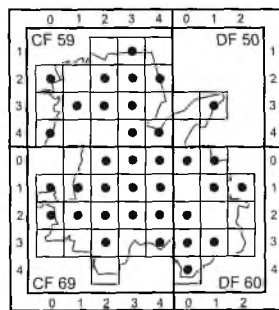
Hieracium murorum



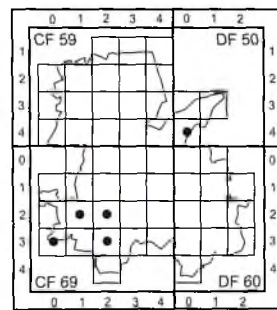
Hieracium pilosella



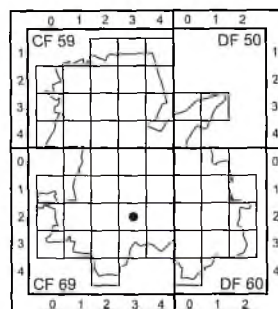
Hieracium piloselloides



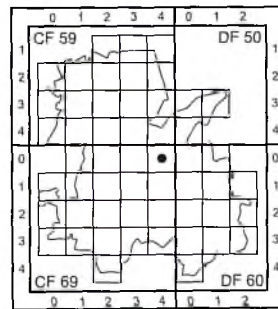
Hieracium sabaudum



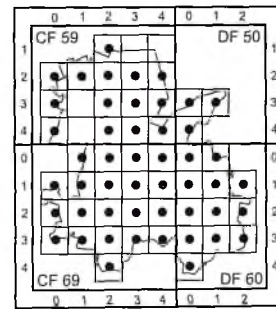
Hieracium umbellatum



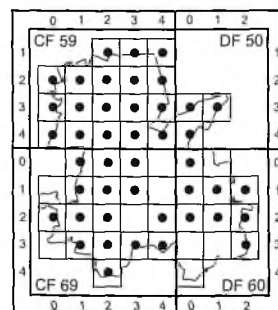
Hierochloë odorata



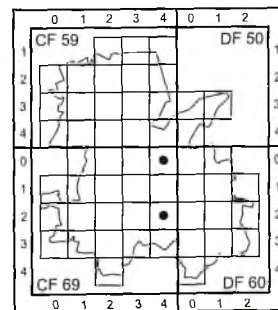
***Hippophaë rhamnoides*



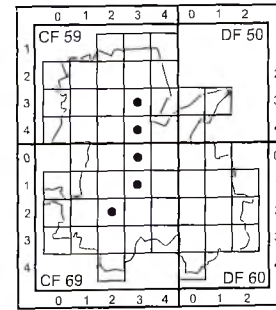
Holcus lanatus



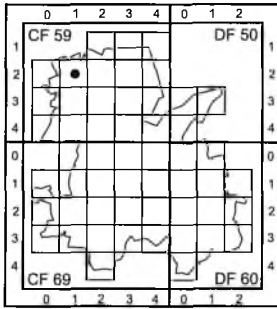
Holcus mollis



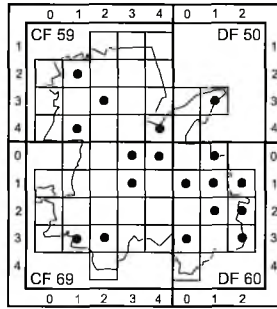
***Hordeum jubatum*



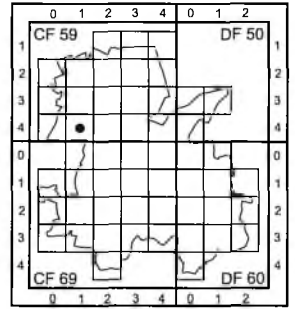
**Hordeum murinum*



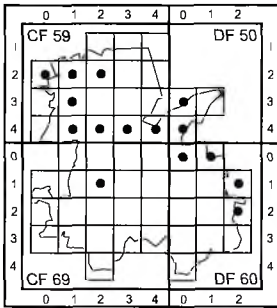
Hottonia palustris



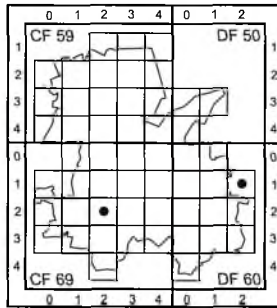
Humulus lupulus



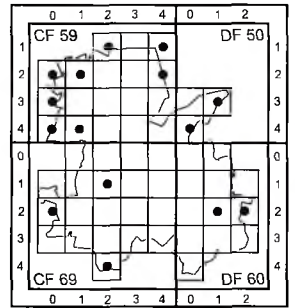
*Hydrocharis
morsus-ranae*



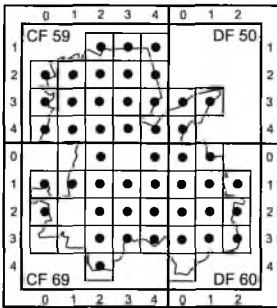
Hydrocotyle vulgaris



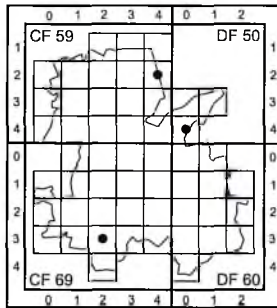
Hypericum humifusum



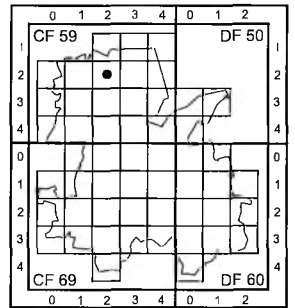
Hypericum maculatum



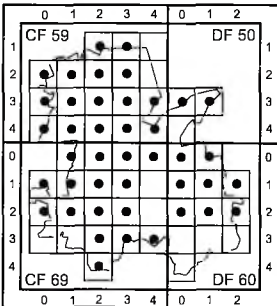
Hypericum perforatum



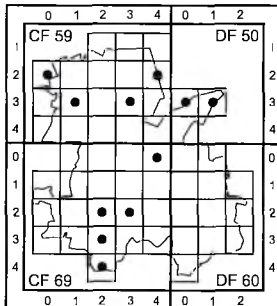
Hypericum tetrapterum



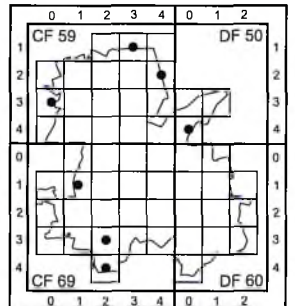
Hypochaeris glabra



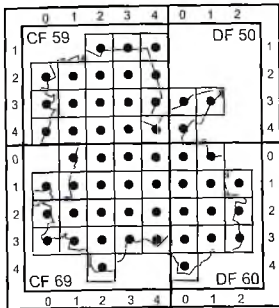
Hypochaeris radicata



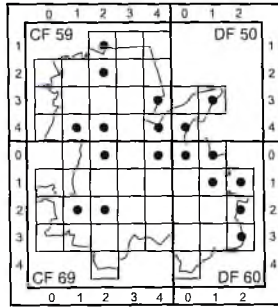
***Impatiens glandulifera*



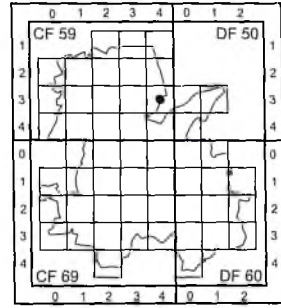
Impatiens noli-tangere



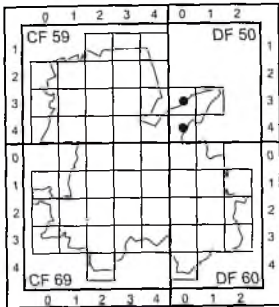
***Impatiens parviflora*



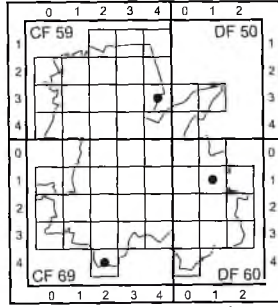
Iris pseudacorus



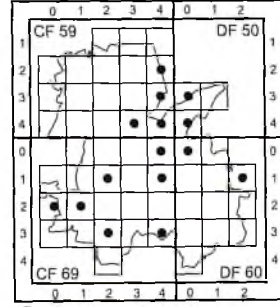
Iris sibirica



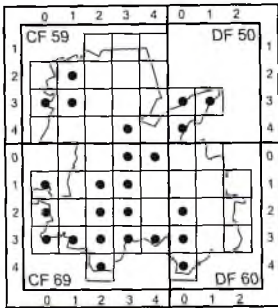
Isolepis setacea



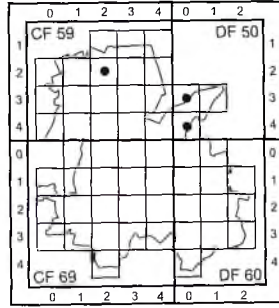
Isopyrum thalictroides



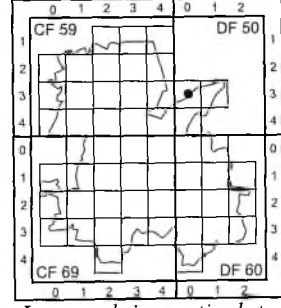
Jasione montana



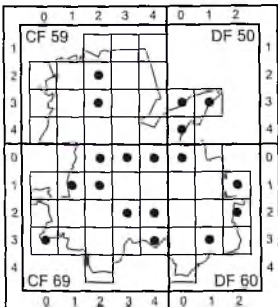
***Juglans regia*



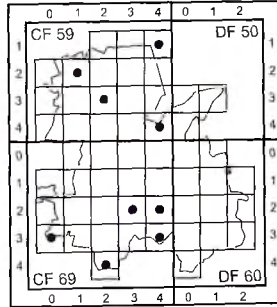
Juncus acutiflorus



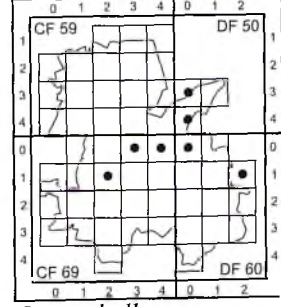
Juncus alpino-articulatus



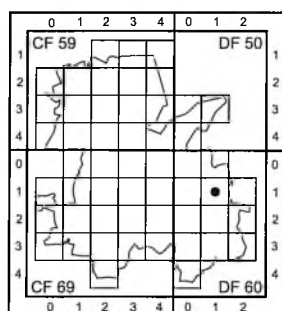
Juncus articulatus



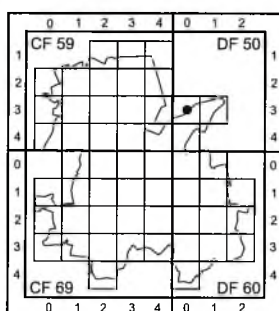
Juncus bufonius



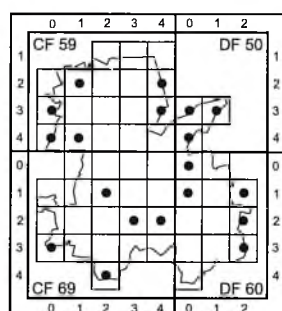
Juncus bulbosus



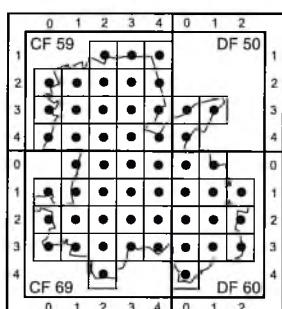
Juncus capitatus



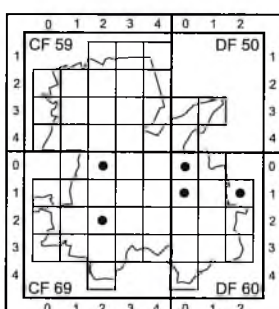
Juncus compressus



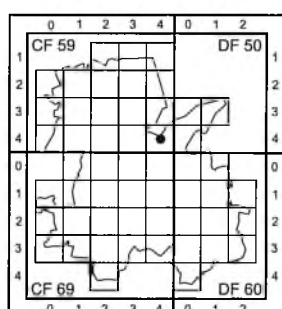
Juncus conglomeratus



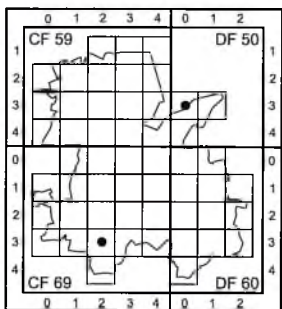
Juncus effusus



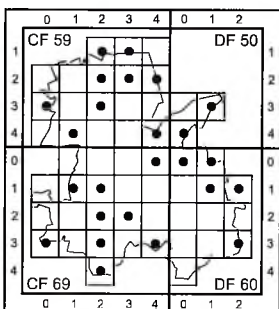
Juncus filiformis



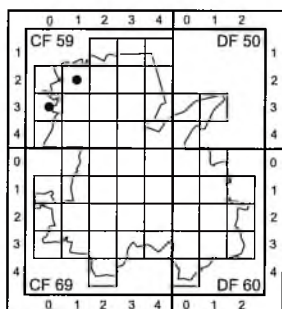
Juncus inflexus



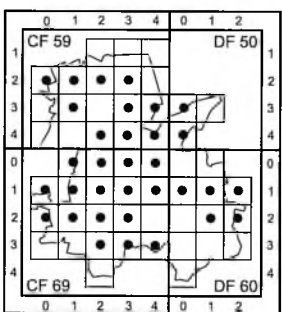
Juncus squarrosus



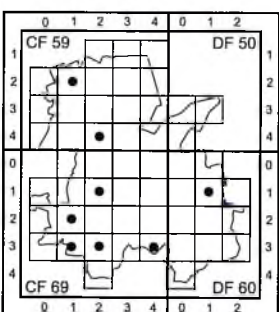
****** *Juncus tenuis*



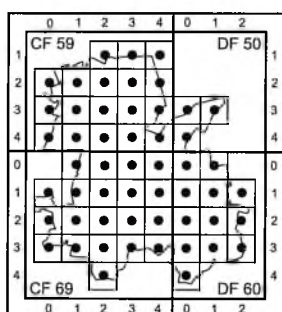
Juniperus communis



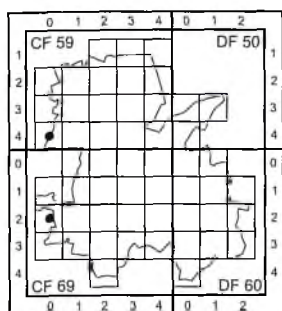
Knautia arvensis



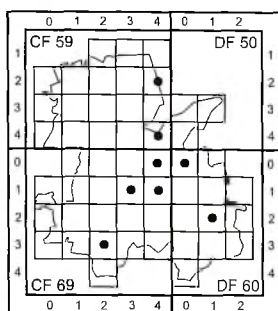
****** *Kochia scoparia*



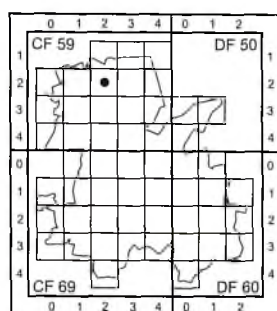
***** *Lactuca serriola*



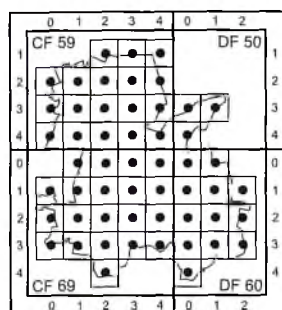
**Lamium album*



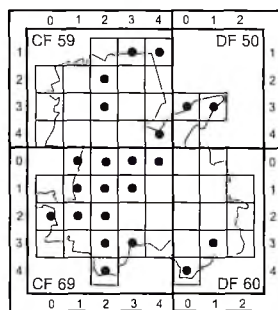
**Lamium amplexicaule*



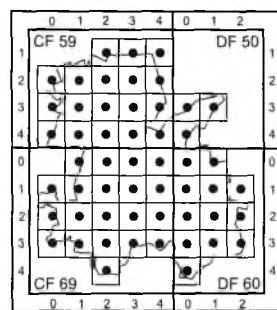
**Lamium*
×*moluccellifolium*



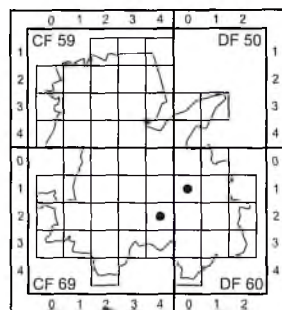
**Lamium purpureum*



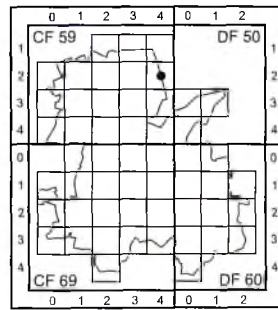
Lapsana communis



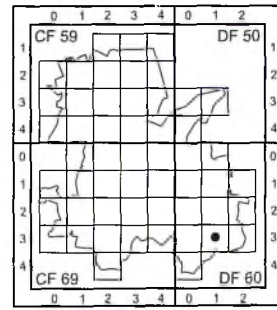
***Larix decidua*



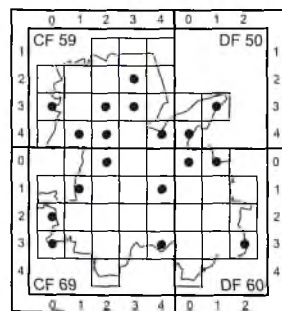
***Larix kaempferi*



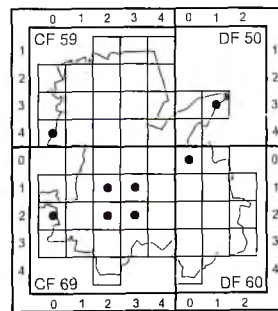
Lathraea squamaria



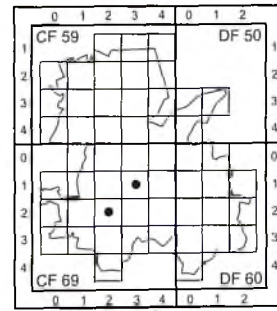
***Lathyrus latifolius*



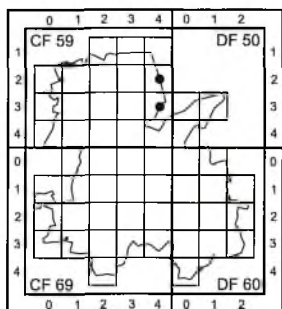
Lathyrus pratensis



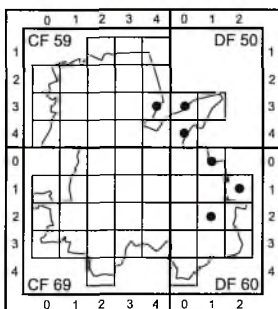
Lathyrus sylvestris



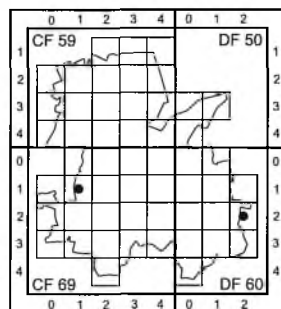
**Lathyrus tuberosus*



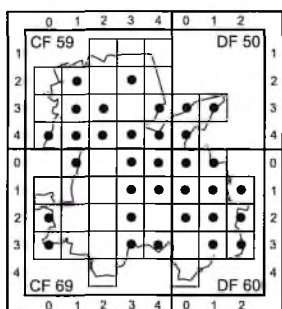
Lathyrus vernus



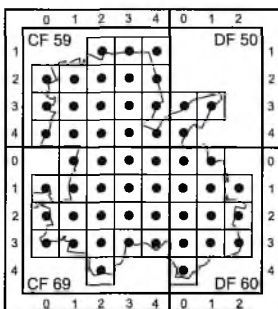
Ledum palustre



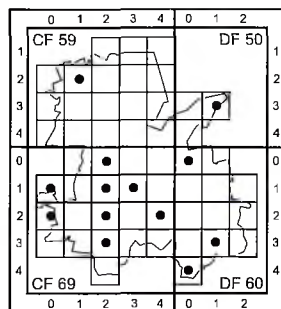
Leersia oryzoides



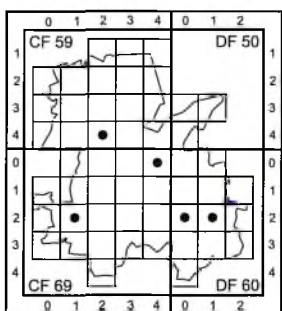
Lemna minor



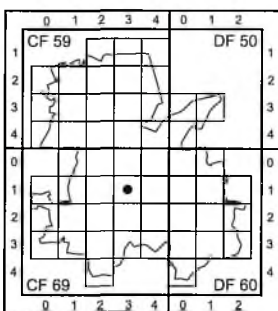
Leontodon autumnalis



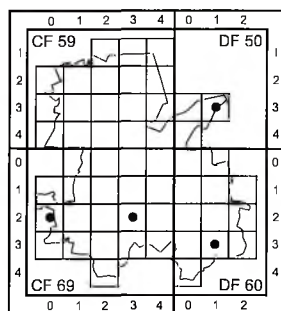
Leontodon hispidus



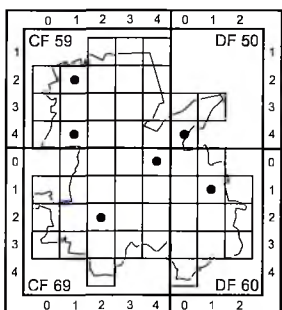
**Leonurus caridaca*
subsp. *cardiaca*



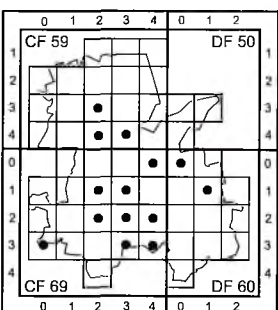
**Leonurus cardiaca*
subsp. *villosus*



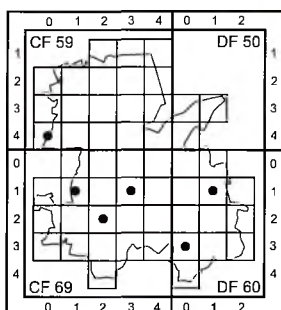
**Lepidium campestre*



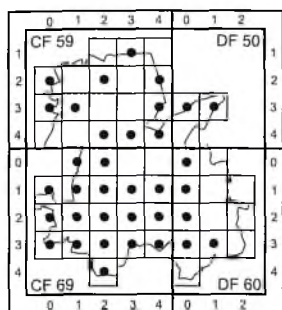
***Lepidium densiflorum*



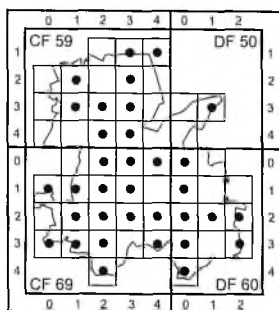
**Lepidium ruderales*



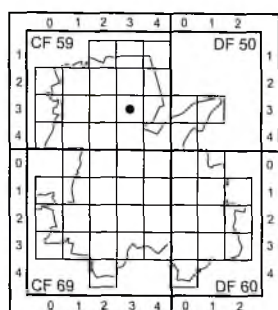
***Lepidium virginicum*



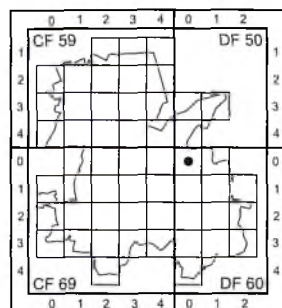
Leucanthemum vulgare



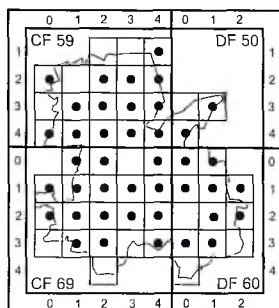
***Ligustrum vulgare*



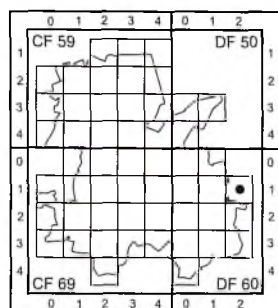
***Lilium bulbiferum*



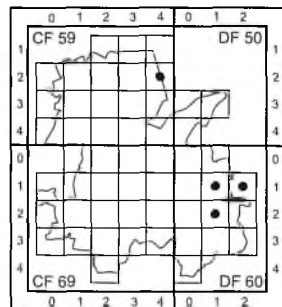
Lilium martagon



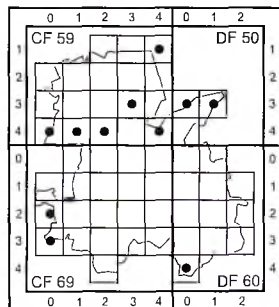
Linaria vulgaris



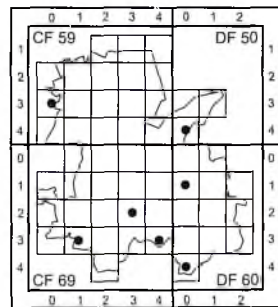
Linum catharticum



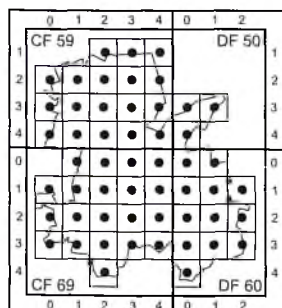
Listera ovata



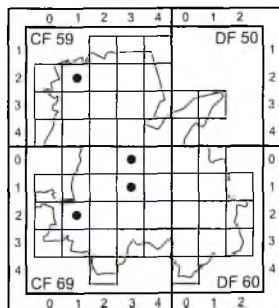
**Lithospermum arvense*



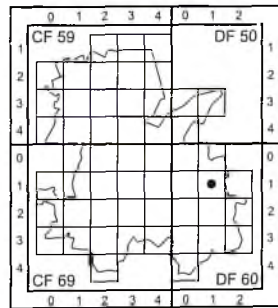
***Lolium multiflorum*



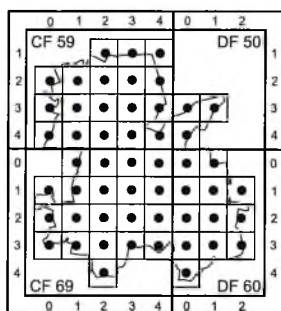
Lolium perenne



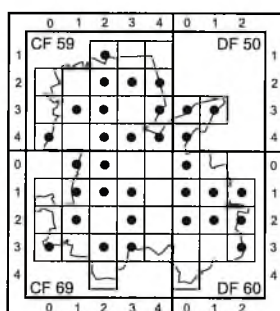
**Lonicera tatarica*



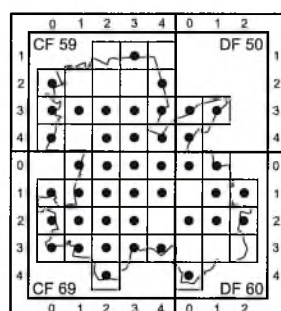
Lonicera xylosteum



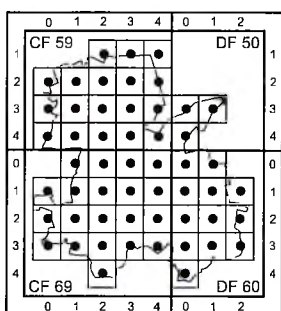
Lotus corniculatus



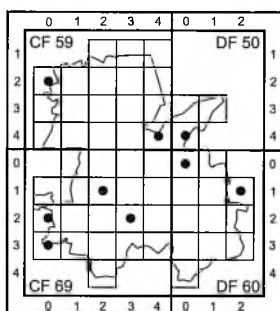
Lotus uliginosus



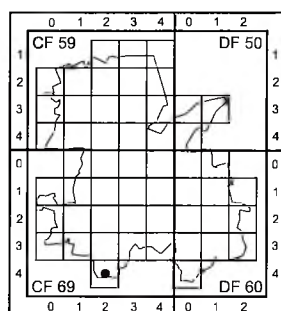
*******Lupinus polyphyllus*



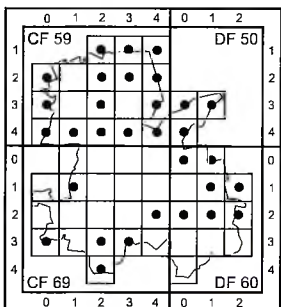
Luzula campestris



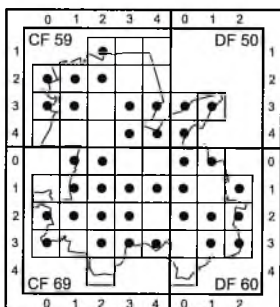
Luzula multiflora



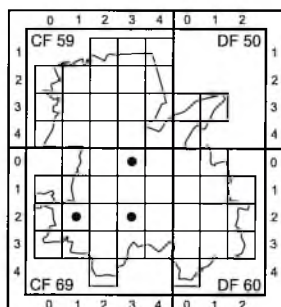
Luzula pallescens



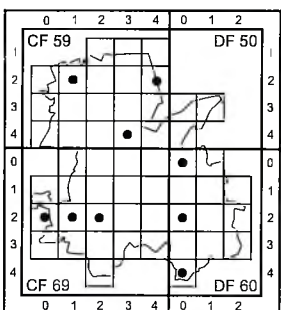
Luzula pilosa



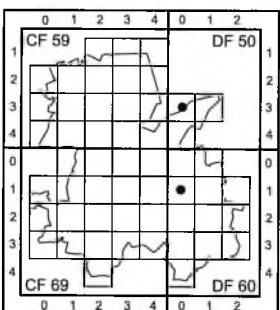
Lychnis flos-cuculi



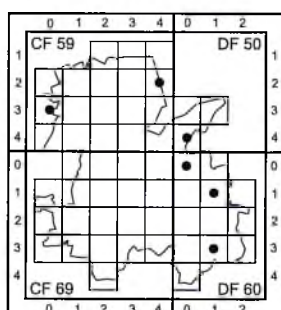
*******Lycium barbarum*



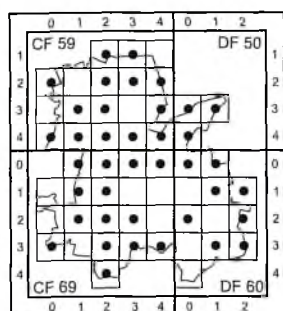
*******Lycopodium
esculentum*



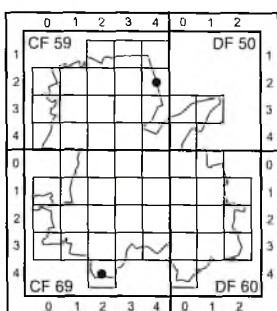
Lycopodiella inundata



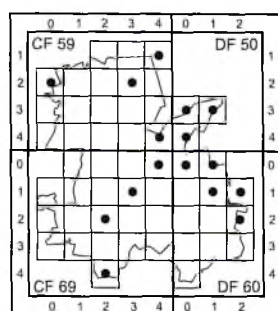
Lycopodium clavatum



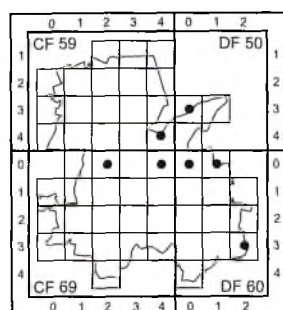
Lycopodium europaeus



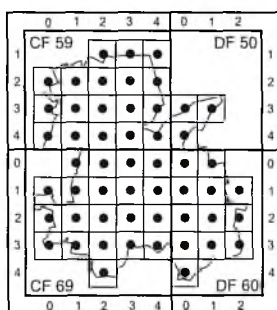
Lysimachia nemorum



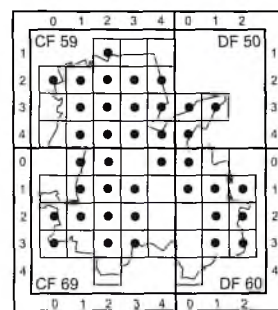
Lysimachia nummularia



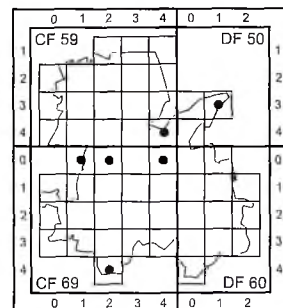
Lysimachia thyrsiflora



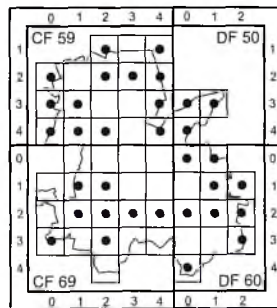
Lysimachia vulgaris



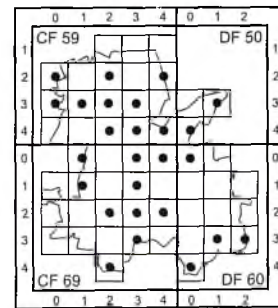
Lythrum salicaria



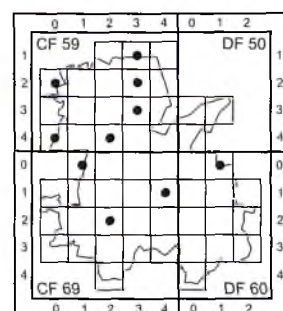
****** *Mahonia aquifolium*



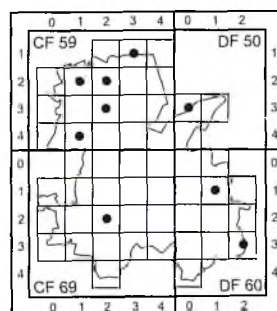
Maianthemum bifolium



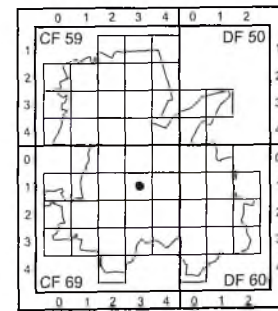
****** *Malus domestica*



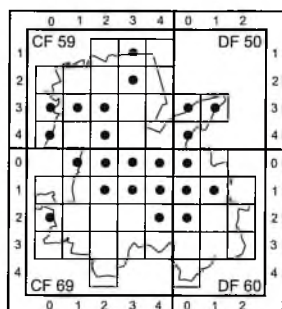
Malus sylvestris



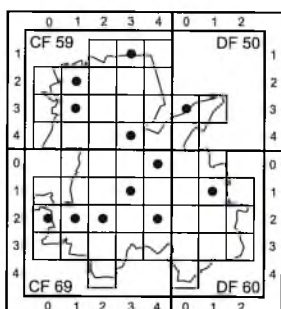
***** *Malva alcea*



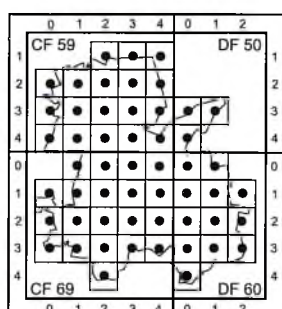
****** *Malva moschata*



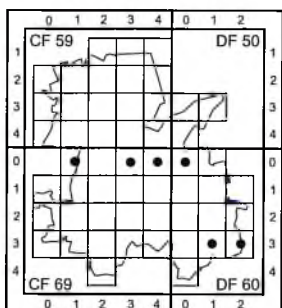
**Malva neglecta*



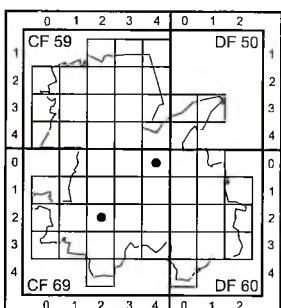
**Malva sylvestris*



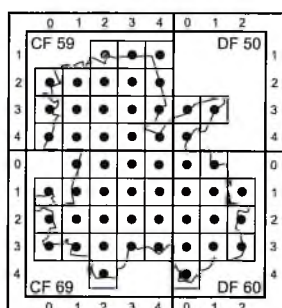
**Matricaria maritima*
subsp. *inodora*



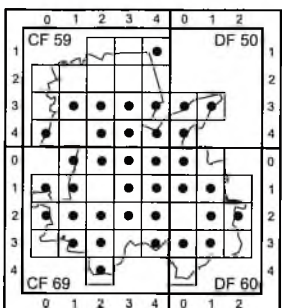
Δ Matteucia
struthiopteris



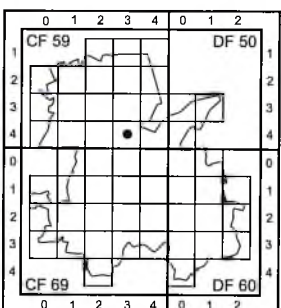
Medicago falcata



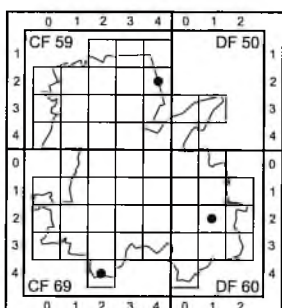
Medicago lupulina



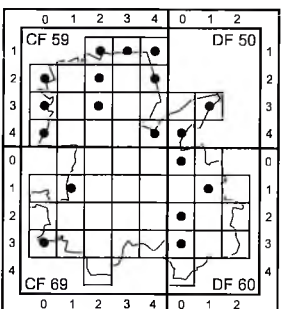
***Medicago sativa*



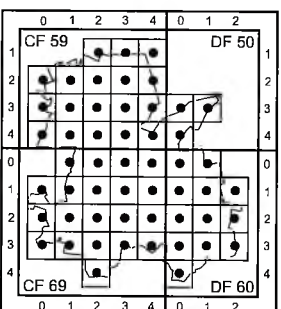
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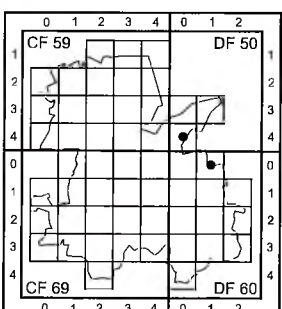
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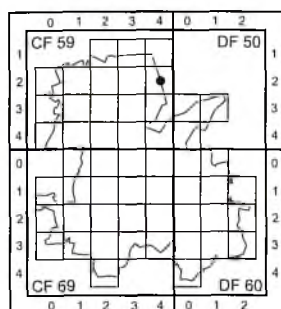
Melampyrum pratense



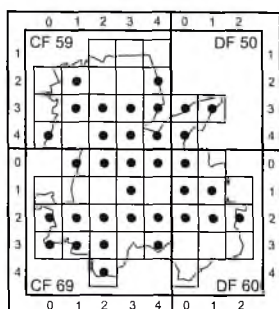
**Melandrium album*



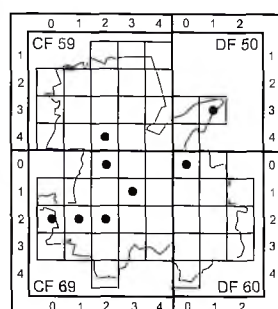
Melica nutans



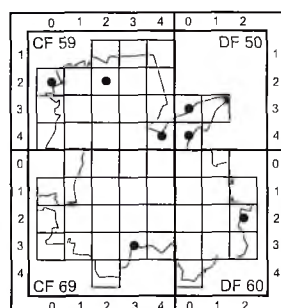
Melica uniflora



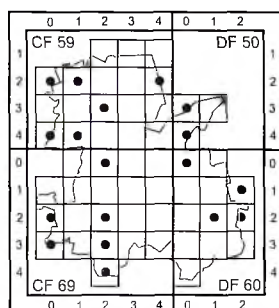
Melilotus alba



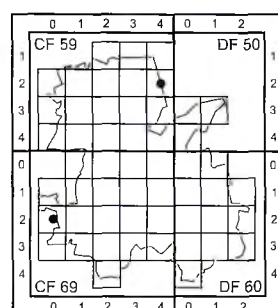
Melilotus officinalis



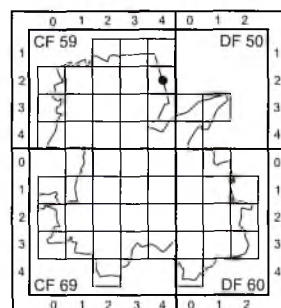
Mentha aquatica



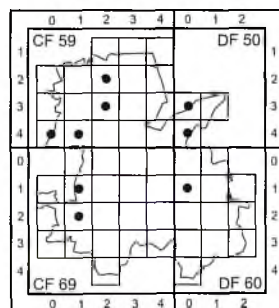
Mentha arvensis



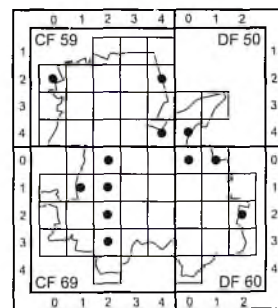
Mentha longifolia



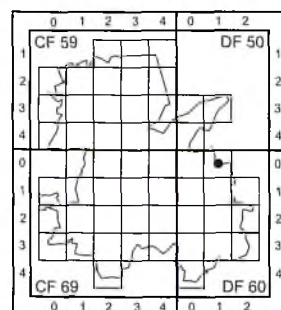
Mentha pulegium



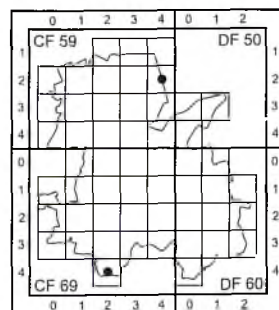
Mentha xverticillata



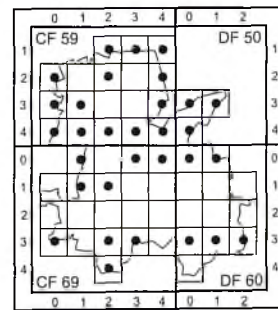
Menyanthes trifoliata



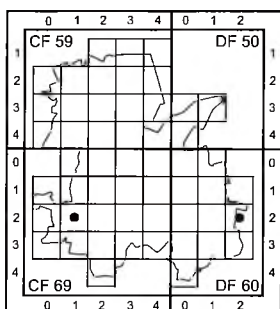
Mercurialis perennis



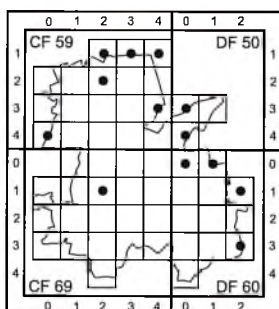
Milium effusum



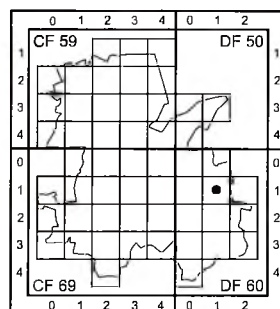
Moehringia trinervia



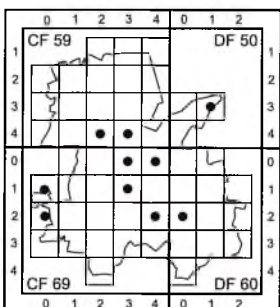
Molinia arundinacea



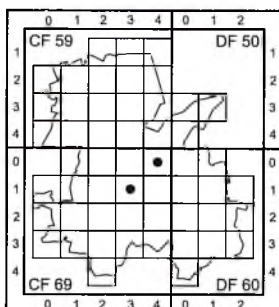
Molinia caerulea



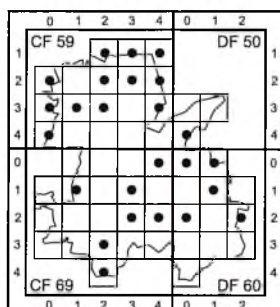
Monotropa hypophaea



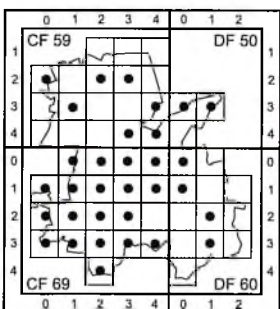
***Morus alba*



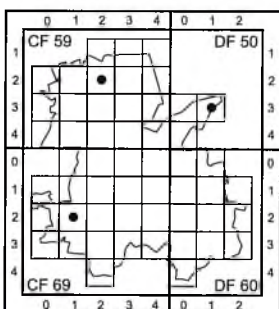
***Muscari botryoides*



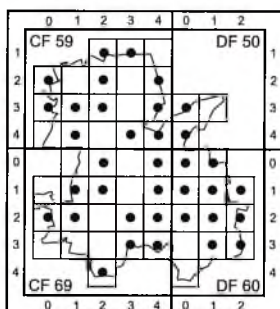
Mycelis muralis



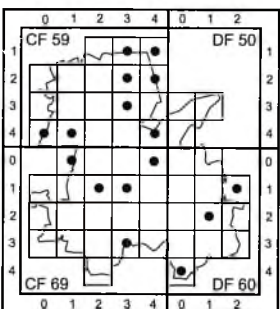
**Myosotis arvensis*



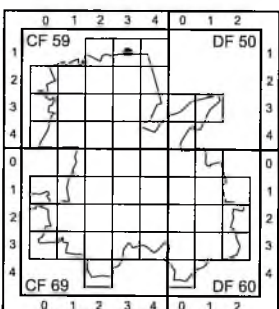
Myosotis discolor



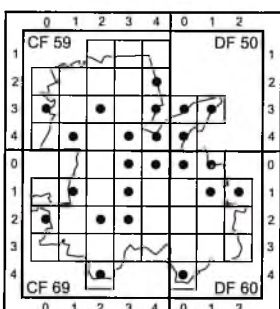
Myosotis palustris



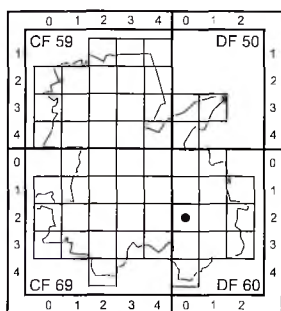
Myosotis stricta



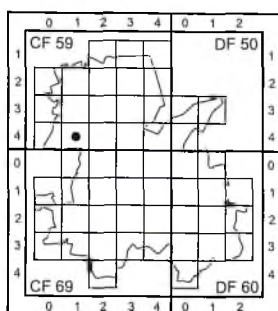
Myosotis sylvatica



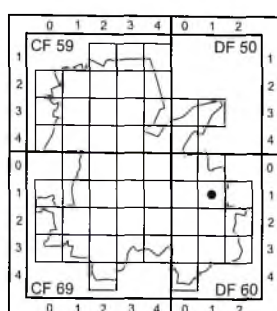
Myosoton aquaticum



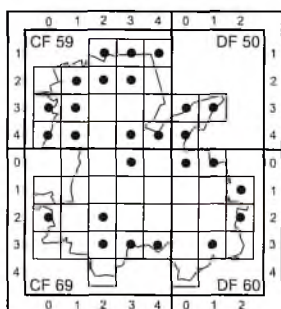
Myriophyllum spicatum



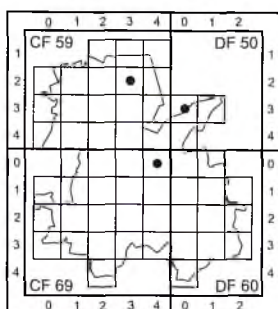
Najas marina



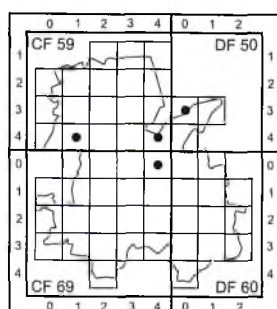
Najas minor



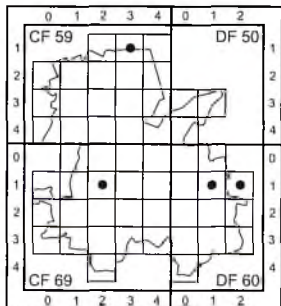
Nardus stricta



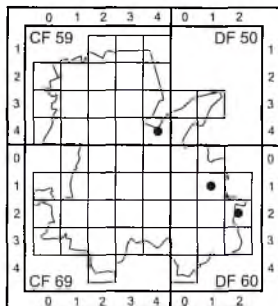
**Nepeta cataria*



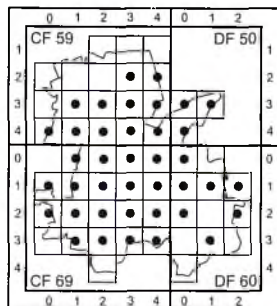
Nuphar lutea



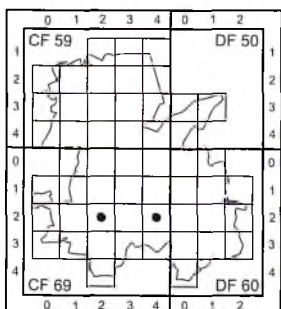
Odontites serotina



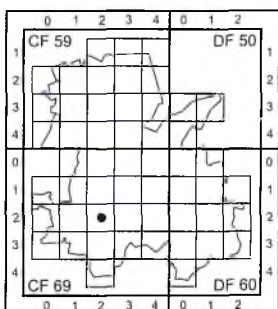
Oenanthe aquatica



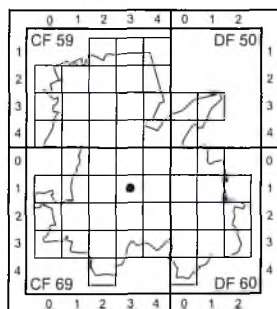
***Oenothera biennis*



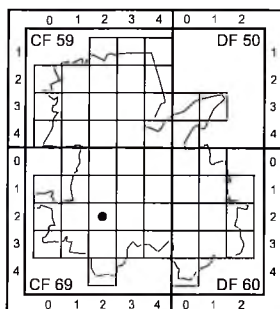
***Oenothera biennis*
× *O. rubricaulis*



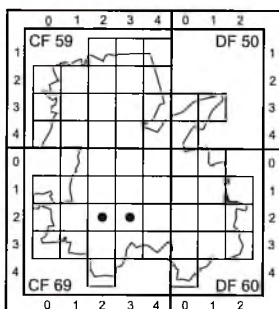
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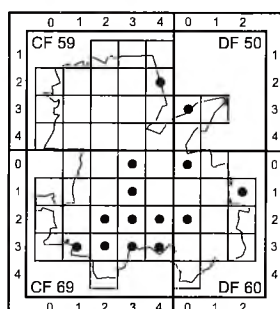
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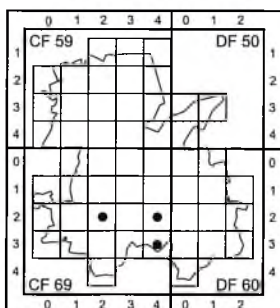
*******Oenothera parviflora*



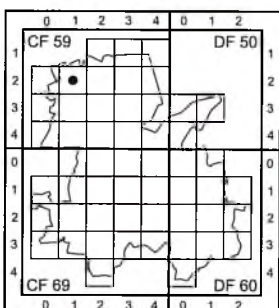
*******Oenothera pseudochicaginis*



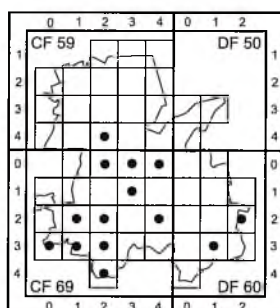
*******Oenothera rubricaulis*



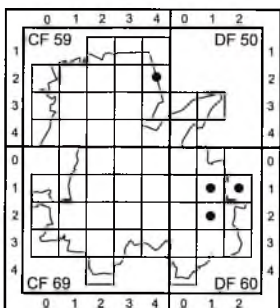
*******Oenothera subterminalis*



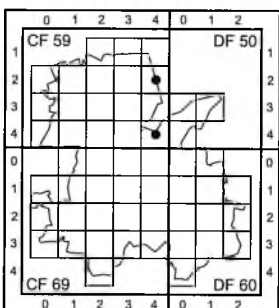
Ononis spinosa



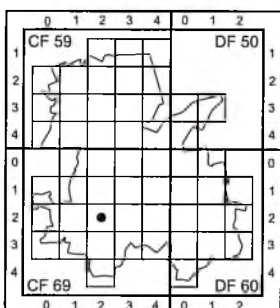
******Onopordum acanthium*



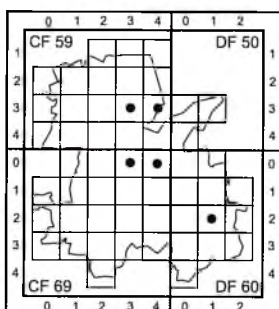
Ophioglossum vulgatum



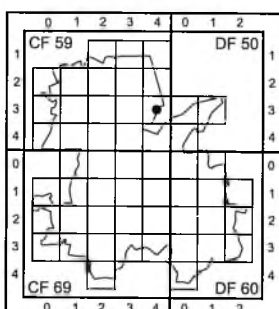
Oreopteris limbosperma



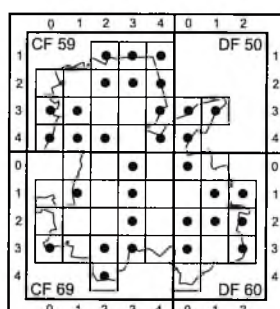
Origanum vulgare



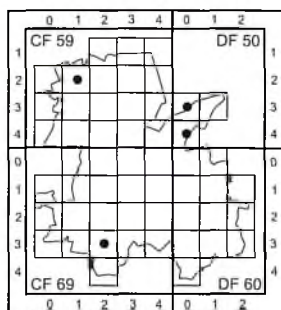
Δ *Ornithogalum umbellatum*



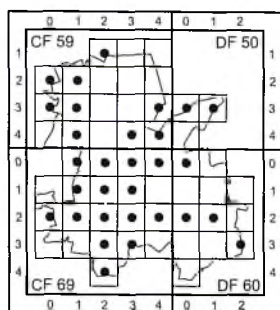
Orthilia secunda



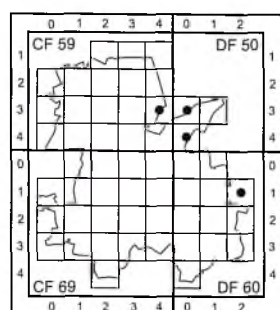
Oxalis acetosella



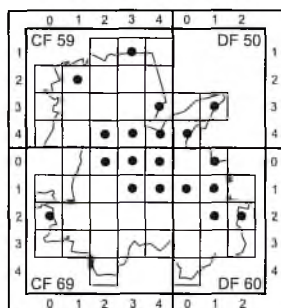
*****Oxalis corniculata***



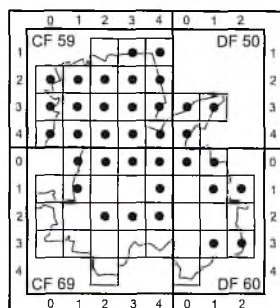
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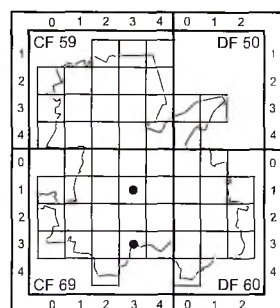
Oxycoccus palustris



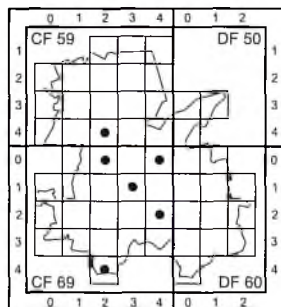
Padus avium



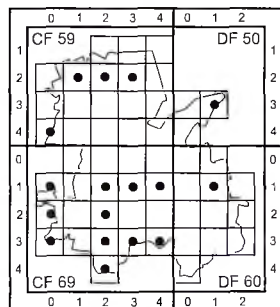
*****Padus serotina***



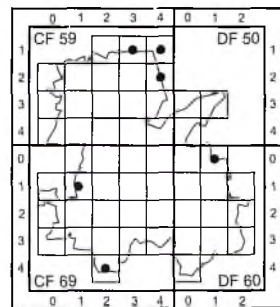
****Papaver agremone***



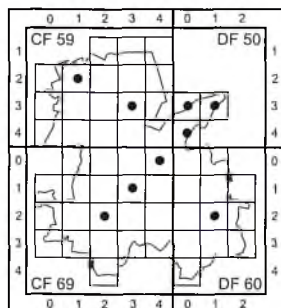
****Papaver dubium***



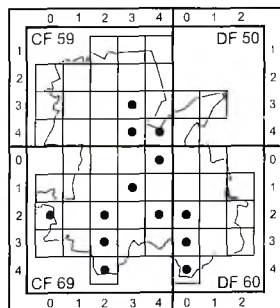
****Papaver rhoeas***



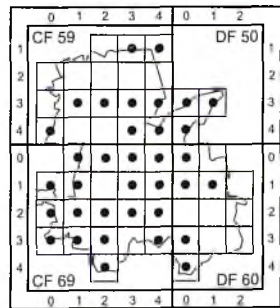
Paris quadrifolia



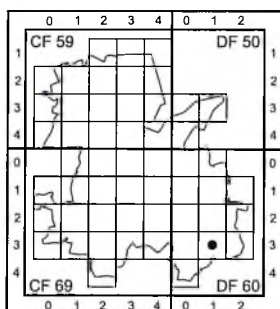
*****Parthenocissus inserta***



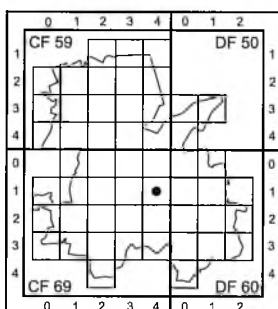
*****Parthenocissus quinquefolia***



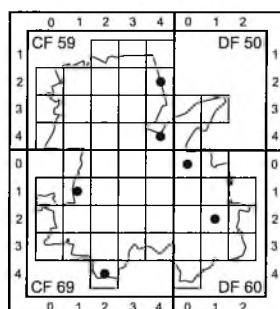
****Pastinaca sativa***



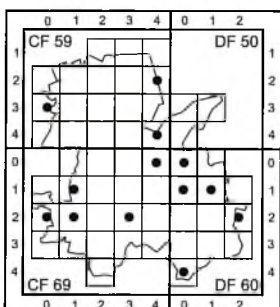
Peplis portula



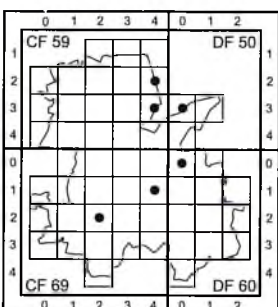
***Persica vulgaris*



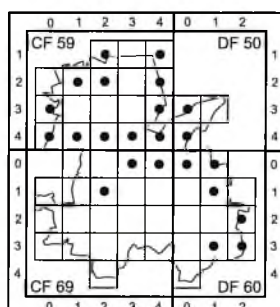
Petasites albus



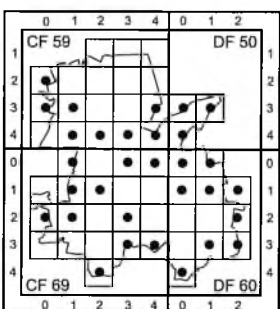
Petasites hybridus



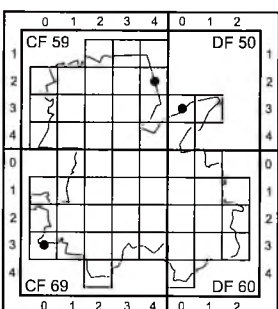
Peucedanum oreoselinum



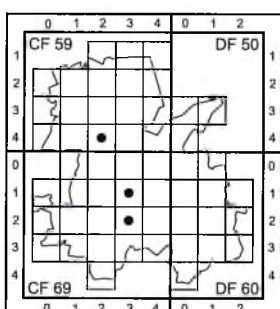
Peucedanum palustre



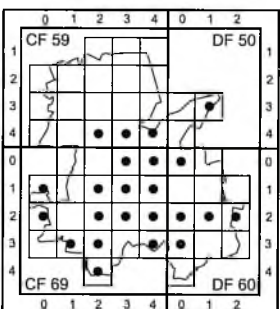
Phalaris arundinacea



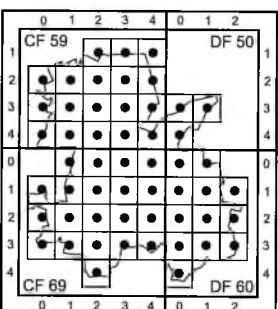
Phegopteris connectilis



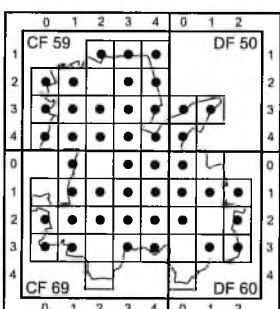
***Philadelphus coronarius*



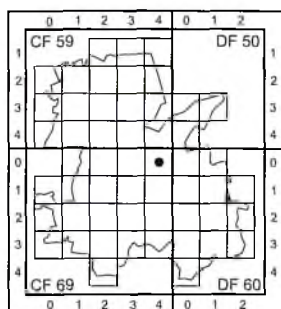
***Philadelphus pubescens*



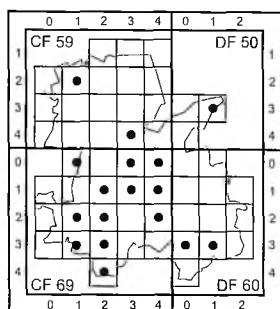
Phleum pratense



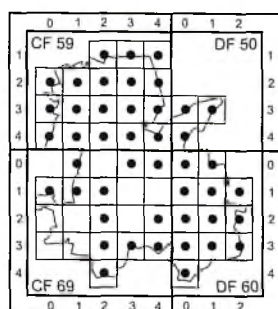
Phragmites australis



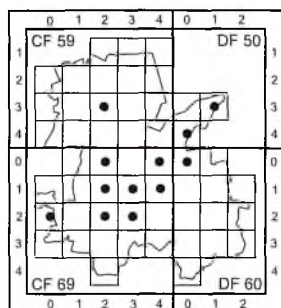
****Physalis alkekengi**



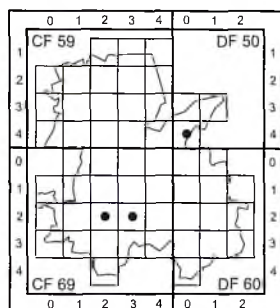
****Physocarpus opulifolius**



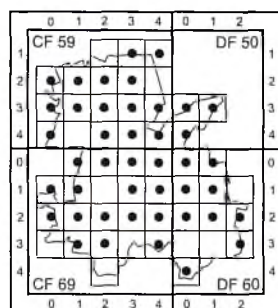
Picea abies



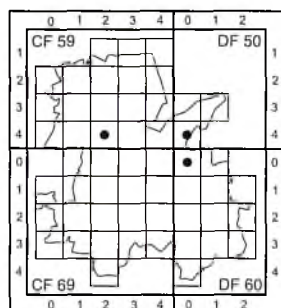
Picris hieracioides



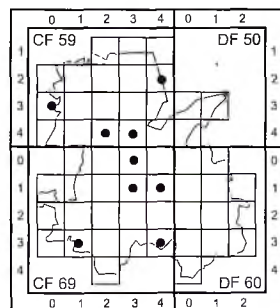
Pimpinella major



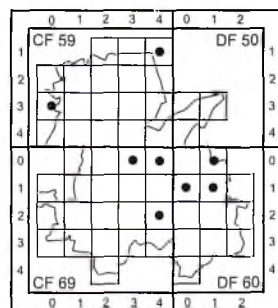
Pimpinella saxifraga



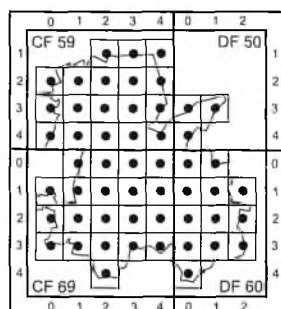
****Pinus banksiana**



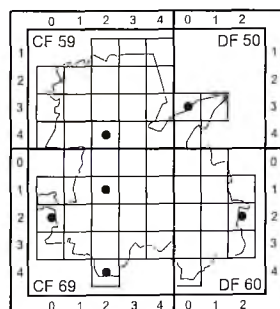
****Pinus nigra**



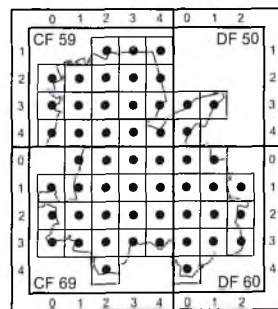
****Pinus strobus**



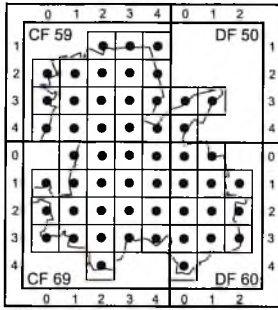
Pinus sylvestris



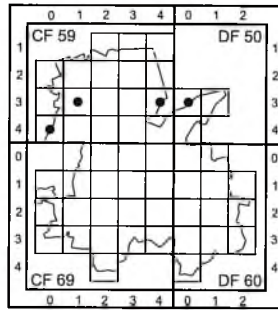
Plantago intermedia



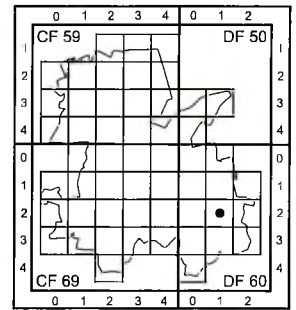
Plantago lanceolata



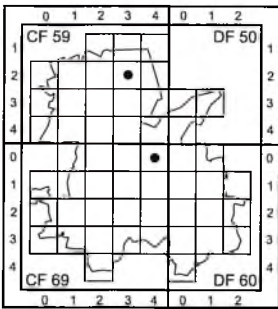
Plantago major



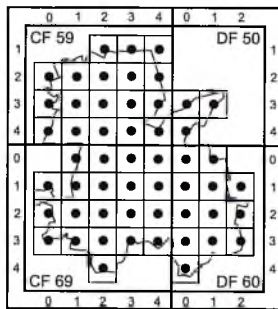
Plantago media



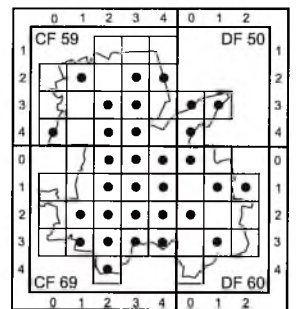
Platanthera bifolia



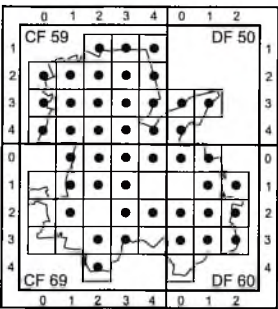
Poa angustifolia



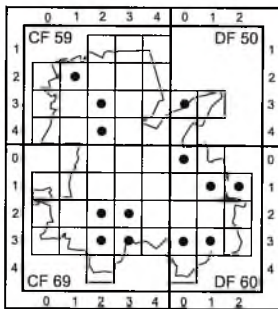
Poa annua



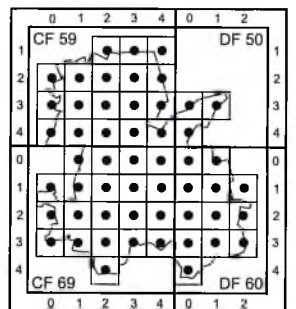
Poa compressa



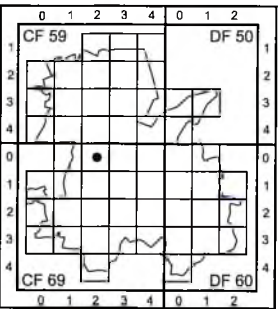
Poa nemoralis



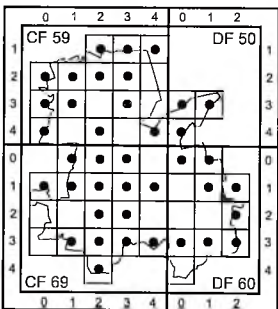
Poa palustris



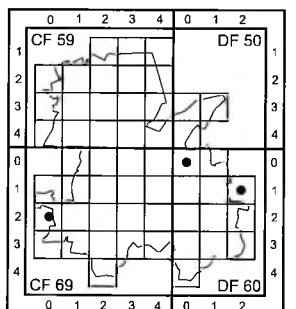
Poa pratensis



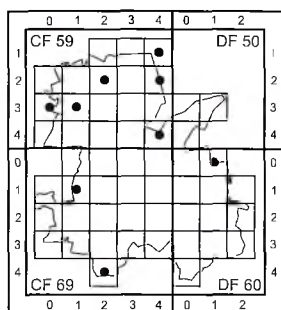
Poa remota



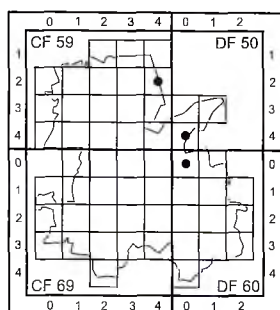
Poa trivialis



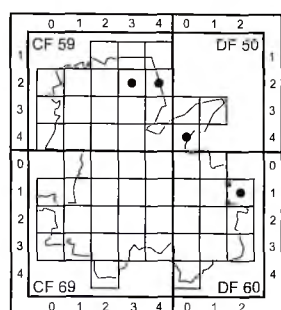
Polygala vulgaris



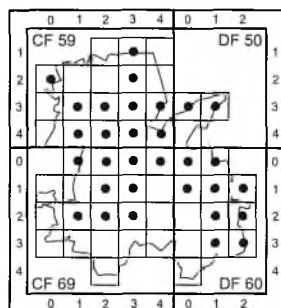
Polygonatum multiflorum



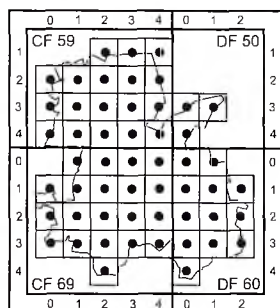
Polygonatum odoratum



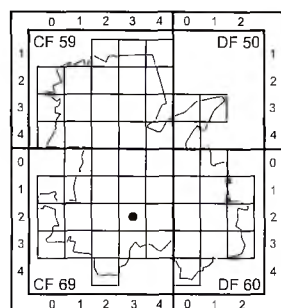
*Polygonatum
verticillatum*



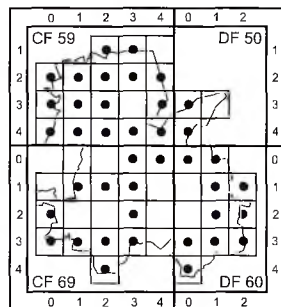
Polygonum amphibium



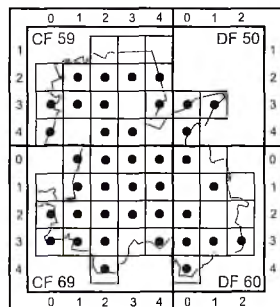
Polygonum aviculare



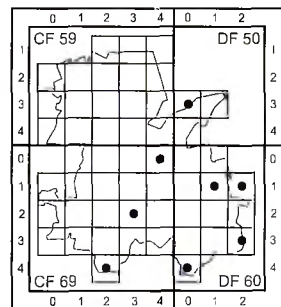
Polygonum brittingeri



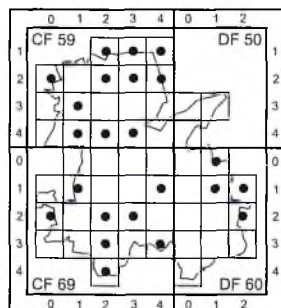
Polygonum hydropiper



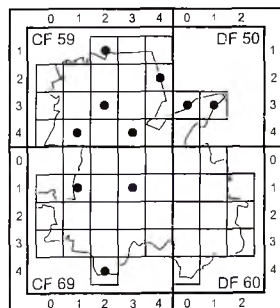
*Polygonum lapathifolium
subsp. lapathifolium*



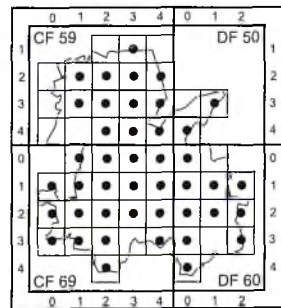
*Polygonum lapathifolium
subsp. pallidum*



Polygonum minus

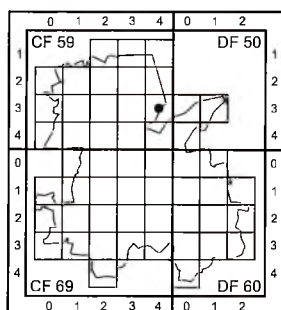


Polygonum mite

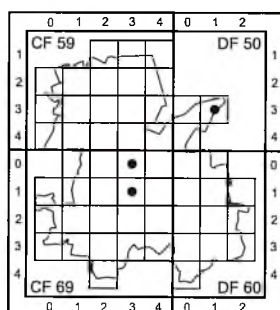


Polygonum persicaria

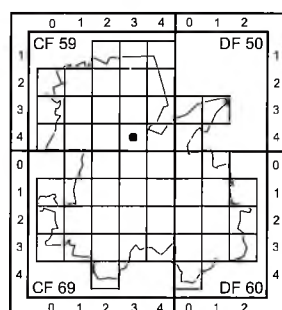
Distribution atlas of vascular plants in Rybník



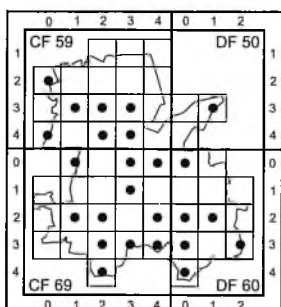
Polystichum aculeatum



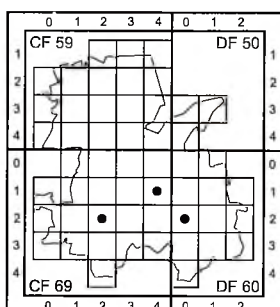
Populus alba



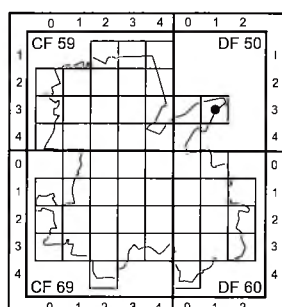
*******Populus xberolinensis*



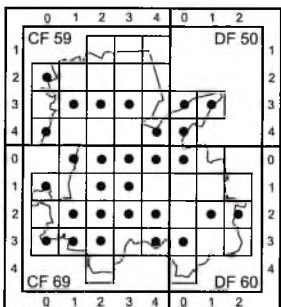
*******Populus xcanadensis*



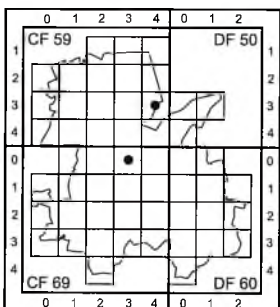
*******Populus candicans*



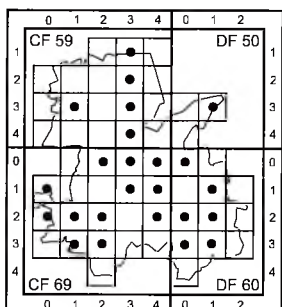
Populus xcanescens



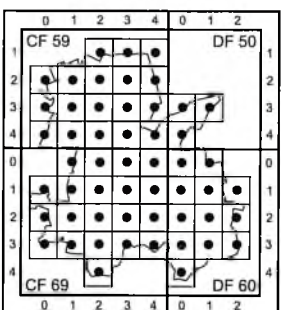
*******Populus 'NE 42'*



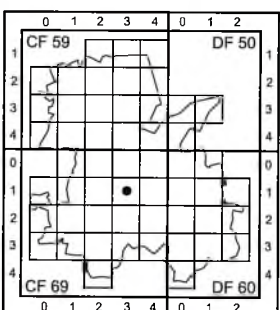
Populus nigra



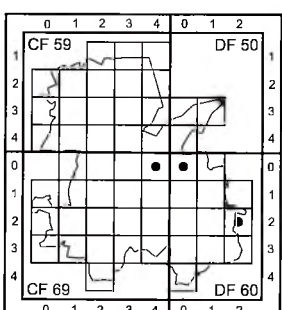
*******Populus nigra 'Italica'*



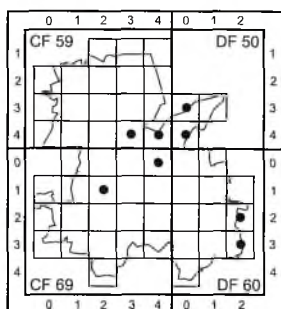
Populus tremula



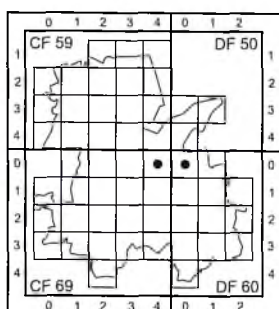
*******Portulaca oleracea*



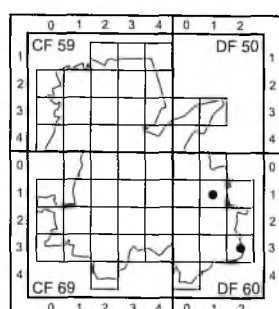
Potamogeton crispus



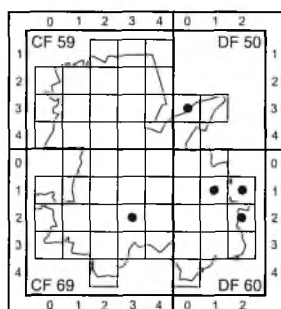
Potamogeton natans



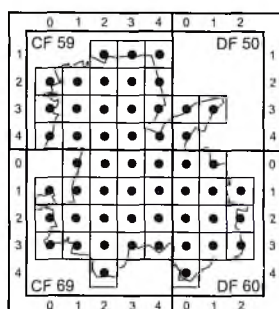
Potamogeton obtusifolius



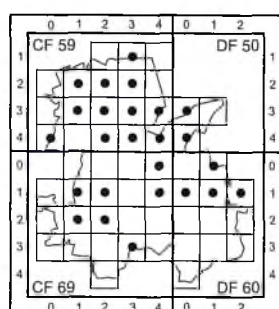
Potamogeton pectinatus



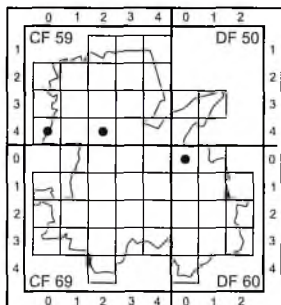
Potamogeton trichoides



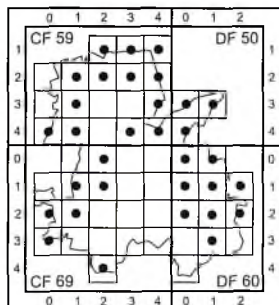
Potentilla anserina



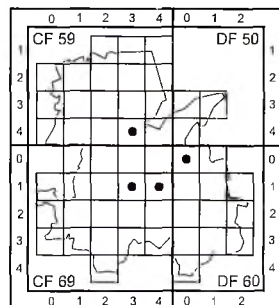
Potentilla argentea



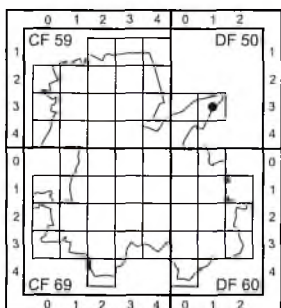
Potentilla collina



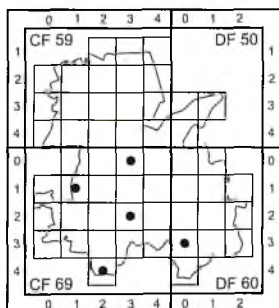
Potentilla erecta



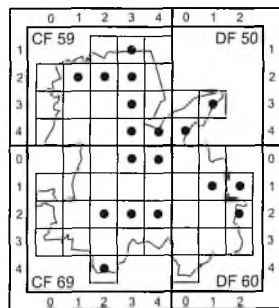
*******Potentilla intermedia*



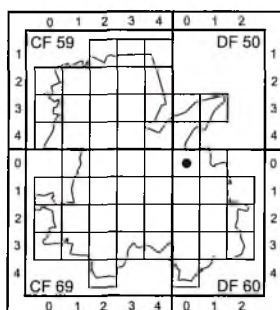
Potentilla × *mixta*



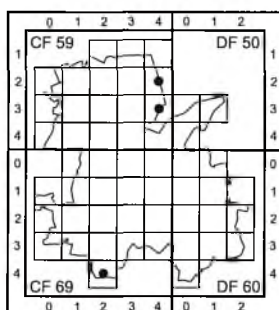
Potentilla norvegica



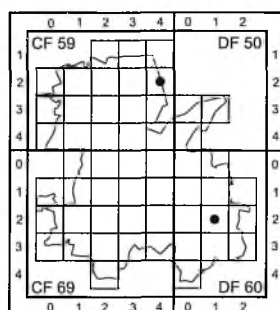
Potentilla reptans



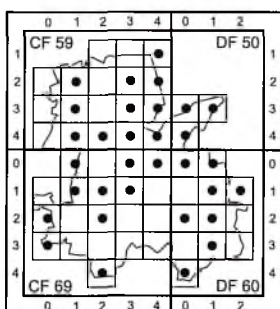
Potentilla supina



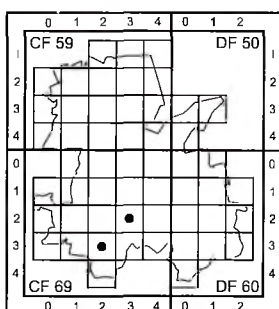
Prenanthes purpurea



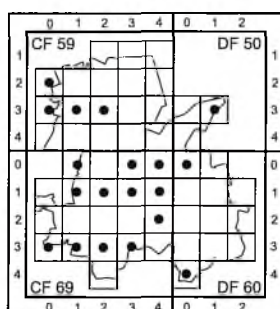
Primula elatior



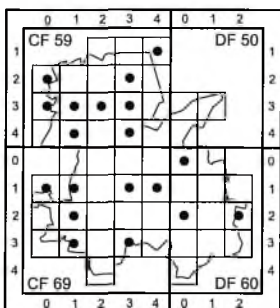
Prunella vulgaris



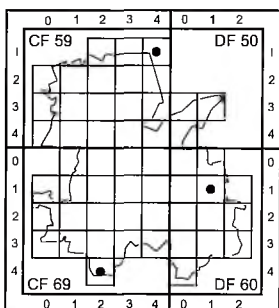
***Prunus cerasifera*



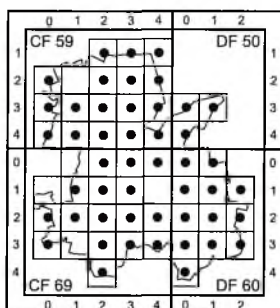
***Prunus domestica*
subsp. *domestica*



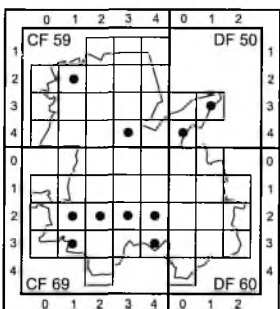
Prunus spinosa



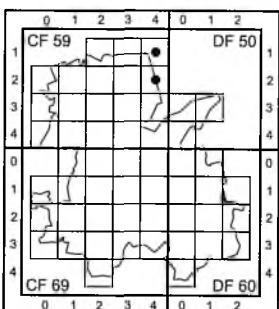
***Pseudotsuga menziesii*



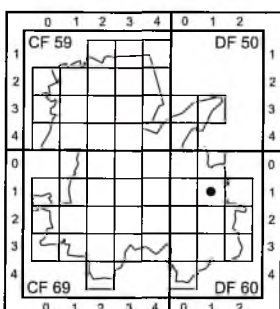
Pteridium aquilinum



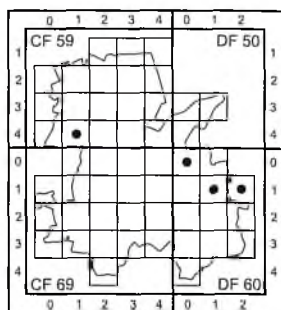
Puccinellia distans



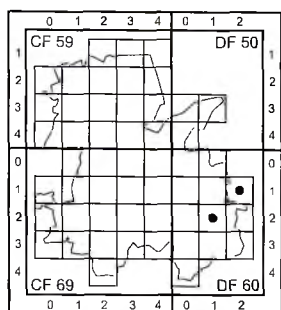
Pulmonaria obscura



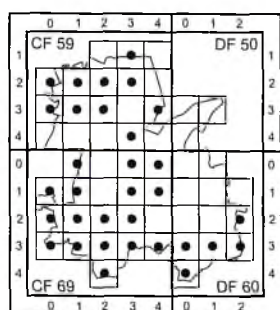
Pyrola media



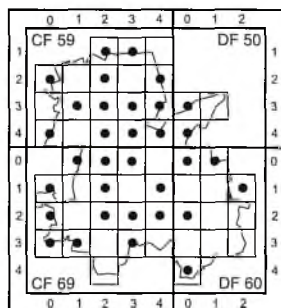
Pyrola minor



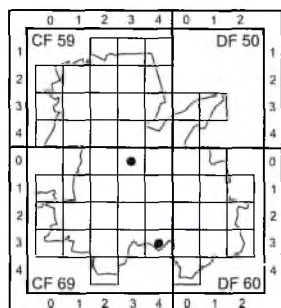
Pyrola rotundifolia



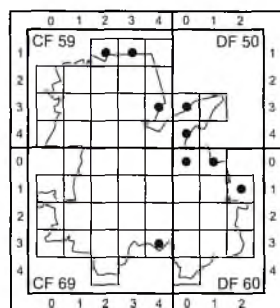
****Pyrus communis**



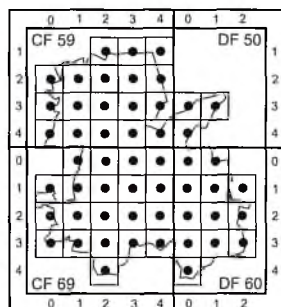
Pyrus pyraster



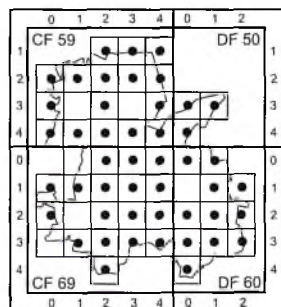
****Quercus cerris**



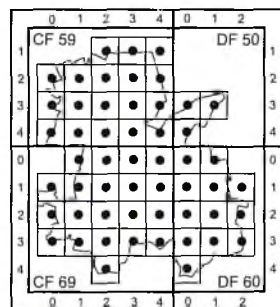
Quercus petraea



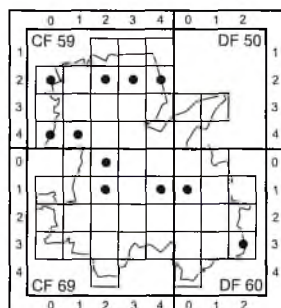
Quercus robur



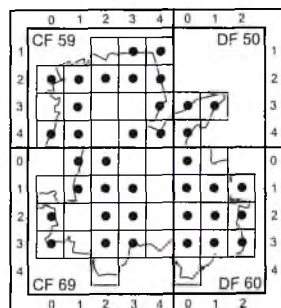
****Quercus rubra**



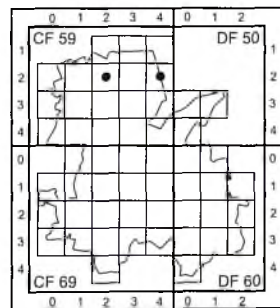
Ranunculus acris



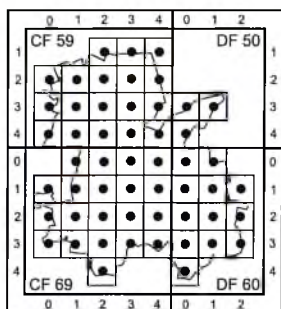
Ranunculus auricomus



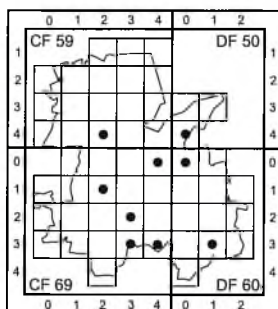
Ranunculus flammula



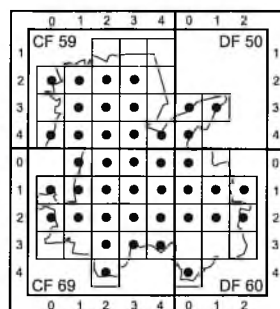
Ranunculus lanuginosus



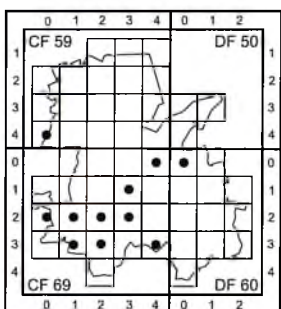
Ranunculus repens



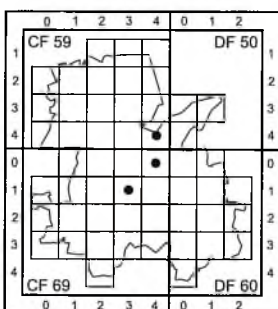
Ranunculus sceleratus



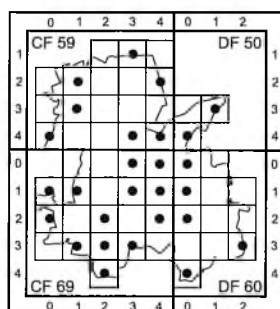
**Raphanus raphanistrum*



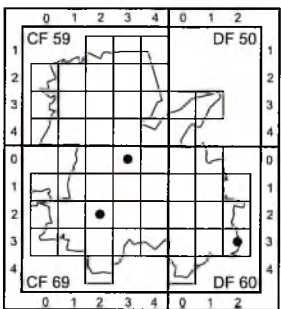
Reseda lutea



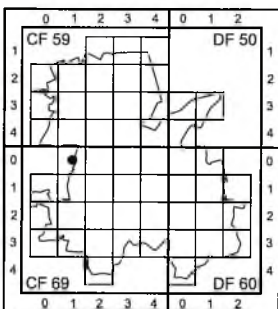
***Reynoutria xbohemica*



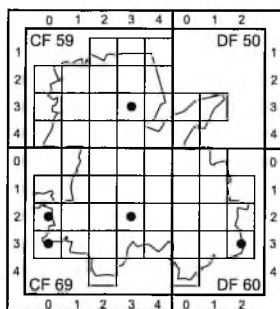
***Reynoutria japonica*



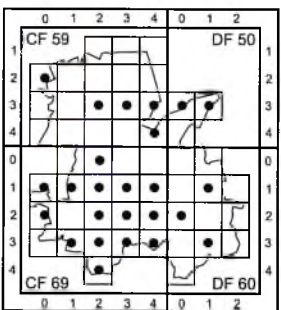
***Reynoutria sachalinensis*



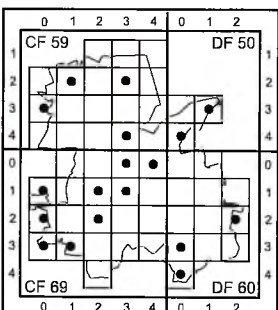
Rhamnus cathartica



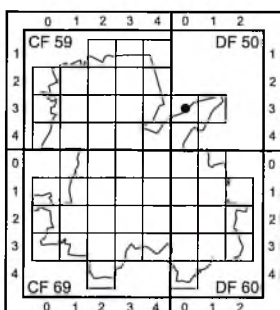
Rhinanthus minor



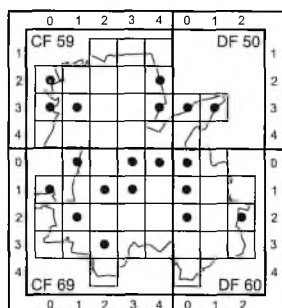
Rhinanthus serotinus



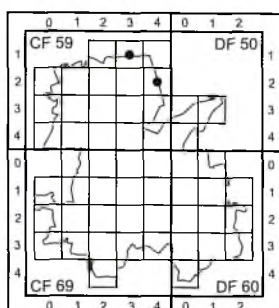
***Rhus typhina*



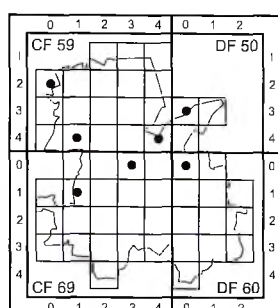
Rhynchospora alba



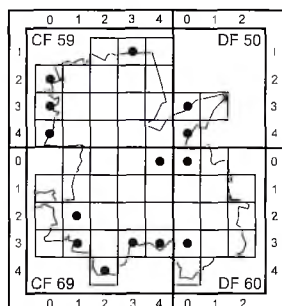
Δ *Ribes nigrum*



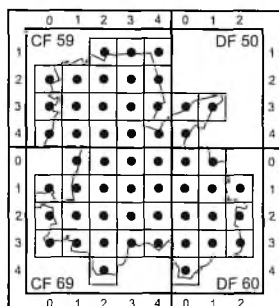
***Ribes rubrum*



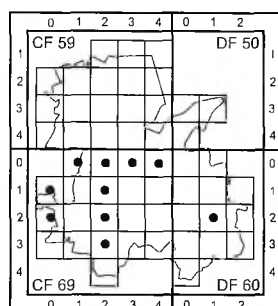
Ribes spicatum



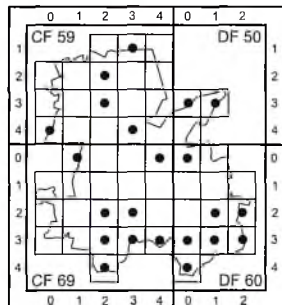
Δ *Ribes uva-crispa*



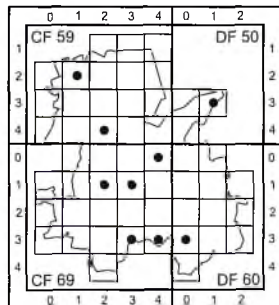
***Robinia pseudoacacia*



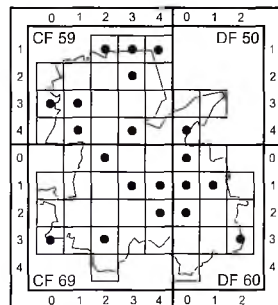
Rorippa $\times$ *armoracioides*



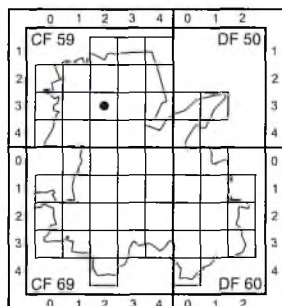
Rorippa palustris



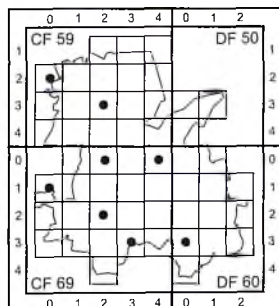
Rorippa sylvestris



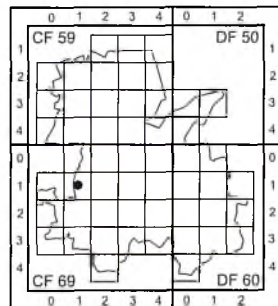
Rosa canina



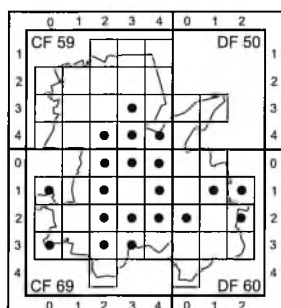
Rosa dumalis



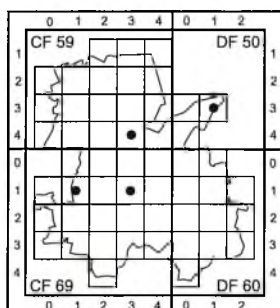
***Rosa multiflora*



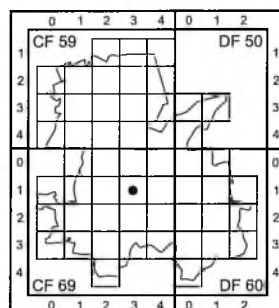
Rosa rubiginosa



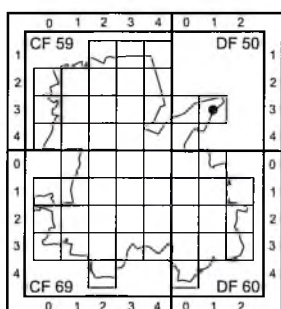
*******Rosa rugosa*



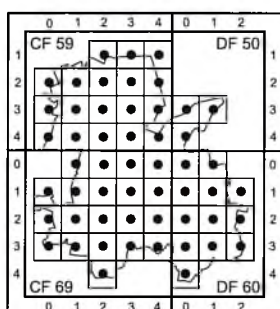
Rubus angustipaniculatus



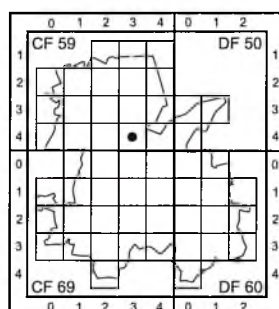
*******Rubus armeniacus*



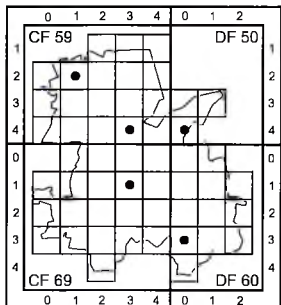
Rubus bifrons



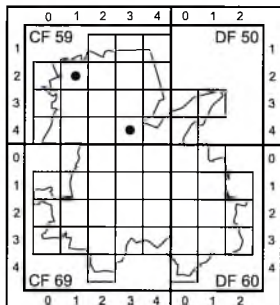
Rubus caesius



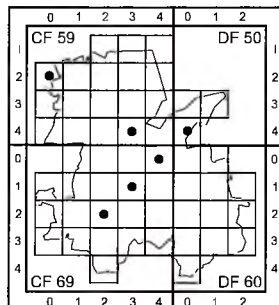
Rubus crispomarginatus



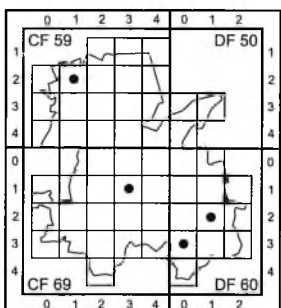
Rubus gliviciensis



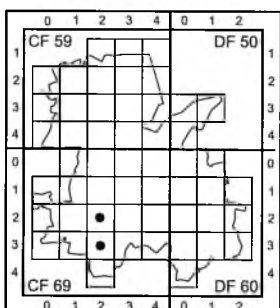
Rubus gothicus



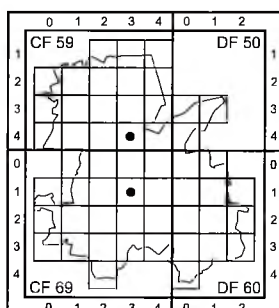
Rubus grabowskii



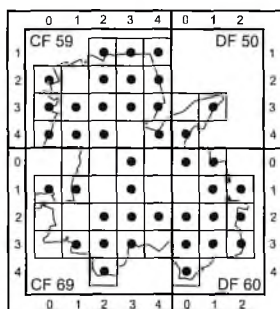
Rubus gracilis



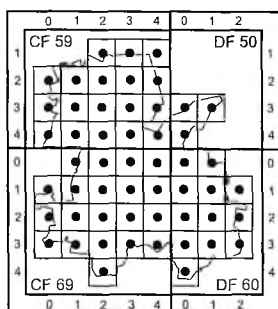
Rubus guentheri



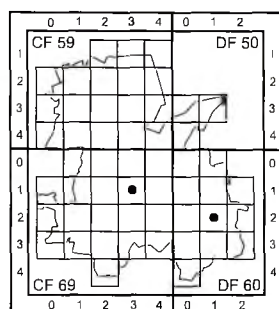
Rubus hercynicus



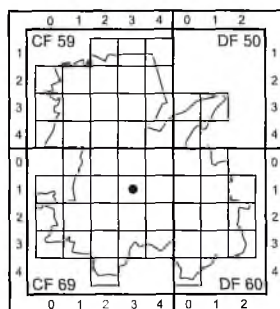
Rubus hirtus



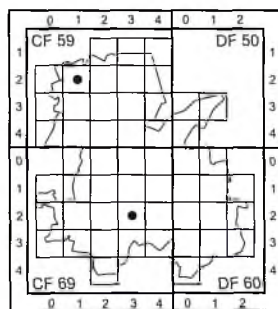
Rubus idaeus



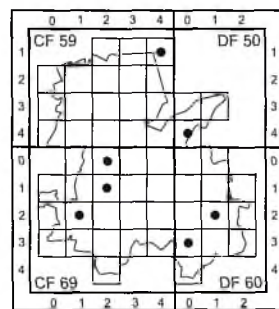
Rubus kuleszae



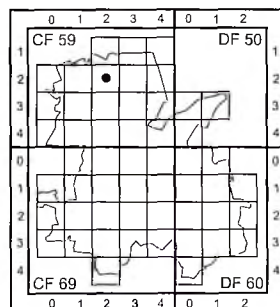
Rubus macrophyllus



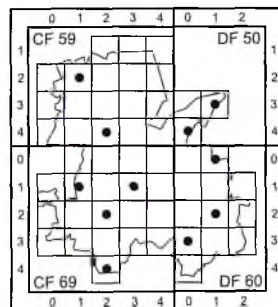
Rubus montanus



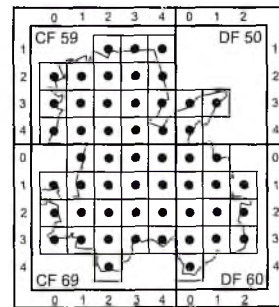
Rubus nessensis



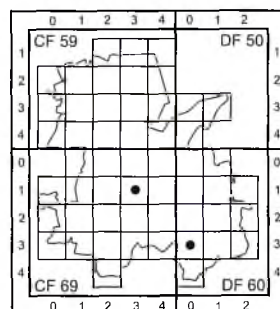
Rubus orthostachys



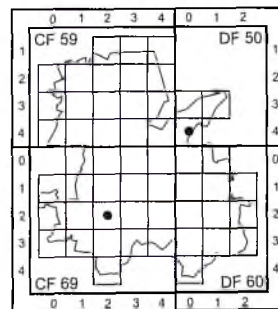
Rubus pedemontanus



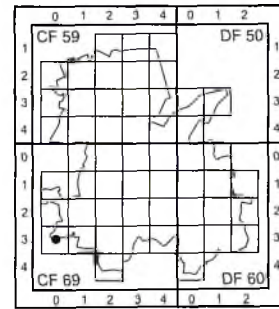
Rubus plicatus



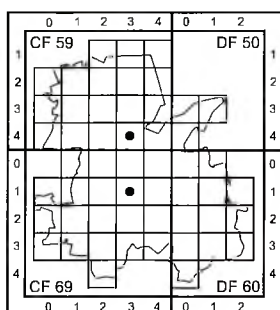
Rubus rudis



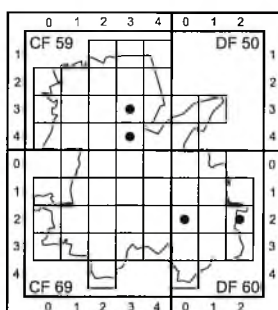
Rubus sprengelii



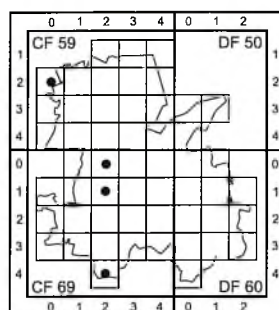
Rubus sulcatus



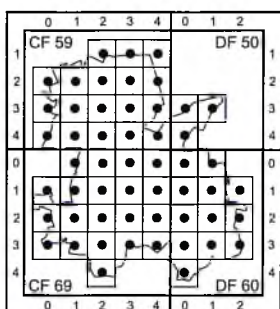
Rubus wimmerianus



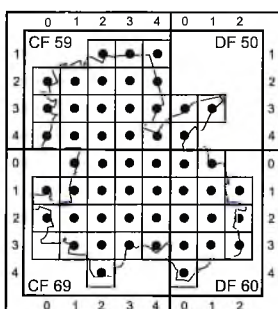
****Rudbeckia hirta**



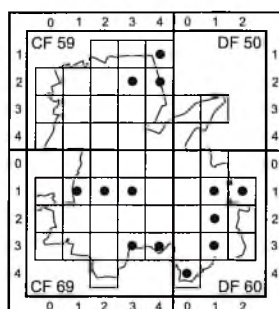
****Rudbeckia laciniata**



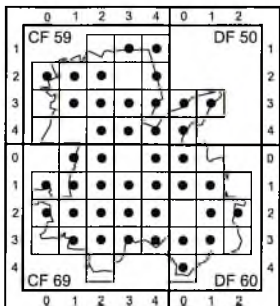
Rumex acetosa



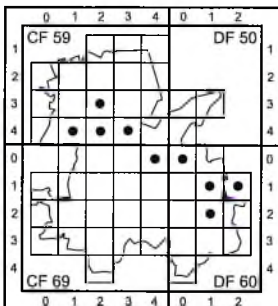
Rumex acetosella



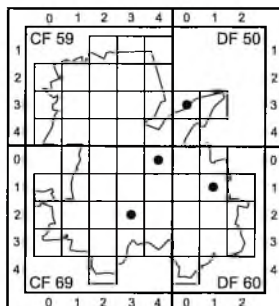
Rumex conglomeratus



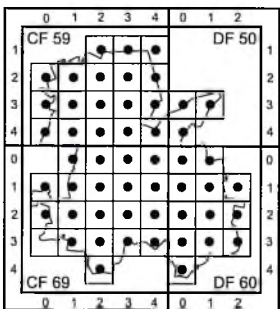
Rumex crispus



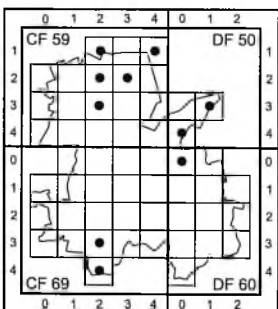
Rumex hydrolapathum



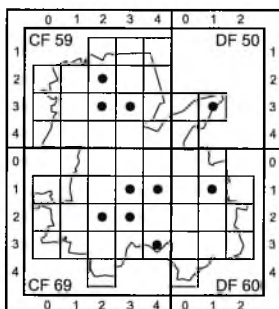
Rumex maritimus



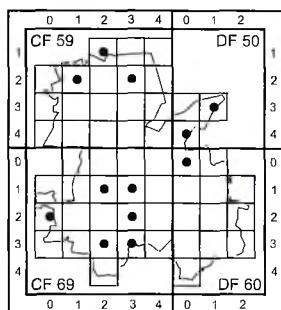
Rumex obtusifolius



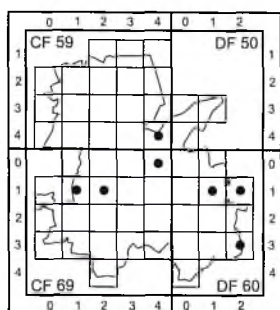
Rumex sanguineus



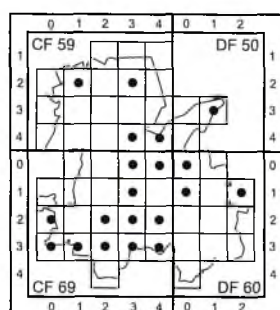
[*]Rumex thyrsiflorus



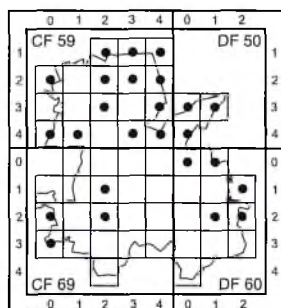
Sagina procumbens



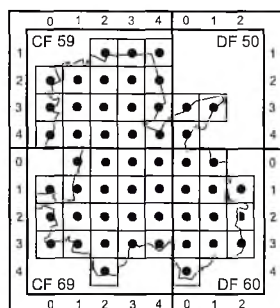
Sagittaria sagittifolia



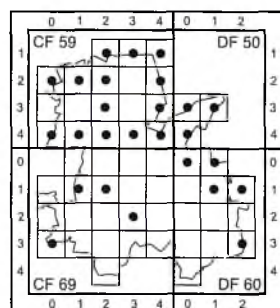
Salix alba



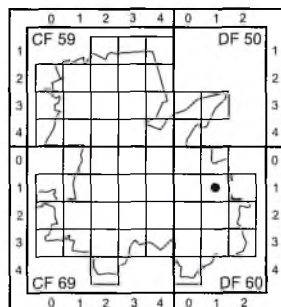
Salix aurita



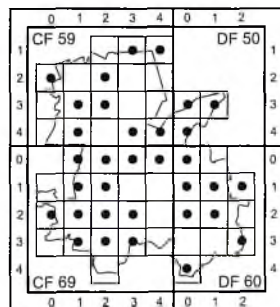
Salix caprea



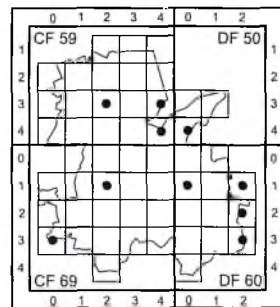
Salix cinerea



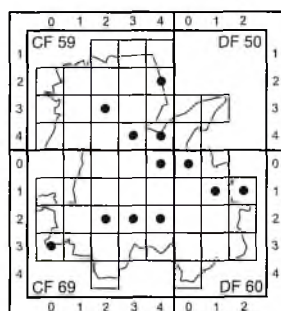
Salix daphnoides



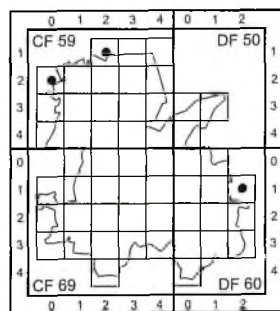
Salix fragilis



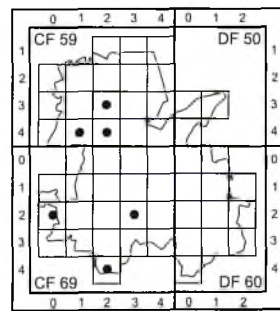
Salix pentandra



Salix purpurea

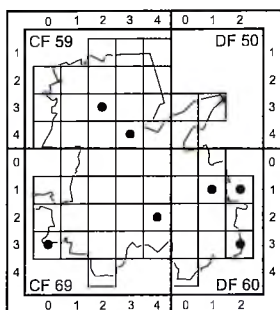


Salix repens subsp.
repens

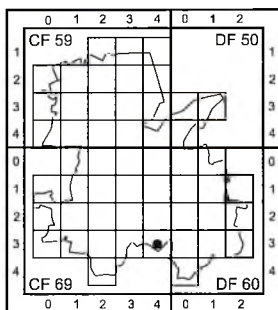


Salix ×*smithiana*

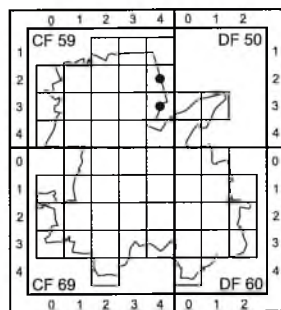
Distribution atlas of vascular plants in Rybník



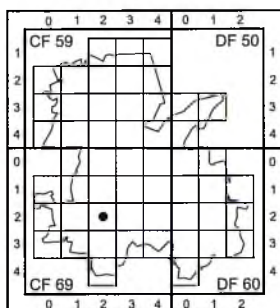
Salix viminalis



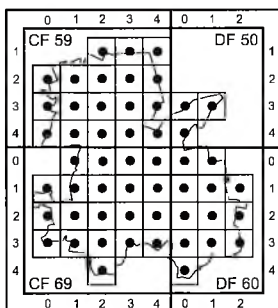
***Salsola kali subsp.
ruthenica*



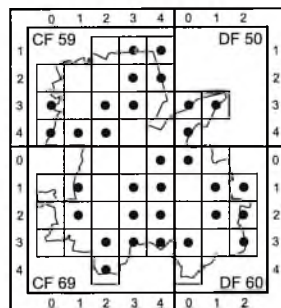
Salvia glutinosa



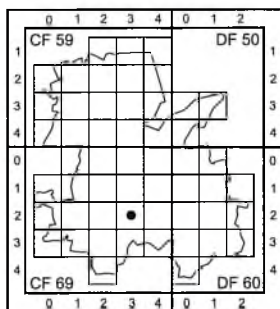
Salvia verticillata



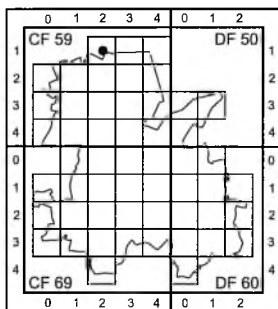
Sambucus nigra



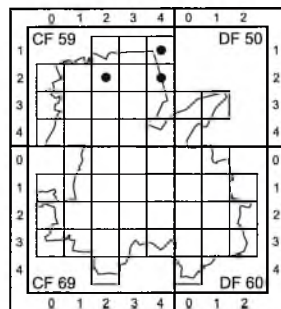
Sambucus racemosa



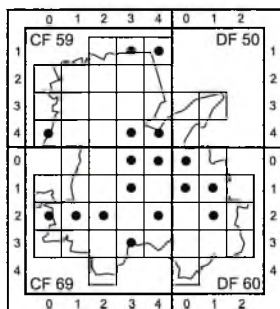
Sanguisorba muricata



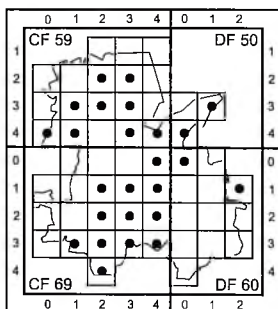
Sanguisorba officinalis



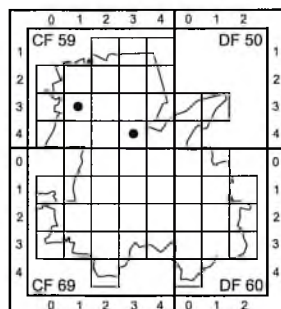
Sanicula europaea



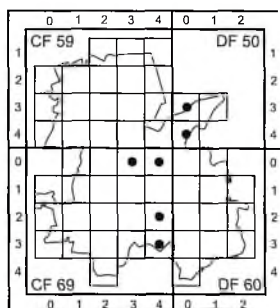
Saponaria officinalis



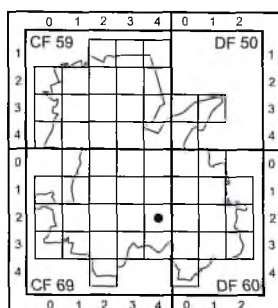
Sarothamnus scoparius



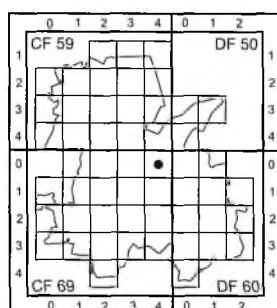
Scabiosa ochroleuca



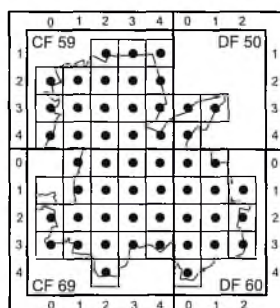
Schoenoplectus lacustris



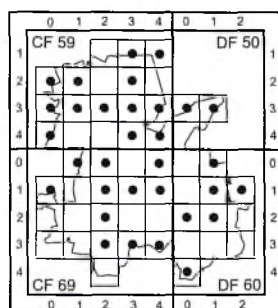
*Schoenoplectus
tabernaemontani*



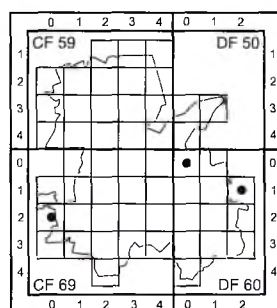
Scirpus radicans



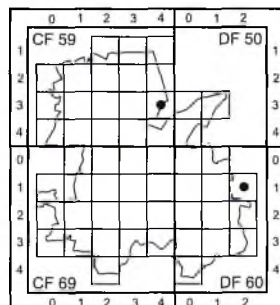
Scirpus sylvaticus



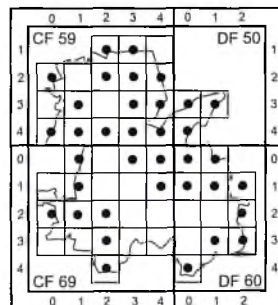
**Scleranthus annuus*



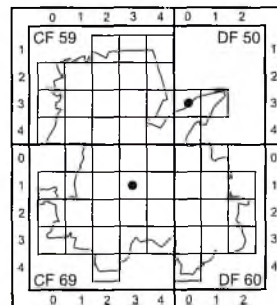
Scleranthus perennis



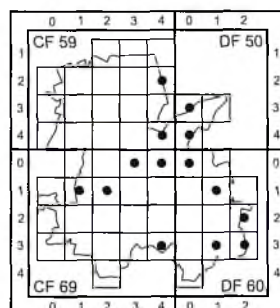
Scorzonera humilis



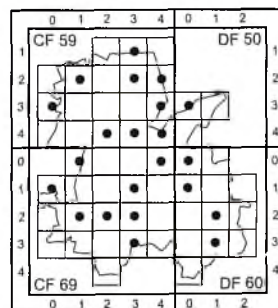
Scrophularia nodosa



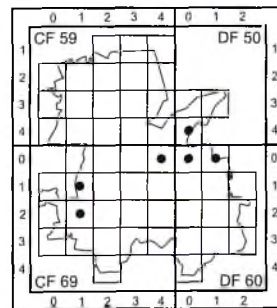
Scrophularia umbrosa



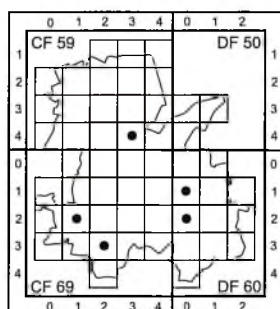
Scutellaria galericulata



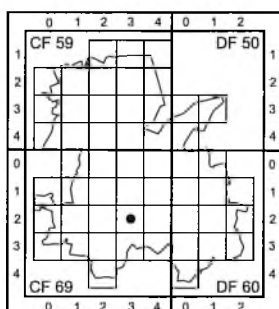
Sedum acre



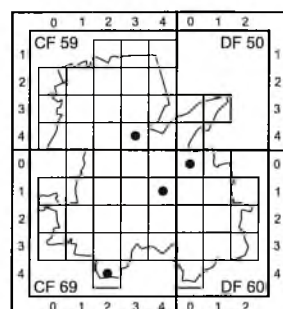
Sedum maximum



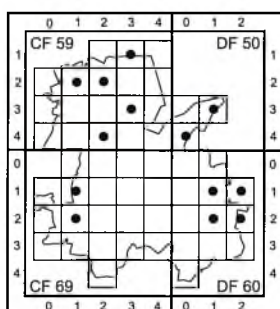
Sedum reflexum



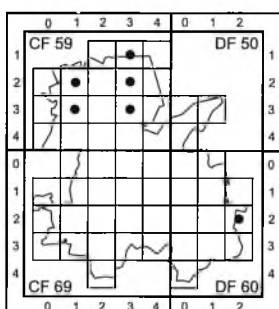
Sedum sexangulare



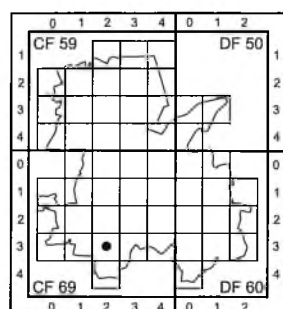
*******Sedum spurium*



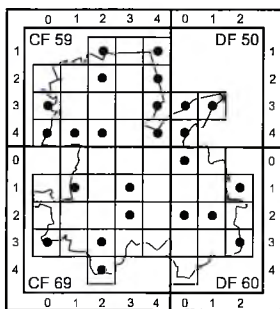
Selinum carvifolia



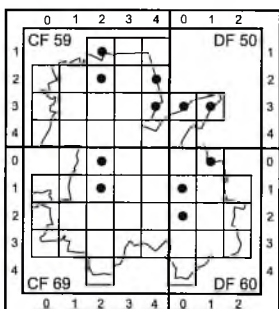
Senecio jacobaea



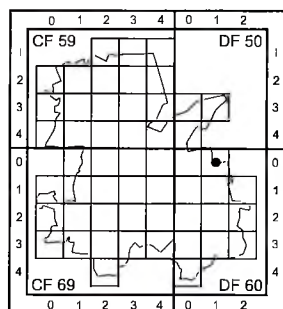
Senecio nemorensis



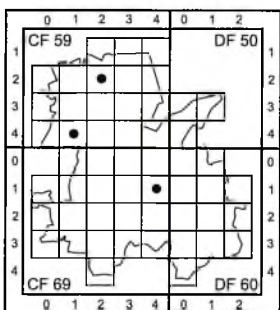
Senecio ovatus



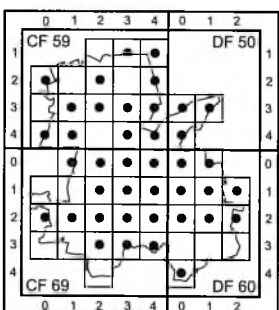
Senecio rivularis



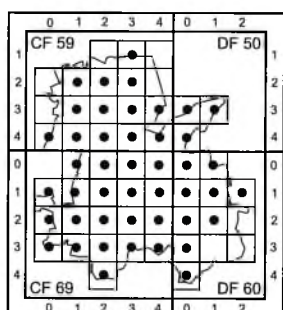
Senecio sylvaticus



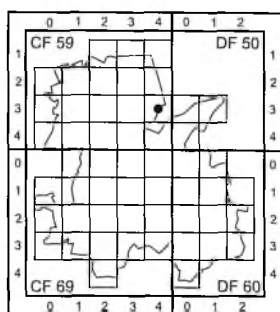
*******Senecio vernalis*



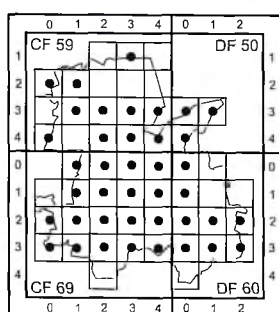
Senecio viscosus



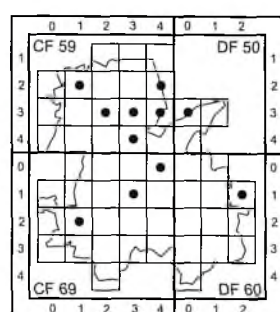
******Senecio vulgaris*



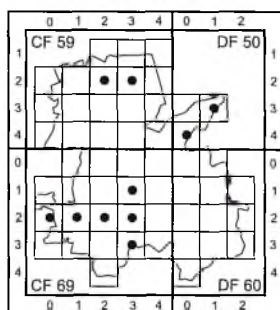
Serratula tinctoria



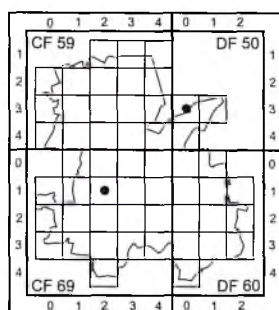
**Setaria pumila*



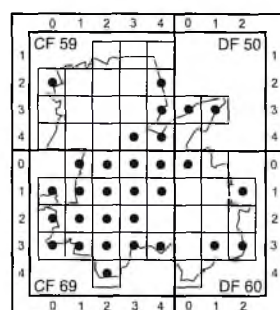
**Setaria viridis*



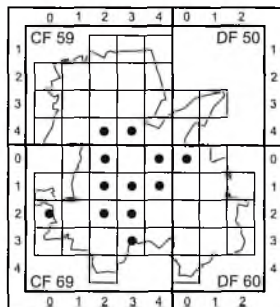
Silene vulgaris



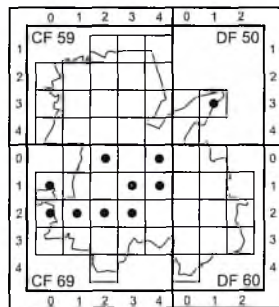
***Sinapis alba*



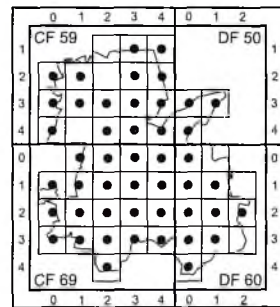
**Sinapis arvensis*



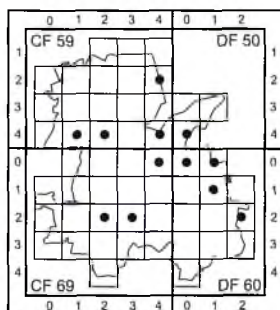
***Sisymbrium altissimum*



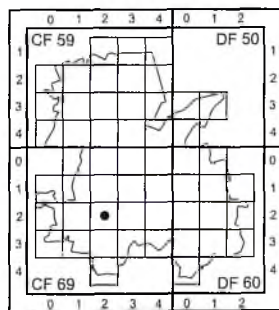
***Sisymbrium loeselii*



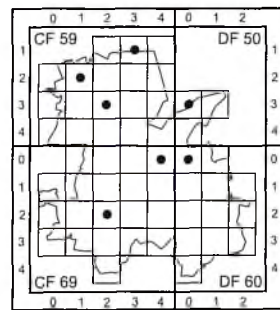
**Sisymbrium officinale*



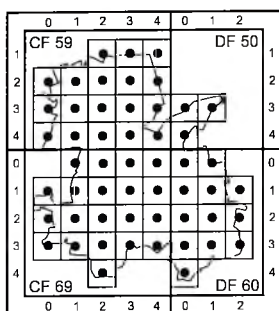
Solanum dulcamara



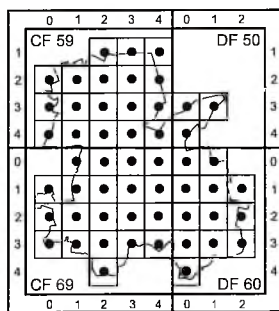
**Solanum luteum*



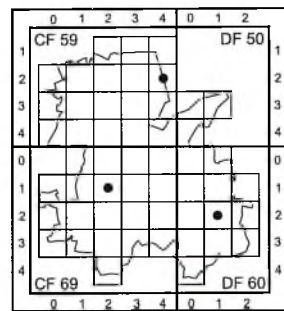
**Solanum nigrum*



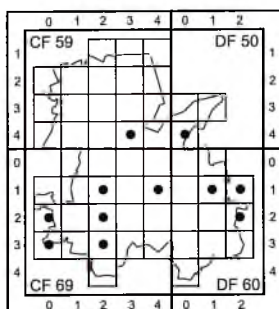
*****Solidago canadensis***



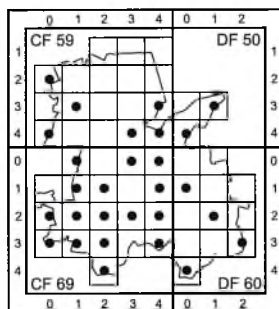
*****Solidago gigantea***



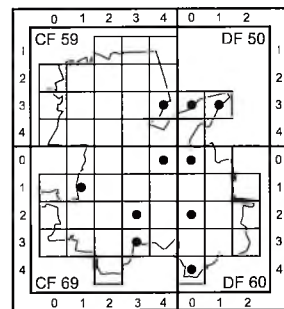
*****Solidago graminifolia***



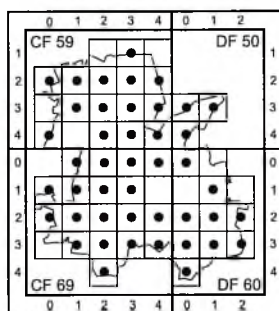
Solidago virgaurea



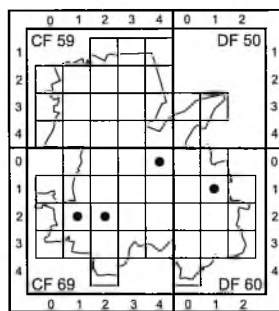
Sonchus arvensis L.
subsp. *arvensis*



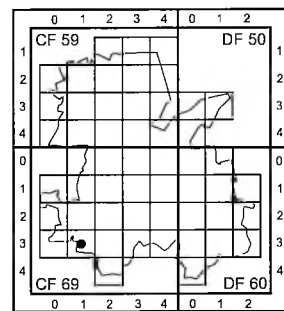
****Sonchus asper***



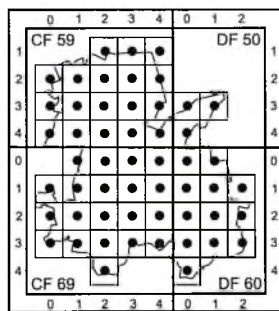
****Sonchus oleraceus***



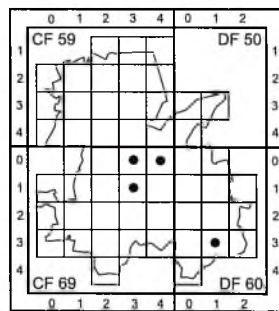
*****Sorbaria sorbifolia***



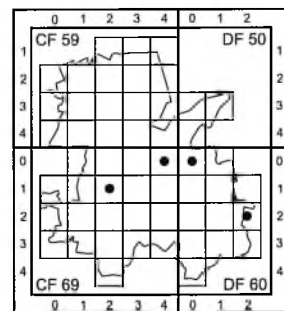
*****Sorbus aria***



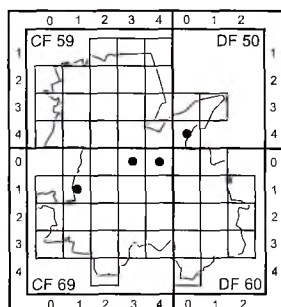
Sorbus aucuparia



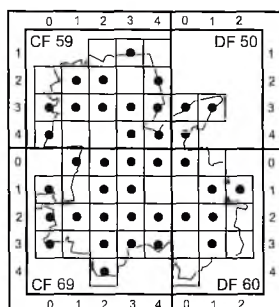
*****Sorbus intermedia***



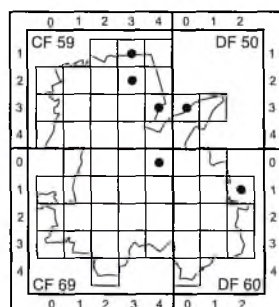
Sparganium emersum



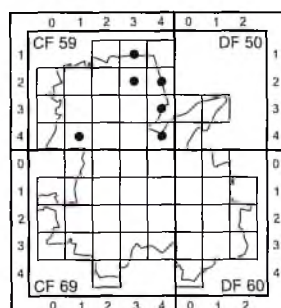
Sparganium erectum



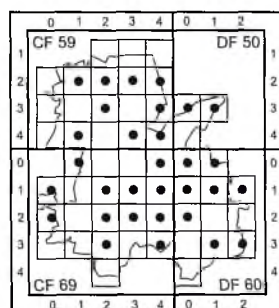
**Spergula arvensis*



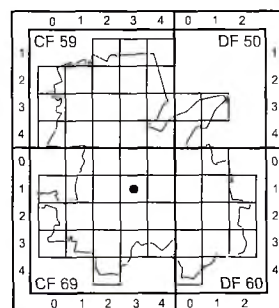
Spergula morisonii



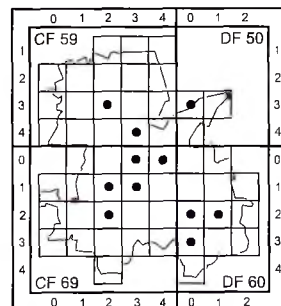
Spergula pentandra



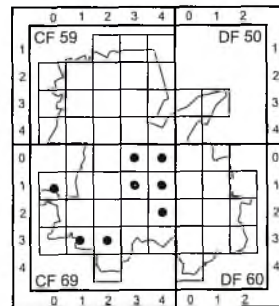
Spergularia rubra



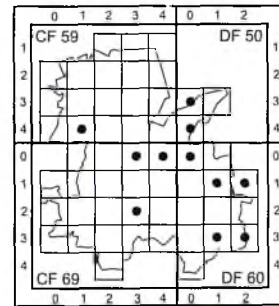
***Spiraea chamaedryfolia*



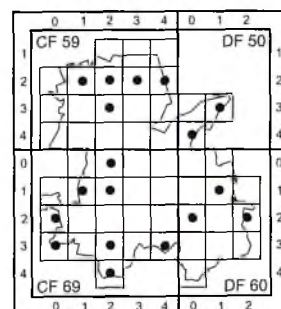
***Spiraea*
x pseudosalicifolia



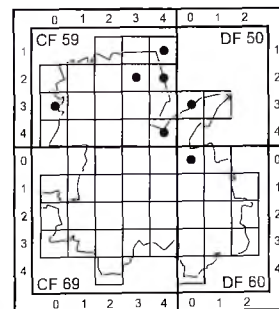
***Spiraea x vanhouttei*



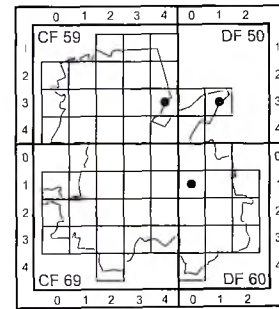
Spirodela polyrhiza



Stachys palustris

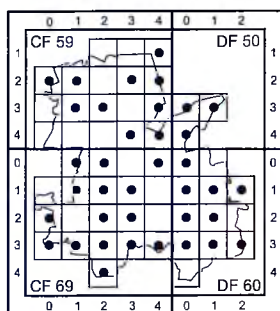


Stachys sylvatica

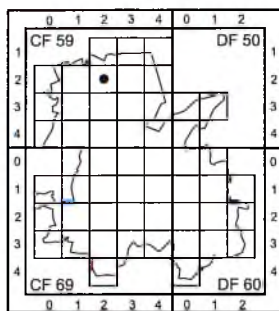


Δ *Staphylea pinnata*

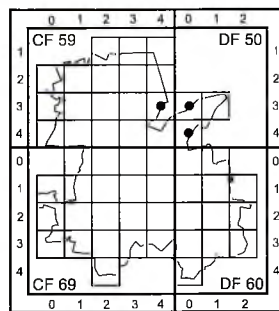
Distribution atlas of vascular plants in Rybník



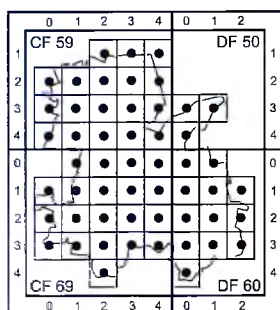
Stellaria graminea



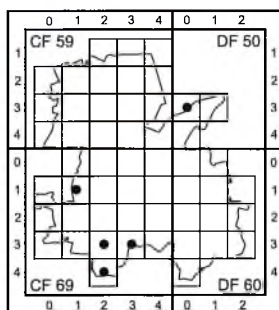
Stellaria holostea



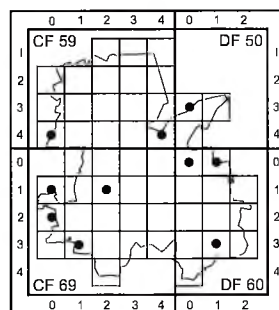
Stellaria longifolia



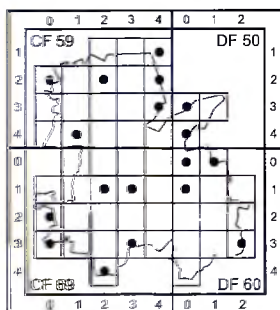
Stellaria media



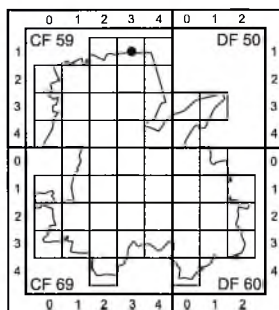
Stellaria nemorum



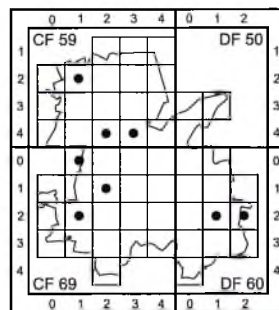
Stellaria palustris



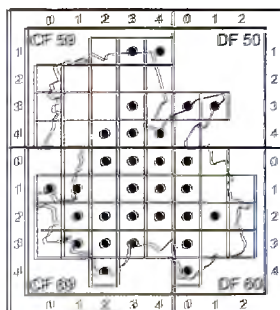
Stellaria uliginosa



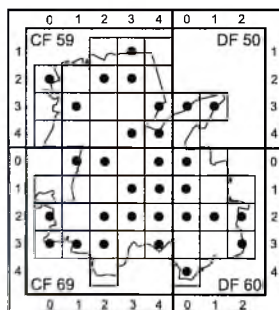
Streptopus amplexifolius



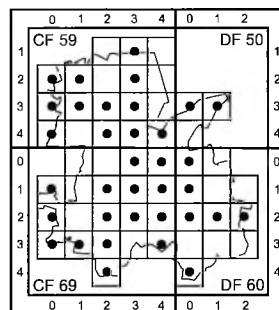
Succisa pratensis



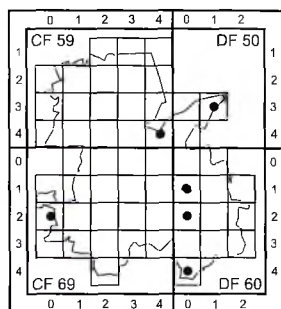
***Symphoricarpos albus*



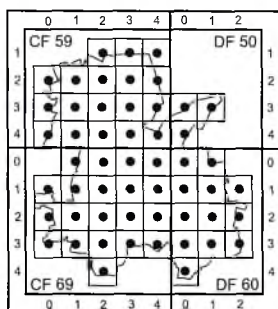
Symphytum officinale



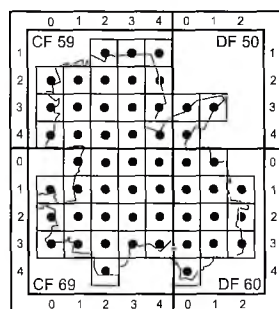
***Syringa vulgaris*



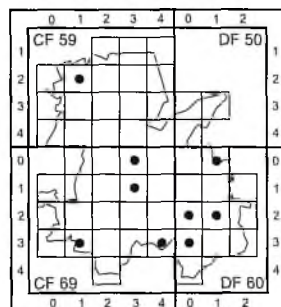
***Tanacetum parthenium*



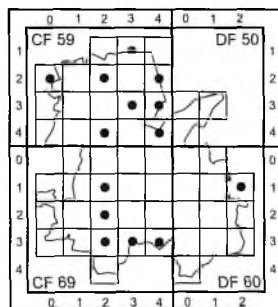
Tanacetum vulgare



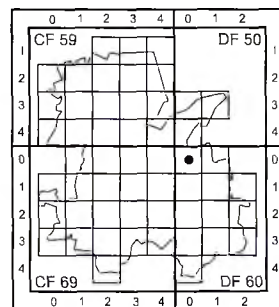
Taraxacum officinale



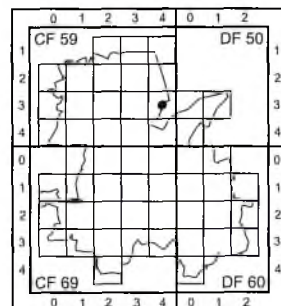
Δ *Taxus baccata*



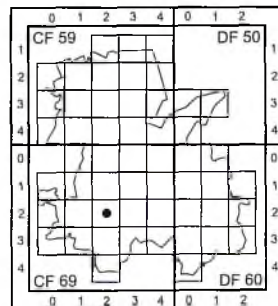
Teesdalea nudicaulis



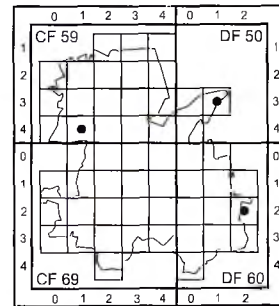
***Telekia speciosa*



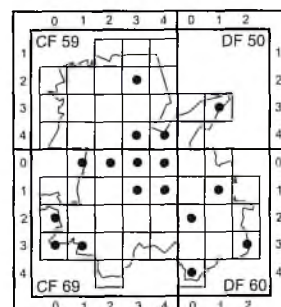
Thalictrum aquilegifolium



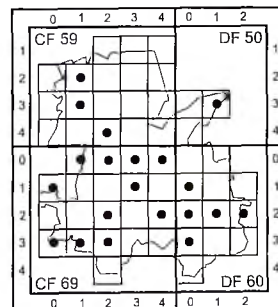
Thalictrum flavum



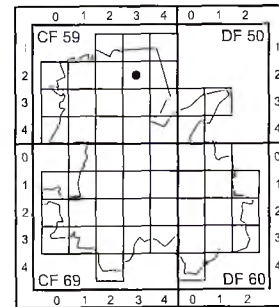
Thelypteris palustris



**Thlaspi arvense*

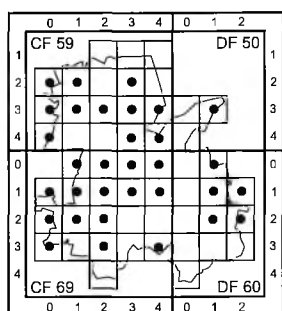


***Thuja occidentalis*

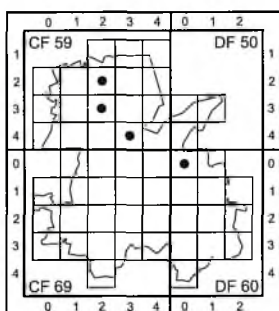


***Thuja plicata*

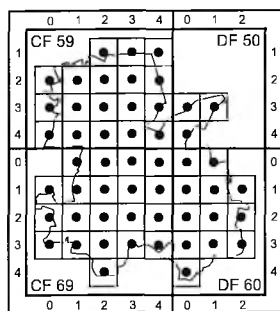
Distribution atlas of vascular plants in Rybník



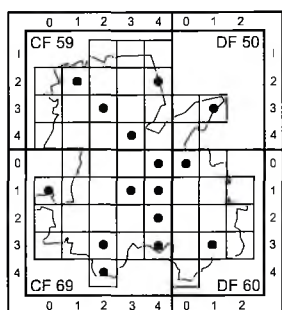
Thymus pulegioides



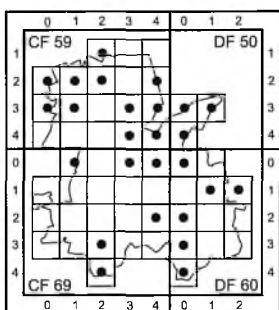
Thymus serpyllum



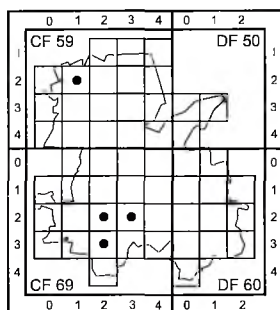
Tilia cordata



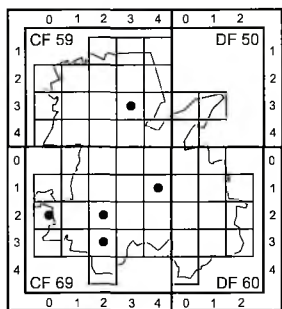
Tilia platyphyllos



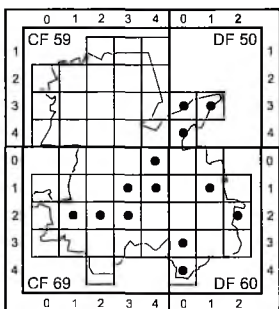
Torilis japonica



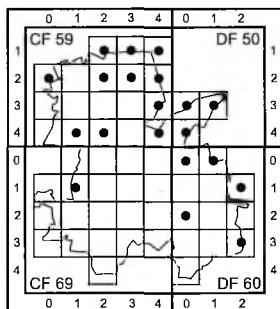
Tragopogon dubius



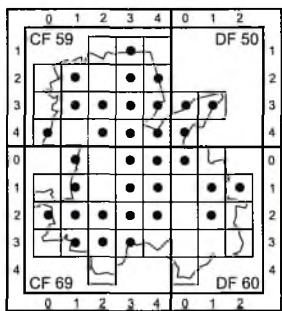
Tragopogon orientalis



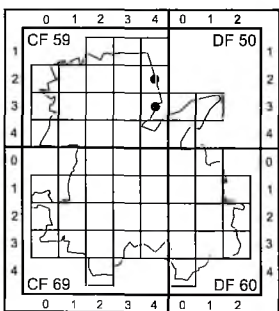
Tragopogon pratensis



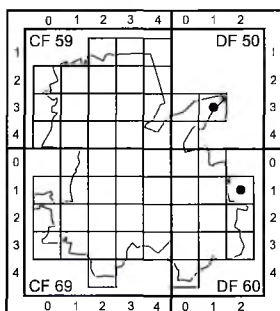
Trientalis europaea



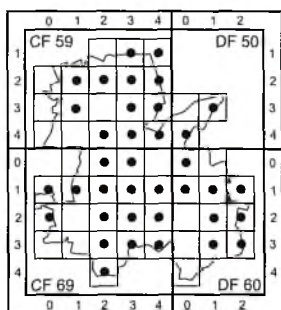
Trifolium arvense



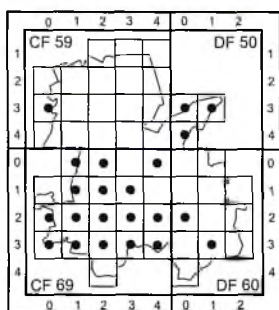
Trifolium aureum



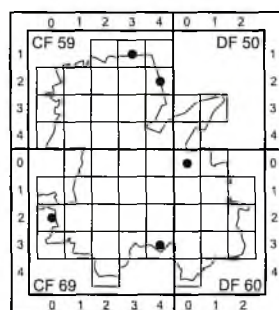
Trifolium campestre



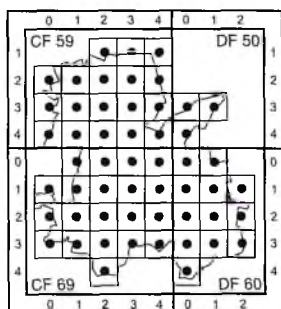
Trifolium dubium



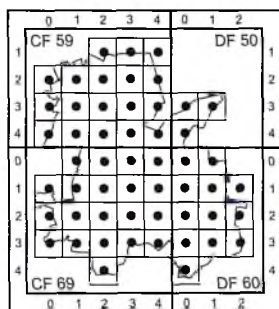
Trifolium hybridum



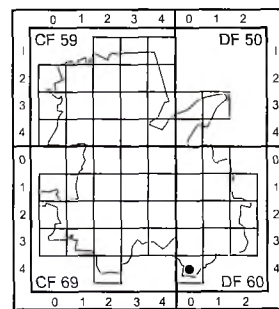
Trifolium medium



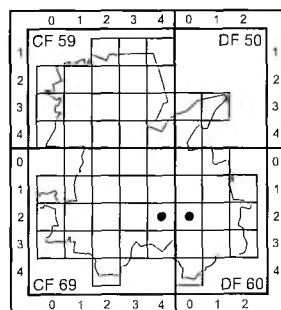
Trifolium pratense



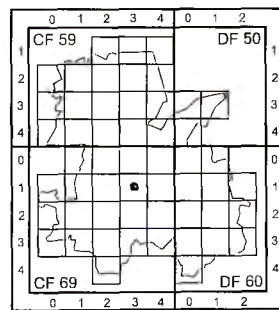
Trifolium repens



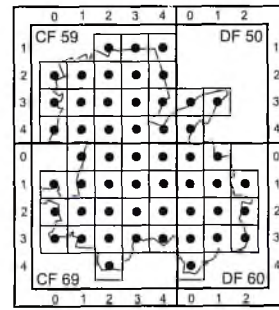
****Trifolium resupinatum**



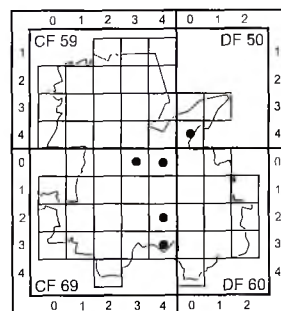
Trisetum flavescens



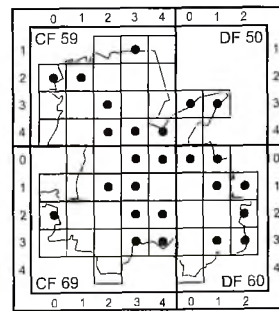
****Tsuga canadensis**



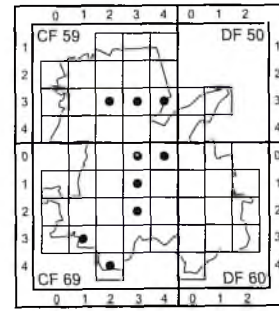
Tussilago farfara



Typha angustifolia

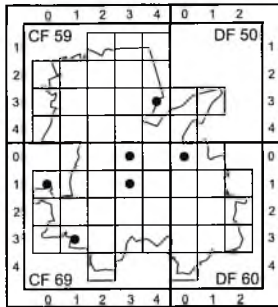


Typha latifolia

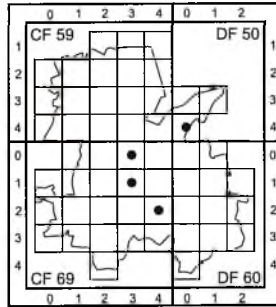


Ulmus glabra

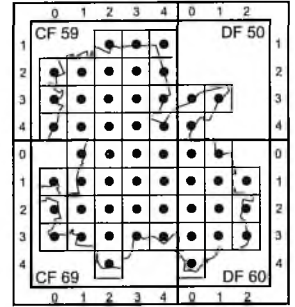
Distribution atlas of vascular plants in Rybník



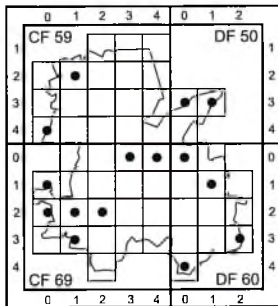
Ulmus laevis



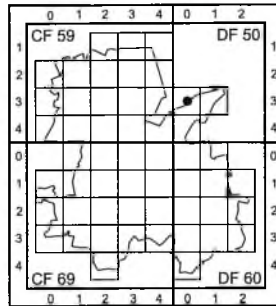
Ulmus minor



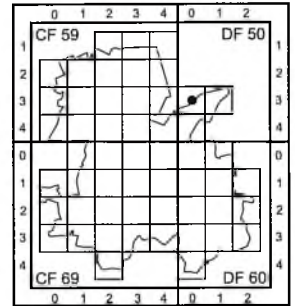
Urtica dioica



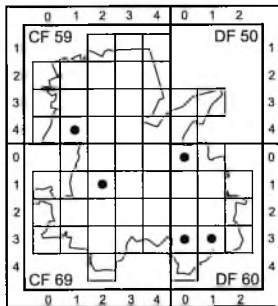
**Urtica urens*



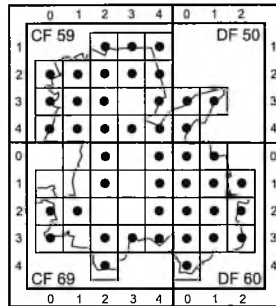
Utricularia intermedia



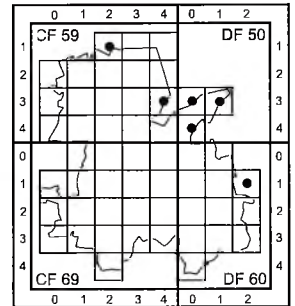
Utricularia minor



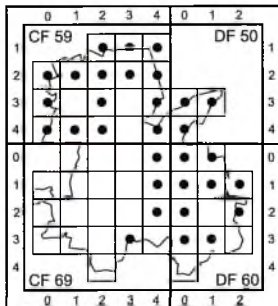
Utricularia vulgaris



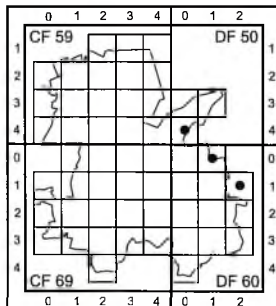
Vaccinium myrtillus



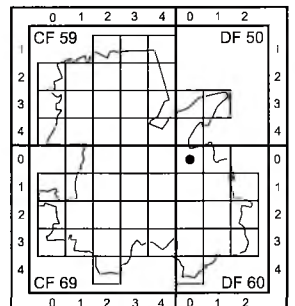
Vaccinium uliginosum



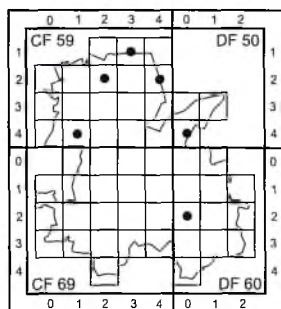
Vaccinium vitis-idaea



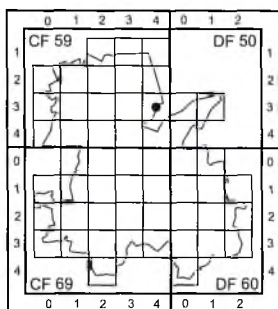
Valeriana officinalis



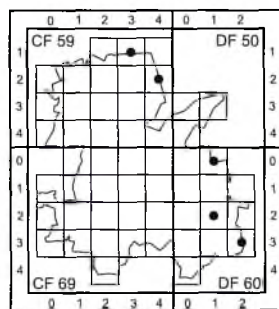
Valeriana sambucifolia



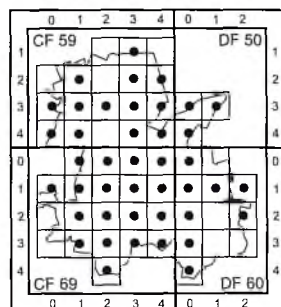
Valeriana simplicifolia



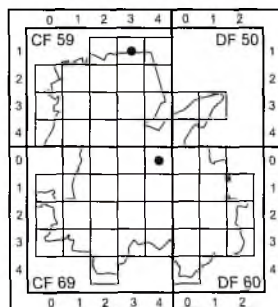
Valeriana tripteris



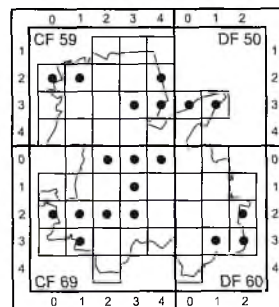
Veratrum lobelianum



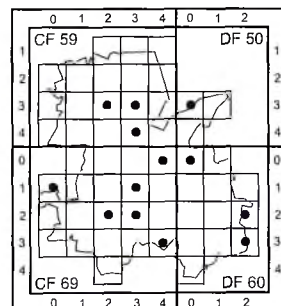
Verbascum densiflorum



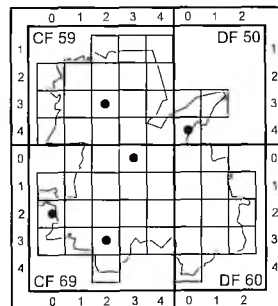
Verbascum lychnitis



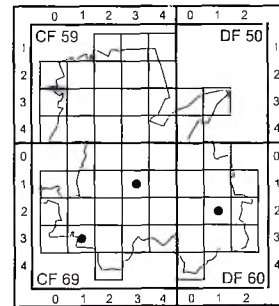
Verbascum nigrum



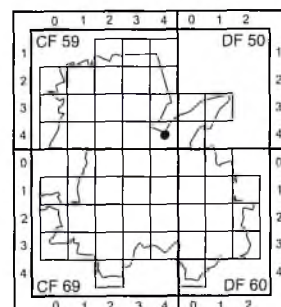
Verbascum phlomoides



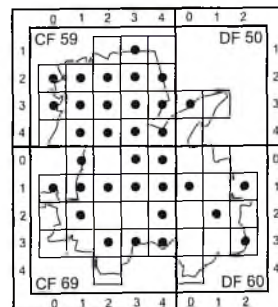
Verbascum thapsus



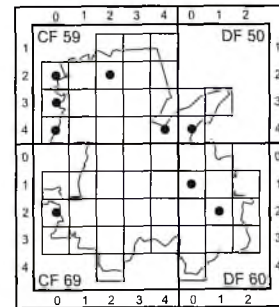
**Verbena officinalis*



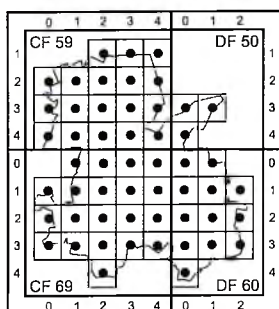
*Veronica
anagallis-aquatica*



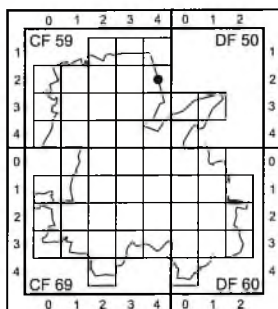
**Veronica arvensis*



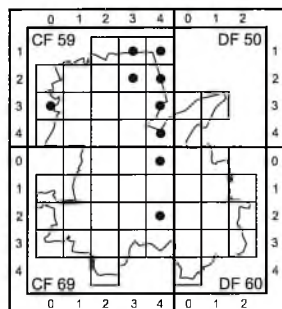
Veronica beccabunga



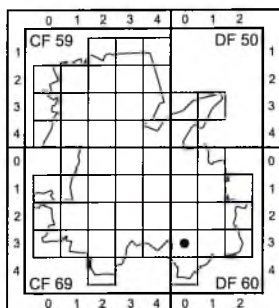
Veronica chamaedrys



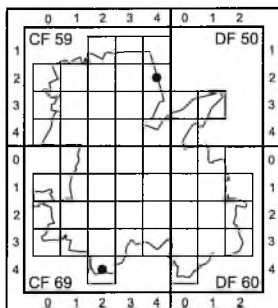
Veronica dilleni



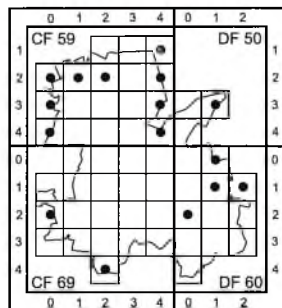
Veronica hederifolia



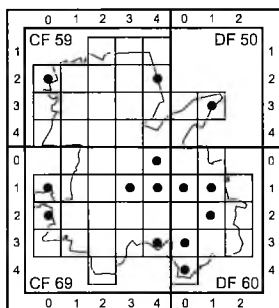
Veronica longifolia



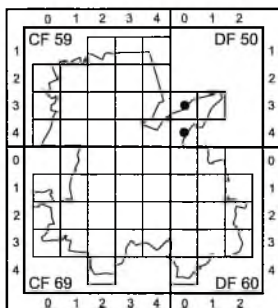
Veronica montana



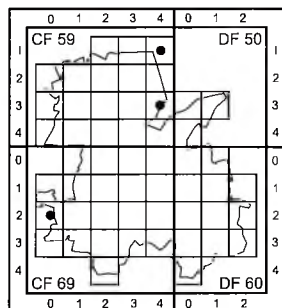
Veronica officinalis



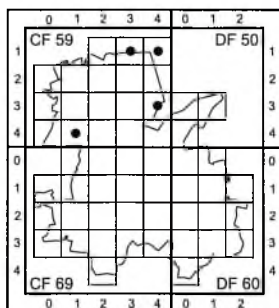
***Veronica persica*



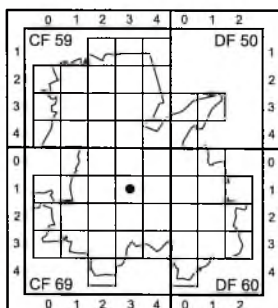
Veronica scutellata



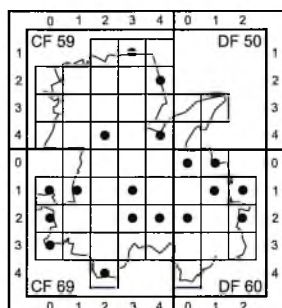
Veronica serpyllifolia



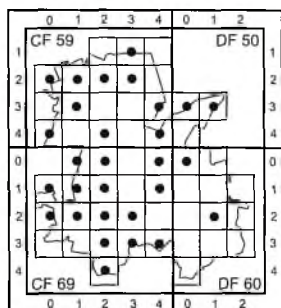
Veronica verna



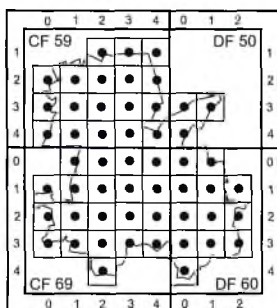
***Viburnum lantana*



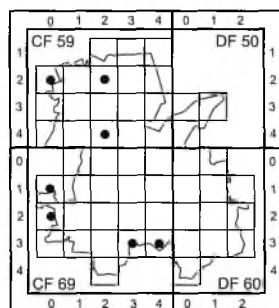
Δ *Viburnum opulus*



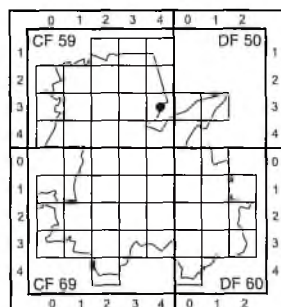
**Vicia angustifolia*



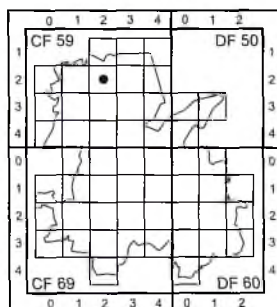
Vicia cracca



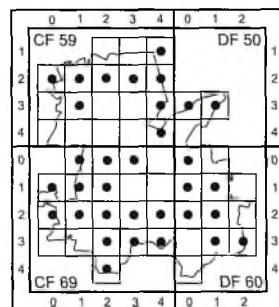
***Vicia dasycarpa*



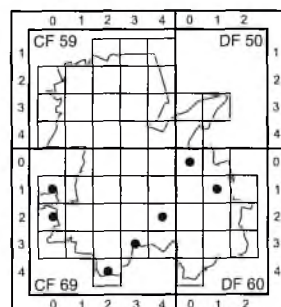
Vicia dumetorum



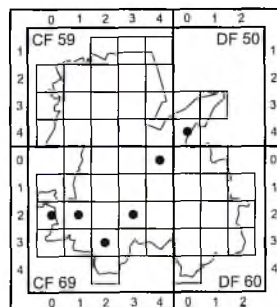
***Vicia grandiflora*



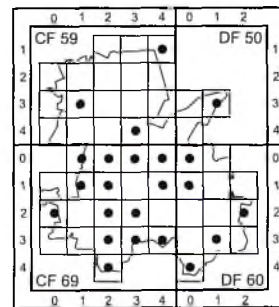
**Vicia hirsuta*



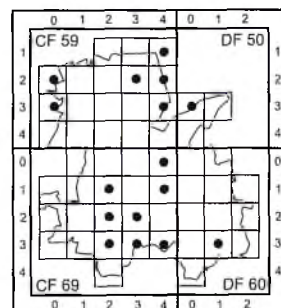
**Vicia sativa*



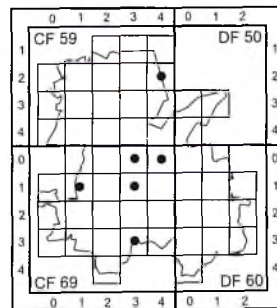
Vicia sepium



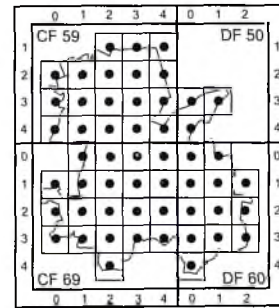
**Vicia tetrasperma*



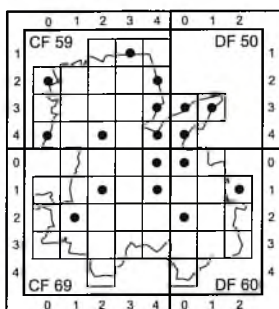
**Vicia villosa*



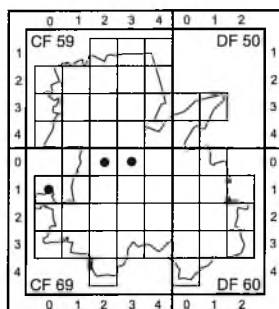
Δ *Vinca minor*



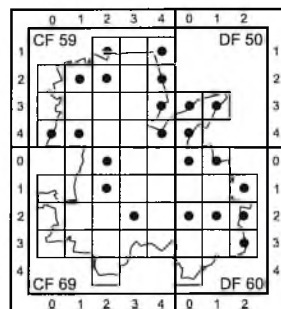
**Viola arvensis*



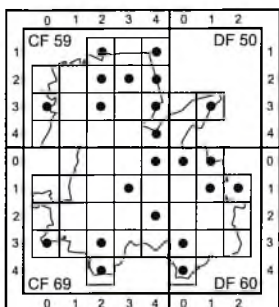
Viola canina



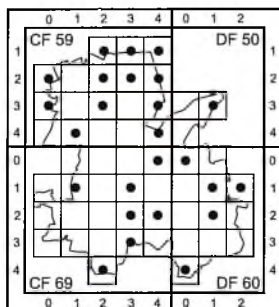
[*]*Viola odorata*



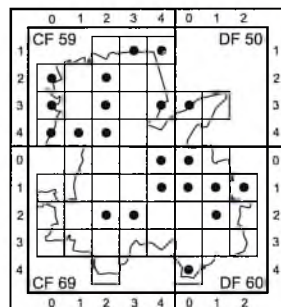
Viola palustris



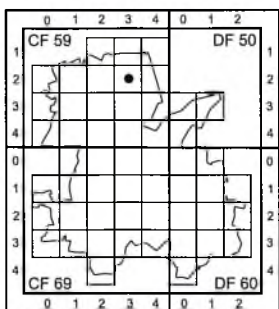
Viola reichenbachiana



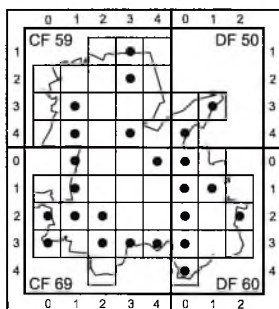
Viola riviniana



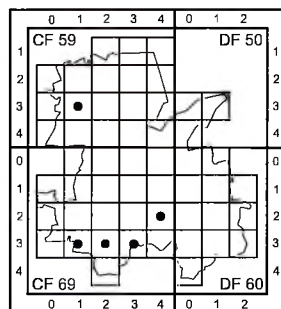
Viola tricolor



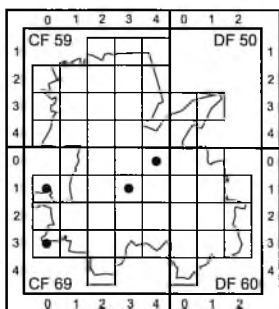
Viscum album
subsp. *abietis*



Viscum album
subsp. *album*



***Vitis riparia*



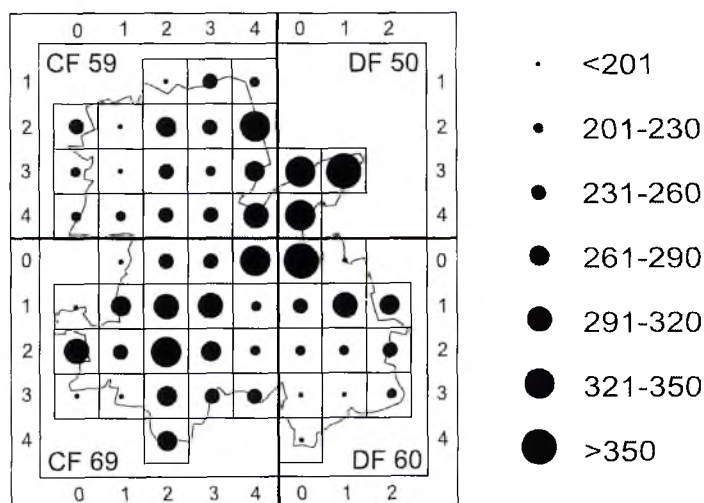
***Vitis vinifera*

4. STRUKTURA PRZESTRZENNA FLORY MIASTA RYBNIK

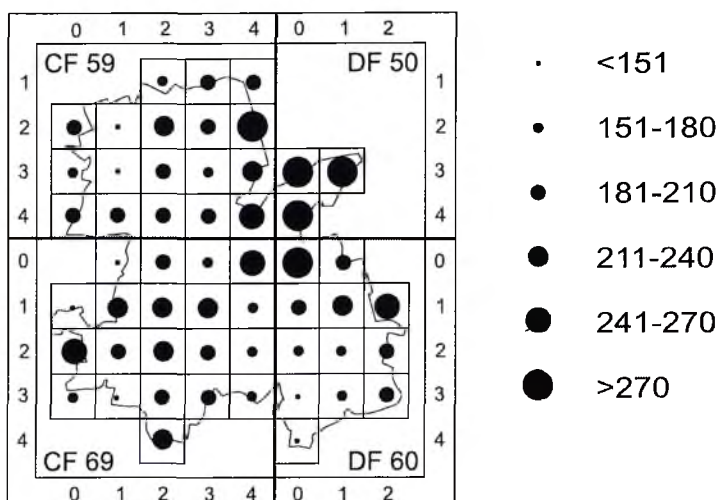
4.1. BOGACTWO FLORYSTYCZNE

Flora ogólna roślin naczyniowych miasta Rybnika liczy 1264 gatunki roślin naczyniowych (w tym 1119 trwale zadomowionych), natomiast flora współczesna obejmuje 1076 gatunków (946 zadomowionych). Na mapach rozmieszczenia gatunków zamieszczonych w niniejszym opracowaniu uwzględniono wyłącznie gatunki trwale zadomowione, występujące na terenie miasta po 1989 roku (689 gatunków rodzimych, 83 archeofity, 165 kenofitów i 9 gatunków o niepewnym statusie w polskiej florze).

Na Ryc. 2 przedstawiono liczby gatunków trwale zadomowionych, odnotowanych w poszczególnych jednostkach kartogramu. Najwięcej gatunków stwierdzono w kwadratach DF6000 (368) i DF5031 (355), a najmniej w DF6030 (160) i CF5912 (163), średnio 245. Ryc. 3 obrazuje liczby gatunków rodzimych, występujących w poszczególnych polach badawczych. Najwięcej z nich odnotowano w okolicach Paruszowca i Kamienia.



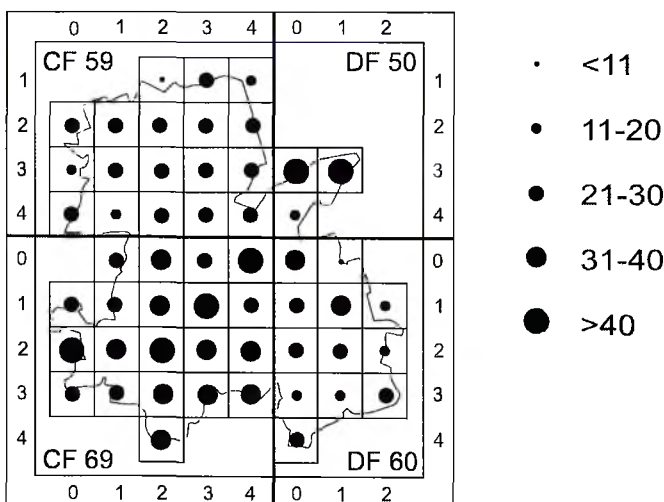
Ryc. 2. Liczby gatunków trwale zadomowionych w wyróżnionych jednostkach kartogramu.
Fig. 2. Number of permanently established species in the distinguished cartogram units.



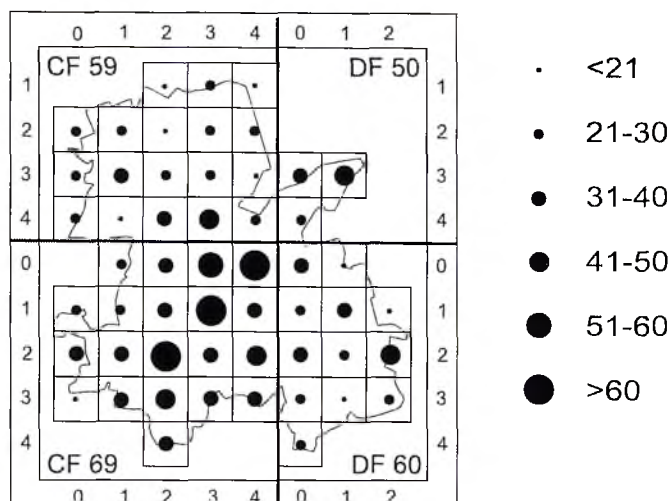
Ryc. 3. Liczby gatunków rodzimych w wyróżnionych jednostkach kartogramu.
Fig. 3. Number of native species in the distinguished cartogram units.

4.2. STOPIEŃ SYNANTROPIZACJI FLORY

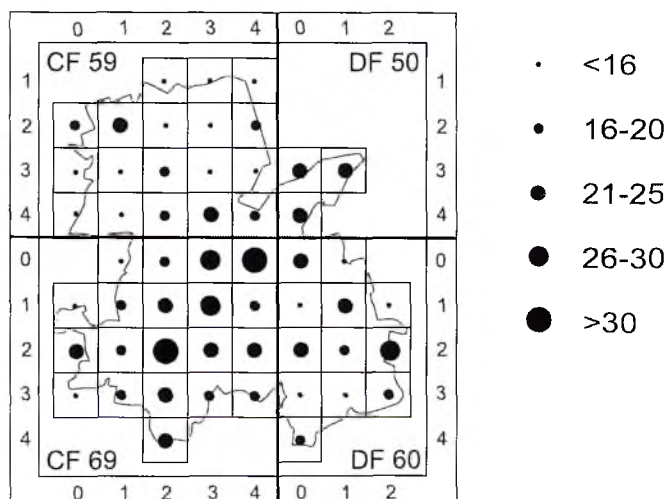
Skład flory jest współcześnie w dużym stopniu kształtowany przez działalność człowieka i dlatego może być wykorzystany do określania natężenia procesu jej synantropizacji (Urbisz 1991). Do tego celu stosuje się wskaźniki florystyczne – czyli wartości liczbowe, wyrażające liczbę lub udział procentowy określonej grupy gatunków (ściśle związanej z antropopresją) w analizowanej florz. Na Ryc. 4 i Ryc. 5 podano liczby gatunków archeofitów i kenofitów występujących w poszczególnych jednostkach kartogramu we florz. współczesnej Rybnika, a na Ryc. 6 – liczby gatunków inwazyjnych. Jak widać, największy stopień synantropizacji flory obserwujemy w centralnej oraz południowej części miasta, a najmniejszy – w północnej i zachodniej.



Ryc. 4. Liczby gatunków archeofitów w wyróżnionych jednostkach kartogramu.
Fig. 4. Number of archaeophytes in the distinguished cartogram units.



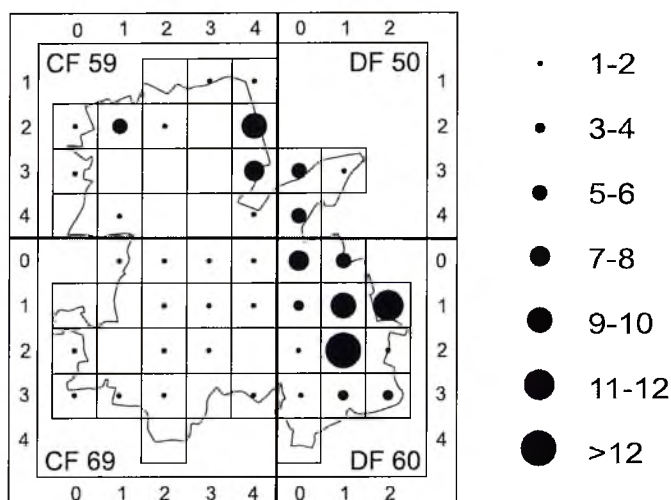
Ryc. 5. Liczby gatunków kenofitów w wyróżnionych jednostkach kartogramu.
Fig. 5. Number of kenophytes in the distinguished cartogram units.



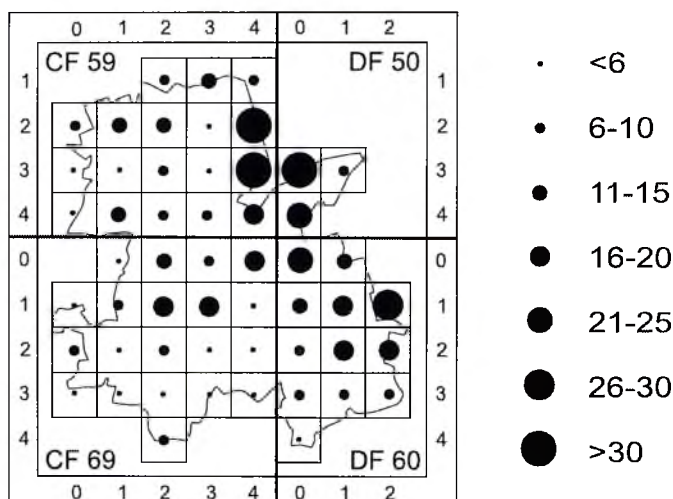
Ryc. 6. Liczby gatunków inwazyjnych w wyróżnionych jednostkach kartogramu.
Fig. 6. Number of invasive species in the distinguished cartogram units.

4.3. GATUNKI CHRONIONE I ZAGROŻONE

Na Ryc. 7 przedstawiono liczby gatunków chronionych (odnotowanych po 1989 roku) w kwadratach badawczych (Rozporządzenie...2014). Najwięcej gatunków stwierdzono w okolicach Gotartowic (DF6021, DF6012, DF6011), Paruszowca (DF6000) i Ochojca (CF5924). Z kolei liczby gatunków zamieszczonych na czerwonej liście roślin naczyniowych województwa śląskiego (Parusel, Urbisz 2012) obrazuje Ryc. 8. Największa koncentracja stanowisk tych gatunków występuje w jednostkach kartogramu DF5030 (Świerki), CF5924 (Ochojec), CF5934 (Golejów) i DF6012 (Na E od Huty Gotartowickiej).



Ryc. 7. Liczby gatunków chronionych w wyróżnionych jednostkach kartogramu.
Fig. 7. Number of protected species in the distinguished cartogram units.



Ryc. 8. Liczby gatunków zamieszczonych na czerwonej liście roślin naczyniowych województwa śląskiego w wyróżnionych jednostkach kartogramu.
Fig. 8. Number of of species included in the red list of vascular plants of Silesian Voivodship in the distinguished cartogram units.

4.4. TERENY CENNE POD WZGLĘDEM BOTANICZNYM

Znaczna część powierzchni Rybnika jest położona w obrębie granic **Parku Krajobrazowego „Cysterskie Kompozycje Krajobrazowe Rud Wielkich”** (PK CKKRW), zajmującego powierzchnię 443,5 km², powołanego w listopadzie 1993 roku na mocy decyzji wojewody katowickiego. Na jego obszarze stwierdzono szereg elementów o dużej wartości botanicznej (Rostański 1994); są nimi: gatunki roślin prawnie chronione, drzewa pomnikowe, a także obiekty zasługujące na ochronę rezerwatową.

Teren PK CKKRW obejmuje północno-wschodnią, północną i północno-zachodnią część miasta (Piaski, Kamień, wschodnia część Wielopola, Golejów, Grabownia, Ochojec, Stodoły, Chwałęcice), zajmujących łącznie powierzchnię 6055,3 ha (45% ogólnej powierzchni Rybnika). Otulina parku obejmuje w około 1224,4 ha (9% ogólnej powierzchni miasta) – Czuczvara i in. (2011).

Na terenie Rybnika znajdują się 3 użytki ekologiczne. Pierwszym z nich jest „**Dolina Okrzeszyniec**” utworzony Uchwałą Nr 836/XLIII/2002 Rady Miasta Rybnika z dnia 4 października 2002 r. w sprawie uznania za użytek ekologiczny części obszaru Doliny Okrzeszyniec położonego pomiędzy ulicami: Na Niwie, Raciborską, Ujejskiego, Wyboistą, Niedobczycką, Jarzynową w Rybniku. Zajmuje powierzchnię 24,66 ha i obejmuje podmokłe łąki, stanowiące siedlisko wielu cennych gatunków roślin (Urbisz 1996; Krotoski 2001; Czuczvara i in. 2011), jak: ponikło igłowe (*Eleocharis acicularis*), ponikło jajowate (*E. ovata*), kukułka szerokolistna (*Dactylorhiza majalis*), bobrek trójlistkowy (*Menyanthes trifoliata*), wążkrota zwyczajna (*Hydrocotyle vulgaris*), pływacz zwyczajny (*Utricularia vulgaris*).

Kolejnym użytkiem ekologicznym jest „**Kencierz**”, utworzony Rozporządzeniem Nr 80/08 Wojewody Śląskiego z dnia 24 listopada 2008 r. w sprawie ustanowienia użytku ekologicznego pod nazwą „Kencierz” w gminach Rybnik, Czerwonka-Leszczyny oraz Żory. Jego powierzchnia wynosi 52,70 ha, w tym na terenie gminy Żory jest 7,2 ha, w gminie Rybnik 45 ha i gminie Czerwonka-Leszczyny 0,5 ha (Czuczvara i in. 2011). Użytek ten obejmuje silnie zmienione przez człowieka tereny doliny Rudy. Jest to teren, gdzie miała powstać zaporę wodna spiętrzająca wody tej rzeki. Pomimo silnej antropopresji spotykamy tu bardzo rzadkie gatunki roślin, np.: rosiczka okrągłolistna (*Drosera rotundifolia*), len przeczyszczający (*Linum catharticum*), występujący tu bardzo licznie kruszczyk błotny (*Epipactis palustris*), kruszczyk rdzawoczerwony (*E. atrorubens*), kruszczyk szerokolistny (*E. helleborine*), kukułka szerokolistna (*Dactylorhiza majalis*), konwalia majowa (*Convallaria majalis*), bagno zwyczajne (*Ledum palustre*), modrzewnica zwyczajna (*Andromeda polifolia*), żurawina błotna (*Oxycoccus palustris*), borówka bagienna (*Vaccinium uliginosum*), wężymord niski (*Scorzonera humilis*), skrzyp pstry (*Equisetum variegatum*), centuria pospolita (*Centaureum erythraea*), wążkrota zwyczajna (*Hydrocotyle vulgaris*) i inne (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). Jest to teren bardzo interesujący pod względem przyrodniczym, na którym stosunkowo niedawno działalność człowieka spowodowała duże zmiany.

Trzeci użytek ekologiczny to „**Meandry rzeki Rudy**” o powierzchni 38,34 ha. Został utworzony Rozporządzeniem Nr 50/08 Wojewody Śląskiego z dnia 25 lipca 2008 r. w sprawie ustanowienia użytku ekologicznego pod nazwą „Meandry rzeki Rudy” w gminie Rybnik. Obejmuje naturalnie meandrujący odcinek rzeki Rudy ze stanowiskami regionalnie rzadkich i ustępujących roślin np. okrzężnicy bagiennej (*Hottonia palustris*) i zwierząt (Krotoski 2001; Czuczvara i in. 2011).

Poza wymienionymi obszarami na terenie Rybnika są zlokalizowane również inne interesujące z botanicznego punktu widzenia obiekty, proponowane do objęcia

ochroną.

Najbardziej znanym są „**Głębokie Doły**” – obszar leśny, od 1994 roku proponowany do objęcia ochroną jako rezerwat florystyczny (Celiński, Czyłok 1995; Krotoski 2005a,b), jak dotąd nie zatwierdzony. Położony jest ok. 2 km na wschód od miejscowości Ochojec, na granicy Rybnika i Czerwionki-Leszczyny, w oddziałach leśnych: 70, 71, 72, 101, 102, 128, 129. W granicach miasta znajduje się około 70 ha jego powierzchni (Czuczvara i in. 2011). Osobliwością florystyczną jest tu płat buczyny sudeckiej (*Dentario enneaphyllidis-Fagetum*), a jej najbardziej interesujący fragment zlokalizowany jest w oddziale leśnym nr 70, po obu brzegach strumienia. Do zasługujących na uwagę gatunków należą tu: kruszczyk siny (*Epipactis purpurata*), ciemiężca zielona (*Veratrum lobelianum*), żywiec dziewięciolistny (*Dentaria enneaphyllos*), żywiec cebulkowy (*D. bulbifera*), bluszcz pospolity (*Hedera helix*), kopytnik pospolity (*Asarum europaeum*), przytulia wonna (*Galium odoratum*), łuskiwnik różowy (*Lathraea squamaria*), żankiel zwyczajny (*Sanicula europaea*), perlówka jednokwiatowa (*Melica uniflora*), czerniec gronkowy (*Actaea spicata*), groszek wiosenny (*Lathyrus vernus*) i czworolist pospolity (*Paris quadrifolia*) (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). W niewielkiej odległości od terenu projektowanego rezerwatu, w oddziale 104h, znajduje się interesujący fragment łągu olszowo-jesionowego, opisany przez Krotoskiego (2008). Występuje tam wiele chronionych i rzadkich gatunków roślin, jak: listera jajowata (*Listera ovata*), nasieźrzał pospolity (*Ophioglossum vulgatum*), przylaszczka zwyczajna (*Hepatica nobilis*), wawrzynka wilczytoko (*Daphne mezereum*), barwinek pospolity (*Vinca minor*), bluszcz pospolity (*Hedera helix*), kalina koralowa (*Viburnum opulus*), konwalia majowa (*Convallaria majalis*), kopytnik pospolity (*Asarum europaeum*), kruszyna pospolita (*Frangula alnus*), pierwiosnek wyniosły (*Primula elatior*), kokoryczka okółkowa (*Polygonatum verticillatum*), zaproć górska (*Oreopteris limbosperma*), przetacznik górski (*Veronica montana*), tojeść gajowa (*Lysimachia nemorum*), jarzmianka większa (*Astrantia major*), kokorycz pełna (*Corydalis solida*) i złoć żółta (*Gagea lutea*) (Krotoski 2008). Rzadkie i chronione gatunki (piżmaczek wiosenny – *Adoxa moschatellina*, czosnek niedźwiedzi – *Allium ursinum*, turzycza orzęsiona – *Carex pilosa*, kokorycz pusta – *Corydalis cava*, zdrojówka rutewkowata – *Isopyrum thalictroides*, kosaciec syberyjski – *Iris sibirica*, gruszyńska jednostronna – *Orthilia secunda*, przenęt purpurowy – *Prenanthes purpurea*, paprotnik kolczysty – *Polystichum aculeatum*, szalwia lepka – *Salvia glutinosa*, sierpik barwierski – *Serratula tinctoria*, rutewka orlikolistna – *Thalictrum aquilegiifolium*, kozłek trójlistkowy – *Valeriana tripteris*, wyka zaroślowa – *Vicia dumetorum*) odnotowano także w oddziałach 128 i 129 (Krotoski – dane niepublikowane). Wydaje się, że utworzenie tu rezerwatu „Głębokie Doły” byłoby bardzo pożądane. Głównym zagrożeniem dla tego obszaru jest niewłaściwa gospodarka leśna. Wskazane są wszelkie działania, które zapobiegają rozprzestrzenianiu się ekspansywnych gatunków roślin. Duży problem stanowi również bardzo słabe odnawianie się buka, który powinien tu dominować w drzewostanie.

Innym terenem zasługującym na uwagę jest **Zalew Gzel** (południowo-zachodnia część Zalewu Rybnickiego) oraz sąsiadujące z nim stawy – obszar proponowany do

objęcia ochroną jako zespół przyrodniczo-krajobrazowy lub użytek ekologiczny (Czuczvara i in. 2011). Z chronionych i rzadkich gatunków roślin występują tu: grążel żółty (*Nuphar lutea*), jeziora morska (*Najas marina*), żabiściek pływający (*Hydrocharis morsus-ranae*), czermień błotna (*Calla palustris*), gruszyczka mniejsza (*Pyrola minor*) i wąkrota zwyczajna (*Hydrocotyle vulgaris*) (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). W celu zachowania półnaturalnego charakteru tego obiektu powinna być tu prowadzona racjonalna gospodarka stawowa i leśna.

Kolejny proponowany użytek ekologiczny to obszar o powierzchni 39,1 ha, położony w **Rybniku-Świerkach** (Czuczvara i in. 2011). W obecnych tu stawach oraz na ich obrzeżach (oddział leśny 143) występuje szereg rzadkich gatunków roślin, np. widłaczek torfowy (*Lycopodiella inundata*), sit ostrokwiatowy (*Juncus acutiflorus*), sit alpejski (*J. alpino-articulatus*), grążel żółty (*Nuphar lutea*), ponikło jajowate (*Eleocharis ovata*), rosiczka okrągłolistna (*Drosera rotundifolia*), przygiełka biała (*Rhynchospora alba*), pływacz drobny (*Utricularia minor*), wąkrota zwyczajna (*Hydrocotyle vulgaris*), turzycza ciborowata (*Carex bohemica*), sitniczka szczecinowata (*Isolepis setacea*), rogatek sztywny (*Ceratophyllum demersum*), czermień błotna (*Calla palustris*). Na pobliskich łąkach występuje storczyk szerokolistny (*Dactylorhiza majalis*) i bobrek trójlistkowy (*Menyanthes trifoliata*), a w lasach kruszczyk szerokolistny (*Epipactis helleborine*), bagno zwyczajne (*Ledum palustre*), kokoryczka wonna (*Polygonatum odoratum*), konwalia majowa (*Convallaria majalis*), wężymord niski (*Scorzonera humilis*), borówka bagienna (*Vaccinium uliginosum*) i żurawina błotna (*Oxycoccus palustris*) (Urbisz 1997; Urbisz, Urbisz 2003). Na tym terenie powinna być prowadzona racjonalna gospodarka leśna i stawowa, aby nie dopuścić do zniszczenia stanowisk, unikalnych na skalę regionu, gatunków roślin.

Cennym pod względem botanicznym obiektem jest **Rybnik-Podlesie**, kompleks leśny, położony na południe od Popielowa, obejmujący oddziały 16, 17, 18, 24, 25, proponowany do ochrony jako zespół przyrodniczo-krajobrazowy (Czuczvara i in. 2011). Występuje tu krajobraz o bardzo zróżnicowanej rzeźbie terenu z licznymi dolinami i wąwozami (Absalon, Leśniok 1999). Jest to obszar lessowy porośnięty lasem (z dużym udziałem buka). Do największych walorów botanicznych należy tu występowanie kilku gatunków górskich, takich jak: przęnet purpurowy (*Prenanthes purpurea*), tojeść gajowa (*Lysimachia nemorum*) czy przetacznik górski (*Veronica montana*).

Kolejny teren, zasługujący na uwagę to **Las Goik i Starok** (pogranicze Kłokocina, Gotartowic i Rowienia), obszar o powierzchni 77,2 ha (leśnictwo Kłokocin, oddziały leśne 273, 276, 277, 278), który obejmuje kompleksy leśne z podmokłymi dolinami cieków, uchodzących do Kłokocinki. Północna część Lasu Goik o powierzchni około 19 ha, jest proponowana do ochrony jako obszar chronionego krajobrazu (Czuczvara i in. 2011). Występują tu rzadkie i chronione gatunki roślin, jak: żywiec gruczołowaty (*Dentaria glandulosa*), żywiec Paxa (*D. ×paxiana*), ciemniżyca zielona (*Veratrum lobelianum*) (Krotoski 2001). W pobliżu opisywanego wyżej obiektu (na W od ulicy Szybowcowej) znajduje się niewielki kompleks leśny, przecięty linią kolejową, z którego Sojka (2005) podaje wiele chronionych i rzadkich roślin, postulując objęcie go ochroną,

jako użytek ekologiczny. Występuje tu 6 gatunków storczyków: buławnik mieczolistny (*Cephalanthera longifolia*), kukułka szerokolistna (*Dactylorhiza majalis*), kruszczyk błotny (*Epipactis palustris*), kruszczyk szerokolistny (*E. helleborine*), listera jajowata (*Listera ovata*) i podkolan biały (*Platanthera bifolia*).

Innym cennym obiektem przyrodniczym jest **Karnatowiec** (dolina Potoku z Przegędzy, między Przegędzą a Piaskami). W studium uwarunkowań i kierunków zagospodarowania przestrzennego dla tego obszaru (106,7 ha) proponuje się ustanowienie ochrony prawnej w postaci zespołu przyrodniczo-krajobrazowego „Dolina Potoku z Przegędzy”. Teren ten obejmuje kompleks wodno-leśny związany z Potokiem z Przegędzy, położony na południe od przysiółka Karnatowiec oraz system stawów hodowlanych z cenną roślinnością wodno-błotną i zbiorowiskami leśnymi w dolinie cieką (Czuczvara i in. 2011). Występują tu m.in.: siedmiopalecznik błotny (*Comarum palustre*), wełniankę wąskolistną (*Eriophorum angustifolium*), wąkrotę zwyczajną (*Hydrocotyle vulgaris*), tojeść bukietową (*Lysimachia thyrsoiflora*), bobrek trójlistkowy (*Menyanthes trifoliata*) i szczyr trwały (*Mercurialis perennis*) – Urbisz (1996).

Kompleks leśny Paruszowiec to obszar leśny o powierzchni 304,8 ha, położony pomiędzy drogą Rybnik-Orzesze, linią kolejową i ul. Wielopolską w leśnictwie Paruszowiec – oddziały leśne 161–168 i 175–180 (Czuczvara i in. 2011). Na uwagę zasługuje tu jedyne w Rybniku stanowisko chronionej lilii złotogłów (*Lilium martagon*). Występują tu również inne cenne gatunki, jak: kruszczyk szerokolistny (*Epipactis helleborine*), konwalia majowa (*Convallaria majalis*), kokoryczka okółkowa (*Polygonatum verticillatum*), kokoryczka wonna (*P. odoratum*) i dzwonek brzoskwiniolistny (*Campanula persicifolia*) (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). Niestety, teren ten, ze względu na wyjątkowo niekorzystną lokalizację (między linią kolejową, a drogą) jest narażony na intensywną działalność człowieka i dlatego w celu zachowania występujących tu stanowisk chronionych i rzadkich gatunków roślin powinna być na nim prowadzona racjonalna gospodarka leśna.

5. PODSUMOWANIE

1. W niniejszym opracowaniu zamieszczono 946 map, przedstawiających rozmieszczenie trwale zadomowionych gatunków na terenie miasta Rybnika, w siatce 53 jednostek kartogramu (kwadratów o boku 2 km). Zebrano ponad 13 000 dat florystycznych. Liczba gatunków w obrębie poszczególnych kwadratów wyniosła od 160 do 368, średnio 245.

2. Najwięcej gatunków trwale zadomowionych występuje w jednostkach kartogramu: DF6000 (368) i DF5031 (355), natomiast gatunków rodzimych, w polach badawczych DF6000 – 299, DF5031 – 284, DF5040 – 281, CF5924 – 276 i DF5030 – 270 (okolice Paruszowca, Ochojca i Kamienia).

3. Największy stopień synantropizacji flory stwierdzono w centralnej i południowej części miasta, między Centrum Rybnika a Niedobczycami (CF6904, CF6913, CF6922).

4. Jednostki kartogramu, w których występuje najwięcej gatunków chronionych to: DF6011, DF6012, DF6021 (Gotartowice i Huta Gotartowicka), DF6000 (Paruszowiec) oraz CF5924 (Ochojec), natomiast najwięcej gatunków z czerwonej listy województwa śląskiego odnotowano w kwadratach: DF5030 (Świerki), CF5924 (Ochojec), CF5934 (Golejów) i DF6012 (Na E od Huty Gotartowickiej).

5. Do najcenniejszych pod względem botanicznym obszarów w Rybniku należą:

- użytek ekologiczny „**Kencierz**”,
- proponowany użytek ekologiczny, położony w **Rybniku-Świerkach**,
- „**Głębokie Doły**” – obszar leśny proponowany do objęcia ochroną rezerwatową.

4. SPATIAL STRUCTURE OF THE VASCULAR PLANT FLORA OF RYBNIK

4.1. FLORISTIC RICHNESS

The general vascular plant flora of Rybnik consists of 1264 species (1109 permanently established), while the present flora includes 1076 species (946 established). Species distribution maps included in this study refer only to permanently established species recorded after 1989 (689 native species, 83 archaeophytes, 165 kenophytes and 9 species with uncertain status in the Polish flora).

In Fig. 2 (page 95) the number of permanently established species recorded in individual cartogram units is presented. Most species were found in squares DF6000 (368) and DF5031 (355) while the least in DF6030 (160) and CF5912 (163), average 245. Fig. 3 (page 96) shows the number of native species occurring in each grid-cell. Most of them were noted in surroundings of Paruszowiec and Kamień.

4.2. LEVEL OF SYNANTHROPIZATION OF THE FLORA

Today the flora composition is primarily determined by human activities, and therefore can be used for estimating the synanthropization processes level (Urbisz 1991). For this purpose the floristic indicators – the numerical values expressing the number or percentage of a specific group of species (closely related to anthropopressure) are used for analyzing the flora. In Fig. 4 (page 96) and Fig. 5 (page 97) the number of archaeophytes and kenophytes in the present flora of Rybnik, occurring in individual cartogram units is given. In Fig. 6 (page 97) the number of invasive species is shown. As can be seen, the highest level of synanthropization of the flora is observed in the central and southern part of the city and the least – in the north and west.

4.3. PROTECTED AND ENDANGERED PLANTS

The number of protected species (recorded since 1989) in particular grid-cells is presented in Fig. 7 – page 98 (Rozporządzenie...2014). Most species were found in squares: DF6021, DF6012, DF6011 (Gotartowice area), DF6000 (Paruszowiec) and CF5924 (Ochojec). The number of species included in The Red List of Vascular Plants of Silesian Voivodship (Parusel, Urbisz 2012) is shown in Fig. 8 (page 98). The largest concentration of protected species localities is observed in DF5030 (Świerki), CF5924 (Ochojec), CF5934 (Golejów) and DF6012 (E of Huta Gotartowicka) cartogram units.

4.4. BOTANICALLY VALUABLE AREAS

A large part of Rybnik area is located within the boundaries of „**Cysterskie Kompozycje Krajobrazowe Rud Wielkich**” Landscape Park (LP CKKRW) established in November 1993 by a decision of the governor of Katowice and occupying an area of 443.5 km². In this area some botanical values were found (Rostański 1994), for example: numerous protected plant species, monumental trees and objects worth protection as a nature reserve. LP CKKRW covers the north-eastern, northern and north-western part of the city (Piaski, Kamień, eastern part of Wielopole, Golejów, Grabownia, Ochojec, Stodoły, Chwałęcice) and occupies an area of 6055.3 ha (45% of Rybnik area). The protective area around the Landscape Park occupies 1224.4 ha (9% of the city area) – Czuczvara et al. (2011).

In Rybnik there are three ecological sites. The first is „**Dolina Okrzeszyniec**” established October 4, 2002 with the Rada Miasta Rybnik Resolution No. 836 / XLIII / 2002. It is located between the following streets: Na Niwie, Raciborska, Ujejskiego, Wyboista, Niedobczycka and Jarzynowa in Rybnik. It covers an area of 24.66 hectares of wet meadows which are the habitat for many rare plant: *Eleocharis acicularis*, *E. ovata*, *Dactylorhiza majalis*, *Menyanthes trifoliata*, *Hydrocotyle vulgaris*, *Utricularia vulgaris* (Urbisz 1996; Krotoski 2001; Czuczvara et al. 2011).

Another ecological site is „**Kencierz**” established November 24, 2008 with Silesian Voivode’s Resolution No. 80/08. It is located in the following municipalities: Rybnik, Czerwionka-Leszczyzny and Żory. Its total area is 52.70 ha, including 7.2 hectares in the municipality of Żory, 45 hectares in the municipality of Rybnik and 0,5 ha in the municipality of Czerwionka-Leszczyzny (Czuczvara et al. 2011). The protected area covers a fragment of Ruda river valley, very transformed by human activities. A dam was planned to be built there. Despite the strong human pressure, some regionally rare plant species are observed, for example: *Drosera rotundifolia*, *Linum catharticum*, *Epipactis palustris* (in large number), *E. atrorubens*, *E. helleborine*, *Dactylorhiza majalis*, *Convallaria majalis*, *Ledum palustre*, *Andromeda polifolia*, *Oxycoccus palustris*, *Vaccinium uliginosum*, *Scorzonera humilis*, *Equisetum variegatum*, *Centaureum erythraea*, *Hydrocotyle vulgaris* and others (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). This is a very interesting area, where recent human activity has caused severe changes in the local ecosystem.

The third ecological site is „**Meandry rzeki Rudy**” covering an area of 38,34 ha. It was established July 25, 2008 with Silesian Voivod Resolution No. 50/08. It includes naturally meandering part of Ruda river where a few localities of regionally rare plants (*Hottonia palustris*) and animals were found (Krotoski 2001; Czuczvara et al. 2011).

In addition to mentioned areas, there are another botanically valuable places, proposed for protection. The most famous is „**Głębokie Doły**” – a forest area which is proposed to be a nature reserve since 1994 (Celiński, Czyłok 1995; Krotoski 2005a,b). It is located about 2 km east from Ochojec, on the border of Rybnik and Czerwionka-Leszczyzny, in the following forest sections: 70, 71, 72, 101, 102, 128, 129. Within the

city boundaries it occupies an area of about 70 ha (Czuczvara et al. 2011). Unique here is a fragment of a beech forest typical for Sudety Mountains (*Dentario enneaphyllidis-Fagetum*). The most interesting fragment is located in the section 70, on both sides of the stream. Species worth attention here: *Epipactis purpurata*, *Veratrum lobelianum*, *Dentaria enneaphyllos*, *D. bulbifera*, *Hedera helix*, *Asarum europaeum*, *Galium odoratum*, *Lathraea squamaria*, *Sanicula europaea*, *Melica uniflora*, *Actaea spicata*, *Lathyrus vernus* and *Paris quadrifolia* (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). In a short distance from proposed reserve site, in section 104h there is an interesting fragment of alder-ash riparian forest described by Krotoski (2008). Many protected and rare species were observed there: *Listera ovata*, *Ophioglossum vulgatum*, *Hepatica nobilis*, *Daphne mezereum*, *Vinca minor*, *Hedera helix*, *Viburnum opulus*, *Convallaria majalis*, *Asarum europaeum*, *Frangula alnus*, *Primula elatior*, *Polygonatum verticillatum*, *Oreopteris limbosperma*, *Veronica montana*, *Lysimachia nemorum*, *Astrantia major*, *Corydalis solida* and *Gagea lutea* (Krotoski 2008). Rare and protected species (*Adoxa moschatellina*, *Allium ursinum*, *Carex pilosa*, *Corydalis cava*, *Isopyrum thalictroides*, *Iris sibirica*, *Orthilia secunda*, *Polystichum aculeatum*, *Prenanthes purpurea*, *Salvia glutinosa*, *Serratula tinctoria*, *Thalictrum aquilegifolium*, *Valeriana tripteris*, *Vicia dumetorum*) occur also in sections 128 and 129 (Krotoski – unpublished data). It seems that the establishment of the “Głębokie Doły” nature reserve would be very desirable. The main threat to this area is an inadequate forest management. Any activity that does not lead to spread of expansive plant species is recommended. The big problem is also very weak beech renewal. This species should dominate in the tree stand.

Another area deserving attention is **Zalew Gzel** (south-western part of Jezioro Rybnickie) and ponds in close vicinity – areas proposed for protection as nature and landscape complex or ecological site (Czuczvara et al. 2011). Protected and rare plant species here are: *Nuphar lutea*, *Najas marina*, *Hydrocharis morsus-ranae*, *Calla palustris*, *Pyrola minor* and *Hydrocotyle vulgaris* (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). To maintain a semi-natural character of the object, a sustainable pond and forest policy should be implemented.

Another proposed ecological site is an area of 39.1 hectares, located in **Rybnik-Świerki** (Czuczvara et al. 2011). In ponds and their outskirts (forest section 143) there were some rare plant species recorded e.g.: *Lycopodiella inundata*, *Juncus acutiflorus*, *J. alpino-articulatus*, *Nuphar lutea*, *Eleocharis ovata*, *Drosera rotundifolia*, *Rhynchospora alba*, *Utricularia minor*, *Hydrocotyle vulgaris*, *Carex bohémica*, *Isolepis setacea*, *Ceratophyllum demersum*, *Calla palustris*. In nearby meadows *Dactylorhiza majalis* and *Menyanthes trifoliata* can be found. In forest occur: *Epipactis helleborine*, *Ledum palustre*, *Polygonatum odoratum*, *Convallaria majalis*, *Scorzonera humilis*, *Vaccinium uliginosum* and *Oxycoccus palustris* (Urbisz 1997; Urbisz, Urbisz 2003). A sustainable pond and forest policy should be implemented for preserving the regionally unique plant species localities.

Botanically valuable is also **Rybnik-Podlesie**, a forest area located south from Popielów (forest sections 16, 17, 18, 24, 25), proposed for protection as a nature and

landscape complex (Czuczvara et al. 2011). The landscape here is varied – with numerous valleys and gorges (Absalon, Leśniok 1999). It is a forested loess (with a large beech participation). The most important botanical values here is the occurrence of several mountain species: *Prenanthes purpurea*, *Lysimachia nemorum* or *Veronica montana*.

Next area deserving attention is **Las Goik and Starok** (borderline of Kłokocin, Gotartowice and Rowień), forest area of 77.2 hectares (Kłokocin forestry, forest sections 273, 276, 277, 278) including marshy valleys of Kłokocinka river tributaries. The northern part of Las Goik, an area of about 19 hectares is proposed for preserve as protected landscape area (Czuczvara et al. 2011). Here the following rare and protected plant species occur: *Dentaria glandulosa*, *D. ×paxiana*, *Veratrum lobelianum* (Krotoski 2001). In the vicinity of Las Goik and Starok (west from Szybowcowa Str.) a small forest complex with railway line is located. Sojka (2005) found many protected and rare plants there. He postulated protection of this area as an ecological site. Six species of orchids can be observed there: *Cephalanthera longifolia*, *Dactylorhiza majalis*, *Epipactis palustris*, *E. helleborine*, *Listera ovata*, *Platanthera bifolia*.

Karnatowiec (Potok z Przegędzy valley, between Przegędza and Piaski). In the study on conditions and directions of spatial development of the area (106.7 ha) is proposed to establish „Dolina Potoku z Przegędzy” nature and landscape complex. This includes a water-forest complex of Potok z Przegędzy river, south from Karnatowiec farmstead, with a system of fish ponds, valuable water and mud vegetation or forest communities in the river valley (Czuczvara et al. 2011). Species recorded here: *Comarum palustre*, *Eriophorum angustifolium*, *Hydrocotyle vulgaris*, *Lysimachia thyrsiflora*, *Menyanthes trifoliata*, *Mercurialis perennis* (Urbisz 1996).

Paruszowiec forest complex – forest area of 304.8 hectares located between the Rybnik-Orzesze road, railway line and Wielopolska Str. (Paruszowiec forestry, forest sections 161–168, 175–180) (Czuczvara et al. 2011). Noteworthy is the only one locality of *Lilium martagon* in Rybnik. Another interesting species recorded here: *Epipactis helleborine*, *Convallaria majalis*, *Polygonatum verticillatum*, *P. odoratum* and *Campanula persicifolia* (Urbisz 1997; Krotoski 2001; Urbisz, Urbisz 2003). Unfortunately this area due to the extremely unfavorable location (between the railway and the road) is exposed to intense human activity. For protection of this site a sustainable forest policy should be implemented.

5. CONCLUSIONS

1. This monograph contains 946 maps showing the distribution of permanently established vascular plant species of Rybnik in net with 53 cartogram units (2 km² squares). Over 13 000 floristic data was collected. The number of species within individual squares ranged from 160 to 368, with an average number – 245.

2. The largest number of permanently established species characterize the following cartogram units DF6000 (368) and DF5031 (355). Most of native species were noted in: DF6000 (299), DF5031 (284), DF5040 (281), CF5924 (276) and DF5030 (270) squares (Paruszowiec, Ochojec and Kamień surroundings).

3. The highest flora synanthropization level was found in the central and southern part of the city between Rybnik and Niedobczyce (CF6904, CF6913, CF6922).

4. Cartogram units where the most protected species occur are: DF6011, DF6012, DF6021 (Gotartowice and Huta Gotartowicka), DF6000 (Paruszowiec) and CF5924 (Ochojec), while red-listed in Silesian Voivodship dominate in units: DF5030 (Świerki), CF5924 (Ochojec), CF5934 (Golejów) and DF6012 (E of Huta Gotartowicka).

5. The most botanically valuable areas in Rybnik are:

- ecological site „**Kencerz**”,
- proposed ecological site in **Rybnik-Świerki**,
- „**Głębokie Doły**” – a forest area which is proposed to be a nature reserve.

LITERATURA (REFERENCES)

- Absalon D., Leśniok M. 1999. Przewodnik przyrodniczy po Rybniku. Wyd. Infomax, Katowice, ss. 96.
- Brauner M. 2006. Dendroflora parku Kozie Góry w Rybniku. WBiOŚ UŚ, Katowice, (msk.).
- Burton R. M. 1983. Flora of the London area. London Natural History Society, London, ss. 225.
- Cabała S. 1990. Zróżnicowanie i rozmieszczenie zbiorowisk leśnych na Wyżynie Śląskiej. Prac. Nauk. UŚ nr 1068. Katowice, ss. 144.
- Celesti Grapow L. 1995. Atlante della Flora di Roma. La distribuzione delle piante spontanee come indicatore ambientale. Argos Edizioni, Roma, ss. 222.
- Celiński F., Czyłok A. 1995. Różnorodność biologiczna i przyrodniczo-krajobrazowa „Uroczyska Głębokie Doły” koło Rybnika. Scripta Rudensia, 5: 1–52.
- Celiński F., Czyłok A., Krotoski T., Rahmonow O. 1994. Ostoja wiekowych buków *Fagus sylvatica* w uroczysku Głębokie Doły na Płaskowyżu Rybnickim. Chrońmy Przyrodę Ojczyzn, 5: 68–72.
- Celiński F., Czyłok A., Krotoski T., Rahmonow O. 1998. W sprawie ochrony uroczyska Głębokie Doły koło Rybnika. Chrońmy Przyrodę Ojczyzn, 54: 32–45.
- Celiński F., Czyłok A., Krotoski T., Serwecińska G., Rahmonow O. 1993. Ocena walorów przyrodniczo-krajobrazowych uroczyska Głębokie Doły – Nadleśnictwo Rybnik. UŚ. Kat. Geobot. i Ochr. Przr., Katowice, (msk.).
- Czuczvara P., Luszka A., Niezabitowska A., Łuciw P., Matusiak K., Kosińska M. 2011. Zmiana studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Rybnika. Geoplan. Wrocław. Dostępne: bip.um.rybnik.eu/Docs/1204/PDF/HAG0JKW8.PDF
- Domański R., Stebel An., Stebel A. 1997. Materiały do flory chronionych i zagrożonych roślin naczyniowych południowej części województwa katowickiego. Cz. II. Gatunki zagrożone i rzadkie. Archiwum Ochrony Środowiska 23(1–2): 223–233.
- Düll R., Kutzelnigg H. 1987. Punktkartenflora von Duisburg und Umgebung mit Angabeder Standortansprüche, Herkunft, Einbürgerungsweise und Gefährdung aller im weiteren Raum um Duisburg seit 1800 beobachteten Gefässpflanzen. Rheurdt, IDH-Verlag, 2 Auflage, ss. 378.
- Engler A. 1870. Nachträge zur Schlesienschen Flora (VI.). In: Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 12: 44–79.
- Fiek E. 1881. Flora von Schlesien preussischen und österreichischen Antheils. J. U. Kerns Verl. Breslau, ss. 571.
- Fritze R. 1868. Neuigkeiten aus der Flora von Rybnik. In: Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 10: 171.
- Grabowski H. 1843. Flora von Ober-Schlesien, Verlag von A. Gosohorsky, Breslau, ss. 452.

- Jackowiak B. 1993. Atlas rozmieszczenia roślin naczyniowych w Poznaniu. Prace Zakładu Taksonomii Roślin Uniw. im A. Mickiewicza w Poznaniu nr 2, ss. 409.
- Jung K.-D. 1982. Flora des Stadtgebietes von Darmstadt. Ergebnisse einer Rasterkartierung. Sonderband der Berichte des naturwissenschaftlichen Vereins Darmstadt, ss. 572.
- Kondracki J. 1988. Geografia fizyczna Polski. PWN Warszawa, Wyd. 6, ss. 441.
- Korsak A. 2011. Udział gatunków obcych w roślinności obrzeży Jeziora Rybnickiego. WBiOŚ UŚ, Katowice, (msk.).
- Krocker A. J. 1787–1823. Flora silesiaca renovata...etc. Vol. 1-4. Sumptibus G.T. Kornii, Vratislaviae.
- Krotoski T. 2001. Nowe stanowiska roślin chronionych i rzadkich stwierdzone na Płaskowyżu Rybnickim i terenach przyległych w latach 1996–2000. Scripta Rudensia, 11: 59–64.
- Krotoski T. 2005a. Dynamika liczebności populacji kruszczyka siniego *Epipactis purpurata* Sm. w projektowanym rezerwacie Głębokie Doły koło Rybnika. Scripta Rudensia, 14: 60–62.
- Krotoski T. 2005b. Nowe stanowiska roślin chronionych i rzadkich stwierdzone na Płaskowyżu Rybnickim i terenach przyległych w latach 2001–2004. Scripta Rudensia, 14: 62–65.
- Krotoski T. 2007. Pokrzyk wilcza jagoda w Rybniku. Przyroda Górnego Śląska, 50: 16.
- Krotoski T. 2008. Godny ochrony łąg jesionowo-olszowy w uroczysku „Głębokie Doły”. Natura Silesiae Superioris, 11: 5–9.
- Krotoski T. 2009. Jodła pospolita w uroczysku Głębokie Doły. Przyroda Górnego Śląska, 57: 6–7.
- Krotoski T. 2010a. Turzycza zwisła – nowy gatunek flory Płaskowyżu Rybnickiego. Przyroda Górnego Śląska, 59: 12.
- Krotoski T. 2010b. Lilia bulwkowata – osobliwość botaniczna w Rybniku. Przyroda Górnego Śląska, 60: 3.
- Krotoski T. 2012a. Żywiec Paxa w okolicy Rybnika. Przyroda Górnego Śląska, 69: 3, 13.
- Krotoski T. 2012b. Perłówka jednokwiatowa i bobrek trójlistkowy w uroczysku Głębokie Doły. Przyroda Górnego Śląska, 68: 3.
- Krotoski T. 2013. Ekspansja turzycy zwistej w Głębokich Dołach koło Rybnika. Przyroda Górnego Śląska, 73: 3.
- Ligeża J. (red.) 1970. Ziemia rybnicko-wodzisławska. Wyd. Śląsk Katowice, ss. 508.
- Mattuschka H. G. Graf von. 1776-1777. Flora Silesiaca, oder, Verzeichniss der in Schlesien wildwachsenden Pflanzen: nebst umständlichen Beschreibung derselben, ihres Nutzens und Gebrauches sowohl in Absicht auf die Arznei - als Haushaltungswissenschaft. Wilhelm Gottlieb Korn, Breslau und Leipzig, T. 1-2, ss. 538+468.
- Mirek Z., Piękoś-Mirek H., Zając A., Zając M. 2002. Flowering plants and pteridophytes of Poland. A checklist. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, ss. 442.

- Parusel J. B., Urbisz An. (red.) 2012. Czerwona lista roślin naczyniowych województwa śląskiego. The red list of vascular plants of silesian voivodship. Raporty Opinie, 6.2: 105–176.
- Rok A., Henel K. 2001. Godne ochrony stanowisko liczydła górskiego (*Streptopus amplexifolius* (L.) DC) oraz innych roślin chronionych w Rybniku-Ochojcu. Scripta Rudensia, 11: 65–67.
- Rostański K. 1994. Chronione i rzadkie wartości botaniczne na terenie Parku Krajobrazowego „Cysterskie Kompozycje Krajobrazowe Rud Wielkich”. Część I i 2. Scripta Rudensia, 1: 77–104.
- Rozporządzenie Ministra Środowiska z dnia 9 października 2014 r. w sprawie ochrony gatunkowej roślin. Dz. U. 2014 poz. 1409.
- Schwenckfeld K. 1600. Stirpium et fossilium Silesiae catalogus. Iimpensis Davidis Alberti bibliopolae Vratislaviensis, Lipsiae, ss. 472.
- Schube T. 1903. Die Verbreitung der Gefäßpflanzen in Schlesien preussischen und österreichischen Anteils. – Druck von R. Nischowsky, Breslau, ss. 361.
- Schube T. 1904. Flora von Schlesien preussischen und östereichischen Antheils – Verl. Wilh. Gottl. Korn. Breslau, ss. 456.
- Schube T. 1904–1925. Ergebnisse der Durchforschung der Schlesischen Gefäßpflanzenwelt im Jahre 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917–1918, 1919–1924. Jahresber. Schles. Ges. Vaterl. Cultur. 81: 42–64, 82: 41–64, 83: 75–95, 84: 68–89, 85: 46–62, 86: 48–66, 87: 49–73, 88: 88–104, 89: 57–70, 90: 92–103, 91: 133–155, 92: 43–61, 93: 35–45, 94: 27–41, 96: 5–11, 97: 75–81.
- Sojka A. 2001. Notatki florystyczne z okolic Rybnika-Gotartowic. Scripta Rudensia, 11: 67–68.
- Sojka A. 2005. Nowe stanowiska roślin chronionych i rzadkich stwierdzone w południowo wschodniej części Rybnika w latach 1998–2004. Scripta Rudensia, 14: 66–67.
- Stankiewicz A. 2002. Różnorodność biologiczna Lasu Podlesie w Rybniku. Przyroda Górnego Śląska, 29: 6.
- Stebel A., Domański R. 1993. W sprawie ochrony roślinności wodnej i torfowiskowej w okolicach miasta Żory w Rybnickim Okręgu Węglowym (Wyżyna Śląska). Kształtowanie Środowiska Geograficznego i Ochrona Przyrody na Obszarach Uprzemysłowionych i Zurbanizowanych, 11:41–45.
- Stebel A., Domański R., Stebel An. 1997. Materiały do flory chronionych i zagrożonych roślin naczyniowych południowej części województwa katowickiego. Cz. I. Gatunki podlegające ochronie prawnej i proponowane do ochrony w województwie katowickim. Archiwum Ochrony Środowiska, 23(1–2): 213–222.
- Sudnik-Wójcikowska B. 1987. Flora Warszawy i jej przemiany w ciągu XIX i XX wieku. Cz. I – II. Wyd. Uniw. Warszawskiego, Warszawa, ss. 242+435
- Szendera W. 1997. Rodzaj *Rubus* L. (Rosaceae) na Górnym Śląsku, studium chorologiczno-taksonomiczne taksonu krytycznego. WBiOŚ UŚ, Katowice,

(msk.).

- Tokarska-Guzik B. 1999. Atlas rozmieszczenia roślin naczyniowych w Jaworznie (Wyżyna Śląska). Atlas of vascular plants distribution in Jaworzno town (Silesian Upland). Inst. Botaniki UJ, Prace Botaniczne, 34, ss. 292.
- Tokarska-Guzik B., Dajdok Z., Zajac M., Zajac A., Urbisz Al., Danielewicz W., Hołdyński Cz. 2012. Rośliny obcego pochodzenia w Polsce ze szczególnym uwzględnieniem gatunków inwazyjnych. GDOŚ, Warszawa, ss. 197.
- Uechtritz R. 1863. Nachträge zur Schlesischen Flora (II.). Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 5: 118–157.
- Uechtritz R. 1864a. Beiträge zur Flora von Schlesien. II. Seltener Pflanzen der Flora von Rybnik. Jahresber. Schles. Ges. Vaterl. Cultur, Abhandl. Schles. Ges. Vaterl. Cultur Abt. Naturw. Med., 1: 22–26.
- Uechtritz R. 1864b. Nachträge zur Schlesischen Flora (III.). Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 6: 98–128.
- Uechtritz R. 1865. Nachträge zur Schlesischen Flora (IV.). Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 7: 72–105.
- Uechtritz R. 1868. Beiträge zur Schlesischen Flora (V.). Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die Angrenzenden Länder, 10: 149–169.
- Uechtritz R. 1872. Die wichtigsten Funde des Jahres 1871, im Gebiete der schlesischen Flora. Jahresber. Schles. Ges. Vaterl. Cult., 49: 155–159.
- Urbisz Al. 2001. Atlas rozmieszczenia roślin naczyniowych południowo-zachodniej części Wyżyny Katowickiej. Prace Naukowe UŚ nr 1944, Katowice, ss. 235.
- Urbisz An. 1991. O zastosowaniu wskaźników florystycznych do określania stopnia synantropizacji flor miejskich. Acta Biologica Silesiana, 19(36): 65–81.
- Urbisz An. 1996. Flora naczyniowa Płaskowyżu Rybnickiego na tle antropogenicznych przemian tego obszaru. Scripta Rudensia, 6: 1–174.
- Urbisz An. 1997. Zasoby gatunkowe flory miasta Rybnik ze szczególnym uwzględnieniem rozmieszczenia roślin chronionych i rzadkich. W: Waloryzacja przyrodnicza miasta Rybnika. ALEKO, Katowice (msk.).
- Urbisz An. 2001. Gatunki górskie we florze Płaskowyżu Rybnickiego. Fragmenta Floristica et Geobotanica Polonica, 8: 63–70.
- Urbisz An. 2012. Atlas rozmieszczenia roślin naczyniowych na Wyżynie Krakowsko-Częstochowskiej. Distribution atlas of vascular plants in the Kraków-Częstochowa Uplands. Centrum Dziedzictwa Przyrody Górnego Śląska Katowice, ss. 397.
- Urbisz An., Urbisz Al. 1998. Rośliny chronione południowo-zachodniej części Wyżyny Śląskiej. Acta Biologica Silesiana, 33(50): 113–142.
- Urbisz An., Urbisz Al. 2003. Antropogeniczne przemiany flory roślin naczyniowych miasta Rybnik, s.: 59–65. W: Flora miast (red. M. Korczyński), Kujawsko-Pomorskie Centrum Edukacji Ekologicznej, PTB, oddz. w Bydgoszczy.
- Urbisz An., Urbisz Al. 2005. Anthropophytes permanently established in the flora of

- Rybnik Plateau (South Poland). *Thaiszia* – J. Bot. Košice, 15, Suppl., 1: 277–288.
- Węgrzynek B. 2003. Roślinność segetalna Wyżyny Śląskiej. Część 2. Zbiorowiska chwastów upraw zbożowych ze związku *Aperion spicae-venti*. *Acta Biologica Silesiana*, 37(54): 87–119.
- Wimmer F. 1857. *Flora von Schlesien*. F. Hirts Verlag, Breslau, ss. 695.
- Witośławski P. 2006. Atlas of distribution of vascular plants in Łódź. Atlas rozmieszczenia roślin naczyniowych w Łodzi. Wyd. Uniw. Łódzkiego, Łódź, ss. 386.
- Zajac A. 1978. Założenia metodyczne Atlasu rozmieszczenia roślin naczyniowych w Polsce. *Wiadomości Botaniczne*, 22(3): 145–155.
- Zajac A., Zajac M. (red.). 2001. Atlas rozmieszczenia roślin naczyniowych w Polsce. – Distribution Atlas of Vascular Plants in Poland. Nakładem Pracowni Chorologii Komputerowej Instytutu Botaniki UJ, Kraków, ss. 716.
- Zajac M., Zajac A., Zemanek B. (red.). 2006. *Flora Cracoviensis Secunda* (Atlas). Nakładem Pracowni Chorologii Komputerowej Instytutu Botaniki UJ, Kraków, ss. 291.
- Zalewska-Gałosz J. 2008. Rodzaj *Potamogeton* L. w Polsce – taksonomia i rozmieszczenie. Instytut Botaniki UJ, Kraków, ss. 218.
- Ziętara A. 2004. Flora synantropijna terenów kolejowych na odcinku Wodzisław Śląski – Rybnik. WBiOŚ UŚ, Katowice, (msk.).

SKOROWIDZ RODZAJÓW (INDEX OF GENERA)

- Abies* – jodła 16
Acer – klon 16
Achillea – krwawnik 16
Acinos – czyścica 16
Acorus – tatarak 16
Actaea – czerniec 17, 100, 106
Adoxa – piżmaczek 17, 100, 106
Aegopodium – podagrycznik 17
Aesculus – kasztanowiec 17
Aethusa – blekot 17
Agrimonia – rzepik 17
Agrostemma – kąkol 17
Agrostis – mietlica 17
Ailanthus – bożodrzew 18
Ajuga – dąbrówka 18
Alchemilla – przywrotnik 18
Alisma – żabieniec 18
Alliaria – czosnaczek 18
Allium – czosnek 18, 100, 106
Alnus – olsza 18
Alopecurus – wyczyniec 19
Amaranthus – szarłat 19
Amelanchier – świdośliwka 19
Anagallis – kurzyślak 19
Anaphalis – anafalis 19
Anchusa – farbownik 19
Andromeda – modrzewnica 19, 99, 105
Anemone – zawilec 19
Angelica – dzięgiel 20
Anthemis – rumian 20
Anthoxanthum – tomka 20
Anthriscus – trybula 20
Apera – miotła 20
Aquilegia – orlik 20
Arabidopsis – rzodkiewnik 20
Arctium – lopian 20, 21
Arenaria – piaskowiec 21
Armeria – zawciąg 21
Armoracia – chrzan 21
Arnoseris – chlodek 21
Arrhenatherum – rajgras 21
Artemisia – bylica 21
Aruncus – parzydło 21
Asarum – kopytnik 21, 100, 106
Asparagus – szparag 22
Aster – aster 22
Astragalus – traganek 22
Astrantia – jarzmianka 22, 100, 106
Athyrium – wietlica 22
Atriplex – łoboda 22, 23
Atropa – pokrzyk 23
Avena – owies 23
Avenula – owsica 23
Ballota – mierznica 23
Barbarea – gorczycznik 23
Batrachium – włosienicznik 23
Bellis – stokrotka 23
Berberis – berberys 23
Berteroia – pylenieć 23
Betonica – bukwica 24
Betula – brzoza 24
Bidens – uczepek 24
Bolboschoenus – sitowiec 24
Brachypodium – kłosownica 24
Brassica – kapusta 24
Briza – drżączka 25
Bromus – stokłosa 25
Bunias – rukiwnik 25
Calamagrostis – trzcinnik 25
Calla – czermień 26, 101, 106
Callitriche – rzęśl 26
Calluna – wrzos 26
Caltha – kniec 26
Calystegia – kielisznik 26
Camelina – lnicznik 26
Campanula – dzwonek 26, 27, 102, 107
Capsella – tasznik 27
Cardamine – rzeżucha 27
Cardaminopsis – rzeżusznik 27
Cardaria – pieprzycznik 27

- Carduus* – oset 27
Carex – turzyca 27, 28, 29, 30, 100, 101, 106
Carlina – dziewięciśń 30, 31
Carpinus – grab 31
Carum – kminek 31
Centaurea – chaber 31
Centaurium – centuria 31, 99, 105
Cephalanthera – buławnik 32, 102, 107
Cerastium – rogownica 32
Cerasus – wiśnia 32
Ceratophyllum – rogatek 32, 101, 106
Chaenorhinum – lniczka 32
Chaerophyllum – świerżbek 32, 33
Chamaecytisus – szczerzeniec 33
Chamaenerion – wierzbówka 33
Chamomilla – rumianek 33
Chelidonium – glistnik 33
Chenopodium – komosa 33, 34
Chrysosplenium – śledziennica 34
Cichorium – cykoria 34
Circaea – czartawa 34
Cirsium – ostrożeń 34, 35
Clematis – powojnik 35
Clinopodium – klinopodium 35
Colchicum – zimowit 35
Comarum – siedmiopalecznik 35, 102, 107
Convallaria – konwalia 35, 99, 100, 101, 102, 105, 106, 107
Convolvulus – powój 35
Conyza – konyza (przymiotno) 35
Corispermum – wrzosowiec 35
Cornus – dereń 35, 36
Coronilla – cieciorka 36
Corydalis – kokorycz 36, 100, 106
Corylus – leszczyna 36
Corynephorus – szcztolicha 36
Cotoneaster – irga 36
Crataegus – głóg 36, 37
Crepis – pępawa 37
Crocus – krokus 37
Cruciata – przytulinka 37
Cuscuta – kaniańka 37
Cynosurus – grzebieńca 37
Dactylis – kupkówka 37
Dactylorhiza – kukulka 37, 99, 101, 102, 105, 106, 107
Danthonia – izgrzyca 38
Daphne – wawrzynek 38, 100, 106
Datura – bieleń 38
Daucus – marchew 38
Dentaria – żywiec 38, 100, 101, 106, 107
Deschampsia – śmiełek 38
Descurainia – stulicha 38
Dianthus – goździk 38, 39
Digitalis – naparstnica 39
Digitaria – palusznik 39
Diploaxis – dwurząd 39
Dipsacus – szczęć 39
Drosera – rosiczka 39, 99, 101, 105, 106
Dryopteris – niecznica 39
Duchesnea – poziomkówka 40
Echinochloa – chwastnica 40
Echinocystis – kolczurka 40
Echinops – przegorzan 40
Echium – żmijowiec 40
Elaeagnus – oliwnik 40
Eleocharis – ponikło 40, 99, 101, 105, 106
Elodea – moczarka 40
Elsholtzia – marzymięta 41
Elymus – perz 41
Epilobium – wierzbownica 41
Epipactis – kruszczyk 41, 42, 99, 100, 101, 102, 105, 106, 107
Equisetum – skrzyp 42, 99, 105
Eragrostis – miłka 42
Erechtites – erechtites 43
Erigeron – przymiotno 43
Eriophorum – wełnianka 43, 102, 107
Erodium – iglica 43
Erophila – wiosnowka 43
Erysimum – pszonak 43
Euonymus – trzmielina 43
Eupatorium – sadziec 43
Euphorbia – wilczomlec 43, 44
Euphrasia – świetlik 44
Fagus – buk 44

- Fallopia* – rdestówka 44
Festuca – kostrzewa 44, 45
Ficaria – ziarnopłon 45
Filago – nicennica 45
Filipendula – wiązówka 45
Fragaria – poziomka 45, 46
Frangula – kruszyna 46, 100, 106
Fraxinus – jesion 46
Fumaria – dymnica 46
Gagea – złoć 46, 100, 106
Galanthus – śnieżyczka 46
Galeobdolon – gajowiec 46
Galeopsis – poziewnik 46, 47
Galinsoga – żółtlica 47
Galium – przytulia 47, 100, 106
Genista – janowiec 48
Geranium – bodziszek 48
Geum – kuklik 49
Glechoma – bluszcz 49
Glyceria – manna 49
Gnaphalium – szarota 49
Gymnocarpium – cienistka 49
Gypsophila – łąszczec 49
Hedera – bluszcz 49, 100, 106
Helianthus – słonecznik 49
Hemerocallis – liliowiec 49
Hepatica – przylaszczka 50, 100, 106
Heracleum – barszcz 50
Herniaria – polonicznik 50
Hesperis – wieczornik 50
Hieracium – jastrzębiec 50, 51
Hierochloë – turówka 51
Hippophaë – rokitnik 51
Holcus – kłosówka 51
Hordeum – jęczmień 51
Hottonia – okrężnica 52, 99, 105
Humulus – chmiel 52
Hydrocharis – żabiściek 52, 101, 106
Hydrocotyle – wążkrota 52, 99, 101, 102, 105, 106, 107
Hypericum – dziurawiec 52
Hypochoeris – prosienicznik 52
Impatiens – niecierpek 52, 53
Iris – kosaciec 53, 100, 106
Isolepis – sitniczka 53, 101, 106
Isopyrum – zdrojówka 53, 100, 106
Jasione – jasioniec 53
Juglans – orzech 53
Juncus – sit 53, 54, 101, 106
Juniperus – jałowiec 54
Knautia – świerzbica 54
Kochia – mietelnik 54
Lactuca – sałata 54
Lamium – jasnota 55
Lapsana – łoczyga 55
Larix – modrzew 55
Lathraea – łuskiewnik 55, 100, 106
Lathyrus – groszek 55, 56, 100, 106
Ledum – bagno 56, 99, 101, 105, 106
Leersia – zamokrzyca 56
Lemna – rzęsa 56
Leontodon – brodawnik 56
Leonurus – serdecznik 56
Lepidium – pieprzyca 56
Leucanthemum – jastrun 57
Ligustrum – ligustr 57
Lilium – lilia 57, 102, 107
Linaria – łąca 57
Linum – len 57, 99, 105
Listera – listera 57, 100, 102, 106, 107
Lithospermum – nawrot 57
Lolium – życica 57
Lonicera – wiciokrzew 57
Lotus – komonica 58
Lupinus – łubin 58
Luzula – kosmatka 58
Lychnis – firletka 58
Lycium – kolcowój 58
Lycopersicon – pomidor 58
Lycopodiella – widłaczek 58, 101, 106
Lycopodium – widłak 58
Lycopus – karbienieć 59
Lysimachia – tojeść 59, 100, 101, 102, 106, 107
Lythrum – krwawnica 59
Mahonia – mahonia 59

- Maianthemum* – konwalijka 59
Malus – jabłoń 59
Malva – śláz 59, 60
Matricaria – maruna 60
Matteucia – pióropusznik 60
Medicago – lucerna 60
Melampyrum – pszeniec 60
Melandrium – bniec 60
Melica – perlówka 60, 61, 100, 106
Melilotus – nostrzyk 61
Mentha – mięta 61
Menyanthes – bobrek 61, 99, 101, 102, 105, 106, 107
Mercurialis – szczyr 61, 102, 107
Milium – prosownica 61
Moehringia – możylinek 61
Molinia – trzęślica 62
Monotropa – korzeniówka 62
Morus – morwa 62
Muscari – szafirek 62
Mycelis – sałatnik 62
Myosotis – niezapominajka 62
Myosoton – kościenica 62
Myriophyllum – wywłócznik 63
Najas – jezierzka 63, 101, 106
Nardus – bliźniczka 63
Nepeta – kocimiętka 63
Nuphar – grążel 63, 101, 106
Odontites – zagorzałek 63
Oenanthe – kropidło 63
Oenothera – wiesiołek 63, 64
Ononis – wilżyna 64
Onopordum – popłoch 64
Ophioglossum – nasięźrzał 64, 100, 106
Oreopteris – zaproć 64, 100, 106
Origanum – lebiodka 64
Ornithogalum – śniedek 64
Orthilia – gruszyńka 64, 100, 106
Oxalis – szczawik 64, 65
Oxycoccus – żurawina 65, 99, 101, 105, 106
Padus – czeremcha 65
Papaver – mak 65
Paris – czworolist 65, 100, 106
Parthenocissus – winobluszcz 65
Pastinaca – pasternak 65
Peplis – bebték 66
Persica – brzoskwinia 66
Petasites – lepiężnik 66
Peucedanum – gorysz 66
Phalaris – mozga 66
Phegopteris – zachyłka 66
Philadelphus – jaśminowiec 66
Phleum – tymotka 66
Phragmites – trzcina 66
Physalis – miechunka 67
Physocarpus – pęcherznica 67
Picea – świerk 67
Picris – goryczel 67
Pimpinella – biedrzyńnik 67
Pinus – sosna 67
Plantago – babka 67, 68
Platanthera – podkolan 68, 102, 107
Poa – wiechlina 68
Polygala – krzyżownica 68
Polygonatum – kokoryczka 69, 100, 101, 102, 106, 107
Polygonum – rdest 69
Polystichum – paprotnik 70, 100, 106
Populus – topola 70
Portulaca – portulaka 70
Potamogeton – rdestnica 70, 71
Potentilla – pięciornik 71, 72
Prenanthes – przenęt 72, 100, 101, 106, 107
Primula – pierwiosnek 72, 100, 106
Prunella – głowienka 72
Prunus – śliwa 72
Pseudotsuga – daglezja 72
Pteridium – orlica 72
Puccinellia – mannica 72
Pulmonaria – miodunka 72
Pyrola – gruszyca 72, 73, 101, 106
Pyrus – grusza 73
Quercus – dąb 73
Ranunculus – jaskier 73, 74
Raphanus – rzodkiew 74
Reseda – rezedza 74

- Reynoutria* – rdestowiec 74
Rhamnus – szakłak 74
Rhinanthus – szelężnik 74
Rhus – sumak 74
Rhynchospora – przygielka 74, 101, 106
Ribes – porzeczka 75
Robinia – robinia 75
Rorippa – rzepicha 75
Rosa – róża 75, 76
Rubus – jeżyna 76, 77, 78
Rudbeckia – rudbekia 78
Rumex – szczaw 78
Sagina – karmnik 79
Sagittaria – strzałka 79
Salix – wierzba 79, 80
Salsola – solanka 80
Salvia – szalwia 80, 100, 106
Sambucus – bez (dziki bez) 80
Sanguisorba – krwiściąg 80
Sanicula – żankiel 80, 100, 106
Saponaria – mydlnica 80
Sarothamnus – żarnowiec 80
Scabiosa – driakiew 80
Schoenoplectus – oczeret 81
Scirpus – sitowie 81
Scleranthus – czerwec 81
Scorzonera – węży mord 81, 99, 101, 105, 106
Scrophularia – trędownik 81
Scutellaria – tarczycza 81
Sedum – rozchodnik 81, 82
Selinum – olszewnik 82
Senecio – starzec 82
Serratula – sierpik 83, 100, 106
Setaria – włośnica 83
Silene – lepnica 83
Sinapis – gorczyca 83
Sisymbrium – stulisz 83
Solanum – psianka 83
Solidago – nawłóć 84
Sonchus – mlecz 84
Sorbaria – tawlina 84
Sorbus – jarząb 84
Sparganium – jeżogłówka 84, 85
Spergula – sporek 85
Spergularia – muchotrzew 85
Spiraea – tawuła 85
Spirodela – spirodela 85
Stachys – czyściec 85
Staphylea – kłokoczka 85
Stellaria – gwiazdnica 86
Streptopus – liczydło 86
Succisa – czarcikęs 86
Symphoricarpos – śnieguliczka 86
Symphytum – żywokost 86
Syringa – lilak 86
Tanacetum – wrotycz 87
Taraxacum – mniszek 87
Taxus – cis 87
Teesdalea – chroszcz 87
Telekia – smotrawa 87
Thalictrum – rutewka 87, 100, 106
Thelypteris – zachyłnik 87
Thlaspi – tobołki 87
Thuja – żywotnik 87
Thymus – macierzanka 88
Tilia – lipa 88
Torilis – kłobuczka 88
Tragopogon – kozibród 88
Trientalis – siódmaczek 88
Trifolium – koniczyna 88, 89
Trisetum – konietlica 89
Tsuga – choina 89
Tussilago – podbiał 89
Typha – pałka 89
Ulmus – wiąz 89, 90
Urtica – pokrzywa 90
Utricularia – pływacz 90, 99, 101, 105, 106
Vaccinium – borówka 90, 99, 101, 105, 106
Valeriana – kozłęk 90, 91, 100, 106
Veratrum – ciemieżycza 91, 100, 101, 106, 107
Verbascum – dziewanna 91
Verbena – werbena 91
Veronica – przetacznik 91, 92, 100, 101, 106, 107
Viburnum – kalina 92, 100, 106
Vicia – wyka 93, 100, 106

Vinca – barwinek 93, 100, 106

Viola – fiołek 93, 94

Viscum – jemiola 94

Vitis – winorośl 94

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Rybnik. Miasto z ikrą.

ISBN 978-83-925142-9-9