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## Floristic sights of Lublin city

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Osobliwości florystyczne miasta Lublina

### SUMMARY

The paper characterizes a group of rarer vascular plants discovered in the area of Lublin city. With the stations examined, all kinds of information collected about them were taken into account. The study took into consideration unpublished herbarium materials and the published ones from strictly definite stations as well as those without a specified location. With stations of this kind, only source information was given. The new plant stations included their exact description: location in the ATPOL grid squares 10 km x 10 km, site of occurrence in a specific part of Lublin, habitat conditions, and number of plant specimens. Altogether, the stations of 74 plants with the numerical majority of apophytes (50 species) over anthropophytes (24 species) were characterized. Out of these, 40 species had not been previously published from Lublin, while 9 others were given from few stations, either strictly specified or without a specified location in the ATPOL grid. Examples of these plants include *Achillea pannonica*, *Alchemilla glaucescens*, *Asplenium ruta-muraria*, *Bidens connata*, *Carex buxbaumii*, *C. davalliana*, in the former case, and *Borago officinalis*, *Coronopus squamatus*, *Genista germanica*, *Geranium molle* in the latter. Worth noting are the investigated plants that are totally or partly legal protected (9 species) and with a different degree of danger to their stations (22 species). These plants embrace for example: *Centaurium erytrea* ssp. *erytrea*, *C. pulchellum*, *Dactylorhiza maculata*, *Epipactis hellborine*, in the former case, and *Androsace septentrionalis*, *Artemisia scoparia*, *Campanula latifolia*, *Carex davalliana*, *C. praecox*, *C. umbrosa* in the latter. Moreover, four species can be classified as belonging to both these groups. They are: *Dactylorhiza maculata*, *Dianthus armeria*, *Iris sibirica*, *Ornithogalum collinum*.

## STRESZCZENIE

W pracy podano stanowiska rzadszych roślin naczyniowych, w skali regionalnej i krajowej, odnalezionych w obrębie miasta Lublina. Przy rozpatrywanych stanowiskach roślin wzięto pod uwagę wszystkie rodzaje zgromadzonych o nich informacji. Uwzględniono zarówno niepublikowane materiały zielnikowe oraz publikowane ze ściśle określonych stanowisk, jak i te bez bliższej ich lokalizacji. Przy tego typu stanowiskach podano tylko informacje źródłowe. Przy nowych stanowiskach roślin uwzględniono dokładną ich charakterystykę: położenie na tle pól siatki kwadratów ATPOL o boku 1 km x 1 km, miejsce występowania w określonej części Lublina, warunki siedliskowe i zasobność stanowiska. Praca obejmuje charakterystykę stanowisk 74 gatunków roślin naczyniowych z ilościową przewagą apofitów (50 gat.) nad antropofitami (24 gat.). Spośród omawianych roślin 40 gatunków nie było publikowanych dotąd z Lublina, 9 gatunków było podawanych z terenu Lublina, ale prace na ich temat nie zawierały dokładnej lokalizacji stanowiska na terenie miasta w obrębie siatki ATPOL oraz jego zasobności. Przykładem tych roślin w pierwszym przypadku są: *Achillea pannonica*, *Alchemilla glaucescens*, *Asplenium ruta-muraria*, *Bidens connata*, *Carex buxbaumii*, *C. davalliana*, a w drugim – *Borago officinalis*, *Coronopus squamatus*, *Genista germanica*, *Geranium molle*. Na uwagę zasługują gatunki podlegające ochronie prawnej zupełnie lub częściowej (9 gat.) oraz zagrożone, umieszczone na ogólnopolskiej lub regionalnej „Czerwonej liście” (22 gat.). Do tych roślin należą: w pierwszym przypadku np.: *Centaureium erytrea* ssp. *erytrea*, *C. pulchellum*, *Dactylorhiza maculata*, *Epipactis hellborine*, a w drugim np.: *Androsace septentrionalis*, *Artemisia scoparia*, *Campanula latifolia*, *Carex davalliana*, *C. praecox*, *C. umbrosa*. Ponadto 4 gatunki zaliczamy do obu tych grup. Są to: *Dactylorhiza maculata*, *Dianthus armeria*, *Iris sibirica*, *Ornithogalum collinum*.

Keywords: rare vascular plants, city of Lublin, Poland.

## INTRODUCTION

Lublin covers the area of 148 km<sup>2</sup>, with a population of 350 thousand inhabitants. Geographically, physically, and geobotanically, the city is situated in the Lublin-Lvov Upland (Lublin Upland), where the following geographical regions meet: Nałęczów Plateau, Bełżycka Plain, Łuszczów Plain, and Giełczew Elevation (Chałubińska, Wilgat 1954, Fijałkowski 1972, Kondracki 2000). The monographic description of Lublin's environment is presented in the study edited by Stochlak (1995). Moreover, a general description of Lublin's geographical-physical and geobotanical properties was given in several publications on floristic and phytosociology (Święs 1992; Święs, Wrzesień 2000; Rysiak, Święs, Wrzesień 2006). The data about the rarer flora of vascular plants are contained in several other publications apart from the aforementioned ones. We should name at least the publications that provide different data about the stations of the plants investigated. These are the studies by Karo (1883), Koporska (1929), Fijałkowski (1959, 1960, 1963, 1964, 1978), Święs, Wrzesień (2002, 2003, 2004), Wrzesień and Święs (2006), including literature cited therein. In his study of the synanthropic communities in Lublin, Fijałkowski (1967) also listed all the species of vascular plants known to him from this city at that time. This specification comprises 510 species. The generalized data on the whole flora of flower plants and pteridophytes in the area of Lublin and in Lublin macroregion can be found in the studies by Fijałkowski (1994, 1995) and those edited by A. and M. Zajac (2001). The data on the stations of the plants investigated herein, assembled in the aforementioned studies by Fijałkowski and those edited by Zajac, and in other phytosociological publications, were not taken into consideration.

During intensive geobotanical research conducted in the territory of Lublin for over a dozen years, the stations of several dozen species of vascular flora were found; they belong to rarer ones, both on the city scale, and regionally and nationally. For technical reasons, the data on these most interesting plant groups will be presented in next publications. The monographic studies of floristic and phytosociological relations in Lublin are under preparation for publication.

#### MATERIALS AND METHODS

The present article characterizes the stations, discovered in Lublin, of the most interesting vascular plants, a total of 71 species. They are mostly the species that have not been given so far from this city. Only a very small part of them are the species previously published from Lublin, either from precisely located stations or without a specified location.

With the plant stations given, all the previous data concerning them were included. This applies both to the unpublished herbarium materials and to the stations previously published or those formerly unknown. The species were listed in alphabetical order, and their nomenclature was adopted after Mirek et al. (2002). The assignment of plants to their specific synanthropic element was given after Zajac (1979), Kornaś (1968), Zajac, Zajac, Tokarska-Guzik (1998) and literature cited therein. Note that the division of kenophytes into geographical-historical groups was made on the basis of the study by Krawiecowa, Rostański (1976 and literature cited therein). The categories of danger to the species were given after Mirek et al. (2006) for Poland, and for the Lublin region – after Kucharczyk (2003). Categories of species protection were listed after [Dziennik Ustaw 2004]. The stations of the species investigated were located in the ATPOL grid squares of 1x1 km, compiled for the whole of Poland (Zajac 1978), Fig. 1. With the given stations of species from one square, the part of square (a, b, c, d), where a species occurs, was additionally provided. Whenever possible, the exact location of the stations of the plants investigated was given, and the description of their ecological conditions and quantitative ratios was provided. This type of data should make it possible to plan future comparative floristic studies.

#### EXPLANATIONS OF ABBREVIATIONS

For species. *The ecological group of apophytes and geographical-historical group of anthropophytes*: Apx – xerothermic apophytes, Apfs – forest-shrubs apophyte, Apm – meadow apophyte, App – psammophilic vegetation apophyte, Apr – rock apophyte, Apww – water-waterside apophyte, Appe – peatbog apophyte, Aps – synanthropic apophyte, Arch – archeophyte, Ageph – agresto-ephemerophyte, Agep – agresto-epicophyte.

For the list of plant stations. *Published stations*. A – located as Lublin city, B – located only in a particular city district or housing estate, E – with exact location in the ATPOL system, F – new, currently recorded. *Herbarium base*. C – located as Lublin city, D – located in a particular city district or housing estate. *Herbarium materials*: WA – Warsaw University Herbarium, LBL – Herbarium of Maria Curie-Skłodowska University in Lublin, Pu – Herbarium of Institute of Soil Science and Plant Cultivation in Puławy. *Status of endangered species and protected species*: CR – critically endangered, critical risk; RL – critically endangered; VU – vulnerable to extinction; LR – low risk; R – rare; TP – total legal protection, PP – partial legal protection; [RRL] – Regional Red List, [NRL] – National Red List.

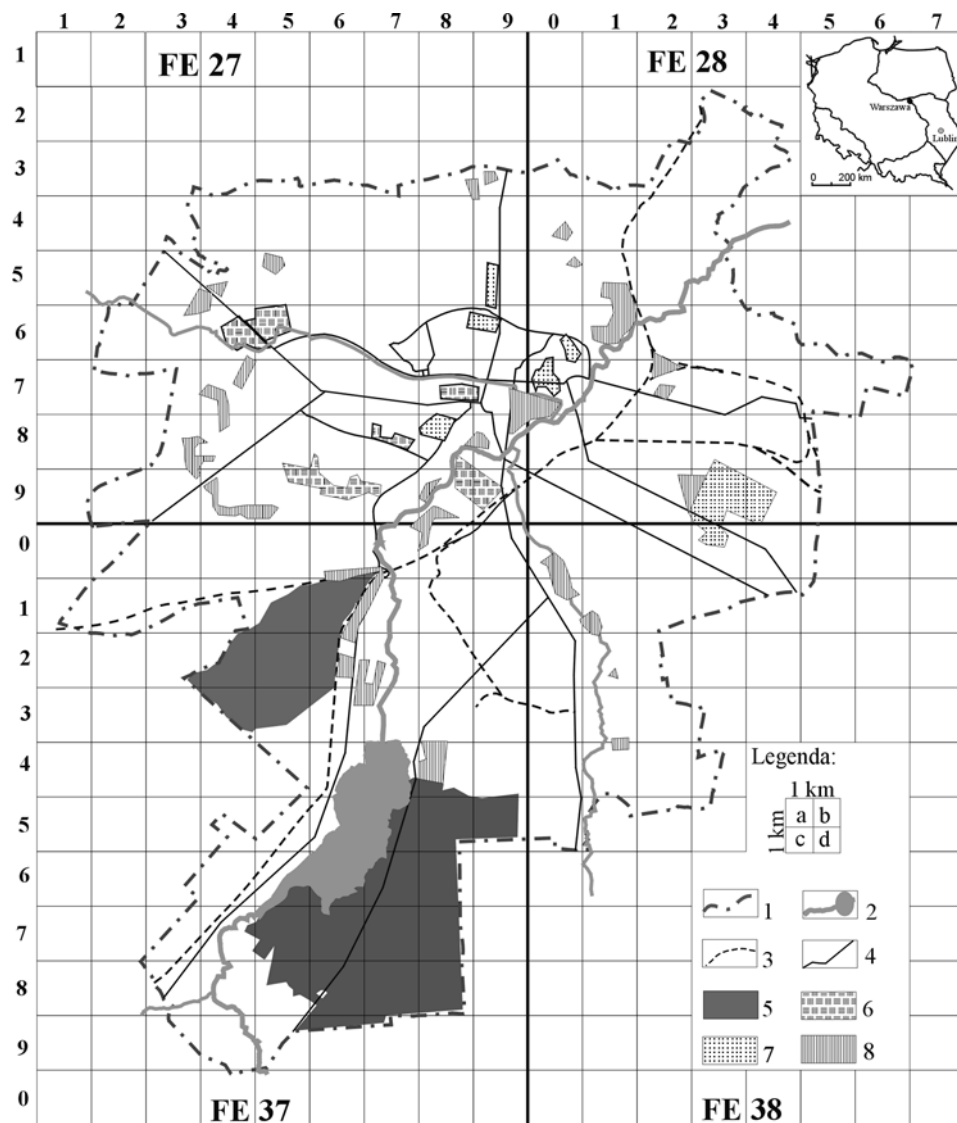


Fig. 1. Map of the investigation area on background ATPOL grid. 1 – city boundaries, 2 – water net and Zemborzycki Reservoir, 3 – railways, 4 – main roads, 5 – forests, 6 – parks, 7 – cemeteries

#### THE LIST OF SPECIES AND THEIR STATIONS

1. *Achillea pannonica*. Apx. A-E:-. F: FE2755a – Czechów district, N part. A slope of the loess escarpment. Several dens tuft of specimens. FE2755b – Czechów district, the shoulder of Polygonowa St., sandy-loamy surface. Dens tuft. FE2756 – Czechów district, in the vicinity of

Koncertowa St. Ruderal yard, sandy-loamy surface. Several specimens. FE2774 – Zimne Doły district, in the vicinity of Gnieźnieńska St. A slope of the loess escarpment. Several tuft of specimens. FE2794 – Węgliń district, in the vicinity of Krańskie Av. Ruderal yard, sandy-loamy surface. Several specimens. FE2795 – Czuby district, in the vicinity of Orkana St. and Armii Krajowej St. Ruderal yard, sandy-loamy surface. Several specimens. FE2832 – Rudnik district, in the vicinity of Torowa St. A slope of the loess escarpment. Dens tuft. FE2840 – Rudnik district, in the vicinity of Dożynkowa St. A slope of the dirt road, sandy-loamy surface. Dens tuft. FE2841 – Rudnik, in the vicinity of crossroads Dożynkowa St, and Orzechowa St. The shoulder of a dirt road, sandy-loamy surface. Dens tuft. FE2843 – Pliszczyn district, in the vicinity of Pliszczyńska St. The shoulder of a dirt road, sandy-loamy surface. Several specimens. FE2851 – Pliszczyn district, in the vicinity of Grodzicki St. A slope of the loess escarpment. Dens tuft. FE2861 – Hajdów district, in Azaliowa St, the Bystrzyca River Valley. River terrace, fen soil humus-loamy. Several specimens. FE2880 – Bronowice district, in the vicinity of Krzemionki St. Lawn, loamy surface. Several specimens.

2. *Alchemilla glaucescens* Apfs. A-E:–. F: FE2842 – Pliszczyn district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. A dozen-odd tuft of specimens. FE3841 – Głusk district SE part, the Czerniejówka River Valley. Meadow, loamy surface. Several dens tuft.

3. *Amaranthus albus*. Agep. A: Lublin city (Koporska 1929, Fijałkowski 1960, 1967). B:–. C: Lublin city (*leg. Koporska H.* 1921, 1909, 1922, LBL; *leg. Fijałkowski D.* 1957, 1958, 1959, LBL). D: Zembrzyce district (*leg. Fijałkowski D.* 1962, LBL), Wrotków district (*leg. Malmon K.* 1957, LBL). E: FE2799 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2798 – Wrotków district, in the vicinity of Krochmalna St. Ruderal yard, loamy-sandy surface. Several specimens. FE2853 – Hajdów district, in the vicinity of crossroads Łagiewnicka St, and Turystyczna St. The shoulder of a road, loamy-sandy surface. Dens tuft. FE2861 – Zadębie district, on Turystyczna St. Lawn, loamy-sandy surface. Dens tuft. FE2799 – The Central Railway Station. The railway tracks margin, sandy surface. Several specimens. FE3713 – Stasin Polny district, N part. A slope of the embankment of railway tracks, sandy surface. Several specimens.

4. *A. blitoides*. Agep. A-B: –. C: Lublin city (*leg. Fijałkowski D.* 1958, 1962 1964, LBL). D: Wrotków district (*leg. Malmon K.* 1957, LBL). E: FE2798 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2799 – The Central Railway Station. The railway track margin, sandy surface covered of slag. Dens tuft.

5. *A. chlorostachys*. Agep. A: Lublin city (Karo 1883; Fijałkowski 1960, 1963, 1967). B-C:–. D: Lublin city (*leg. Malmon K.* 1957, LBL; *leg. Fijałkowski D.* 1959, 1962, LBL). E: FE2799 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2798 – Rury district, area of Lublin's Sugar Factory. Ruderal yard, loamy surface. Several specimens. FE2881 – The North Railway Station. The railway track margin, loamy-sandy surface with admixture of slag. One tuft of specimens. FE2882 – Zadębie district, SE part. The railway track margin, sandy-loamy surface. Several specimens. FE3804 – Felin district, in the vicinity of Folwarczna St. margin of field under cultivation, loamy surface. One tuft of specimens. FE3810 – Kośminek district, in the vicinity of Kochanowski St. Ruderal yard, loamy-sandy surface. Several tuft of specimens.

6. *A. lividus*. Agep. A: Lublin city (Fijałkowski 1963, 1967, 1978, Kulpa 1964). B:–. C: Lublin city (*leg. Fijałkowski D.* 1948, 1962, LBL; *leg. Szandruk M.* 1964, LBL). E: –. F: FE2776 – Śródmieście district, in the vicinity of Puławska St. Lawn, loamy surface. Several dens tufts of specimens. FE2787 – Śródmieście district, Maria Curie-Skłodowska Sq. Lawn, loamy-sandy surface. Dens tuft. FE2788 – Śródmieście district, in the vicinity of Dolna Marii Panny St. Ruderal yard, loamy-sandy surface. Several specimens. FE2797a – Rury district, in the vicinity of Plażowa St. Lawn loamy surface, two dens tufts. FE2797b – Rury district, in the vicinity of Dzierżawna St. On the edge of a dirt road covered of slag. Dens tuft. FE2798a – Rury district, Lublin's Sugar Factory

sedimentary tank, loamy surface. Dens tuft. FE2798b – Rury district, on a Piłsudski St. Lawn, loamy-sandy surface. Several specimens. FE2881a – The North Railway Station. On the edge of platform, sandy-gravel surface. Several specimens. FE2881b – The North Railway Station. A slope of the embankment of railway tracks, sandy-gravel surface. Dens tuft. FE2890 – Kośminek district, in the vicinity of crossroads Długa St., and Elektryczna St. Cracks of pavement. Several specimens. FE3709 – Rury district, area of Lublin's Sugar Factory. The railway trucks sandy-gravel surface. Dens tuft.

7. *Androsace septentrionalis*. Apx, RL [RRL]. A: Lublin city (Koporska 1929). B–C: –. D: Wrotków district (*leg. Koporska H.* 1925, LBL). E: FE2834, FE2883 – Lublin, railway areas (Wrzesień, Świeś 2006). F: FE2822 – Rudnik district, in the vicinity of Pliszczynska St. On the edge of railway trucks, loamy-sandy surface. Dozen-odd specimens. FE2842 – Rudnik district, in the vicinity of Dożynkowa St. Loess-covered slope. Several specimens.

8. *Artemisia austriaca*. Agep. A: Lublin city (Fijałkowski 1959, Kulpa 1964, Fijałkowski 1967, Żukowski 1971). B–C: Lublin city (*leg. Motyka J.* 1947, LBL), Lublin city (*leg. Lando A.* 1957, LBL). D: Zemborzyce district (*leg. Fijałkowski D.* 1958, 1959, 1962, LBL), Wrotków district (*leg. Malmon K.* 1957, LBL). E: FE2841, FE2822 – Lublin, railway areas (Wrzesień, Świeś 2006). F: FE2841a – Rudnik district, in the vicinity of Palmowa St. The shoulder of road, loamy-sandy surface. Several dens tuft. FE2841b – Rudnik district, in the vicinity of Orzechowa St. A slope of the loess escarpment. Dens tuft. FE2842 – Rudnik district, in the vicinity of Torowa St. On the edge of railway trucks, loamy-sandy surface. Dozen-odd specimens. FE2882 – Majdan Tatarski, in the vicinity of Chemiczna St. out of order railway trucks, sandy-gravel surface. A dozen-odd specimen.

9. *A. dracunculus*. Agep. A–D: –. E: FE2841 – Lublin, railway areas (Wrzesień, Świeś 2006). F: FE2841 – Rudnik district, in the vicinity of Torowa St. The shoulder of a dirt road, loamy-sandy surface. Dens tuft. FE2851a – Rudnik district, in the vicinity of Paprociowa St. The shoulder of a dirt road, loamy-sandy surface. Several dens tuft. FE2851b – Rudnik district, in the vicinity of Wrzosowa St. The shoulder of a dirt road, loamy surface. Dens tuft. FE2861 – Rudnik district, in the vicinity of Wrzosowa St. Ruderal yard, loamy-sandy surface. Dens tuft. FE3820 – Abramowice district, in the vicinity of crossroads Nadrzeczna St, and Głuska St. The shoulder of road, loamy-sandy surface. Dozen-odd specimens.

10. *A. scoparia*. Ageph, V [RRL]. A: Lublin city (Karo 1883; Fijałkowski 1967), B: –. C: Lublin city (*leg. Łapczyński K.* 1883, WA; *leg. Malmon K.* 1957, LBL). D: Sławinek district (*leg. Karo F.* 1883, 1884 WA). E: FE2873 – Lublin, railway areas (Wrzesień, Świeś 2006). F: FE2745 – Czechów district in the vicinity of crossroads Poligonowa St., and Dzbenin St. A slope of the dirt road, loamy-sandy surface. Three dens tuft. FE2872 – Zadebie district, in the vicinity of Mełgiewska St. the railway track margin. Ruderal yard, slag surface. One tuft of specimens.

11. *Asplenium ruta-muraria*. App, V [RRL]. A–E:–. F: FE2779 – Śródmieście district, in the vicinity of Sienna St. on the wall of Old Jewish Cemetery. Several dens tuft. FE2787 – Śródmieście district, in the vicinity of Głęboka St. on the wall Old Jewish Cemetery. Several dens tuft.

12. *Bidens connata*. Agep. A–E:–. F: FE2853 – Hajdów district, in the vicinity of Turystyczna St, by the brige. River bang, loamy surface. Several specimens. FE2764 – Sławin district, in the vicinity of Sławinkowska St, area of Museum Lublin«s Village. River bang, loamy surface. Several tuft of specimens. FE2791 – Lipniak district, in the vicinity of Forestkowa St. River bang, loamy surface. Several specimens. FE2792 – Lipniak district, in the vicinity of crossroads Liszkowskiego St. and Leśna St. River bang, loamy surface. Several specimens. FE3701 – Lipniak district, in the vicinity of crossroads Leśna St. and Raszyńska St., by the bridge, river bang, loamy surface. Several specimens.

13. *Borago officinalis*. Ageph. A: Lublin city (Fijałkowski 1963, 1967). B: –. C: –. D: Lublin city (*leg. Fijałkowski D.* 1947, LBL; *leg. Demianowicz Z.* 1951, 1952, Pu; *leg. Reich N.*

1951, Pu). E: -. F: FE2754 – Sławin district, in the vicinity of Zbożowa St. Fallow, loamy surface. Isolated specimen. FE2766 – Czechów district, in the vicinity of Wyrwas St. Brushwood, sandy-gravel surface. Isolated specimen. FE3804 – Felin district, in the vicinity of crossroads Felin St. and Krępiecka St. On the edge of field under cultivation, loamy surface. Isolated specimen. FE3821 – Wólka Abramowicka district, in the vicinity of Zorza St. Miedze i ugory, sandy surface. In large numbers. FE3822 – Wólka Abramowicka district, in the vicinity of Zorza St. Ruderal yard, loamy-sandy surface. In large numbers.

14. *Brassica nigra*. Agep. A: Lublin city (Koporska 1929, Fijałkowski 1967). B: -. C: -. D: Wrotków district (*leg. Karo F.* 1884, WA), Rury district (*leg. Koporska H.* 1917, LBL). E: -. F: FE2768 – Śródmieście district, in the vicinity of Biernacki St. Ruderal yard, loamy-sandy surface. Several specimens. FE2779 – The Old Town, in the vicinity of Podwale St. Steep slope, sandy-humus surface. Several specimens. FE2797 – Rury district, in the vicinity of crossroads Nadbystrzycka St. and Pozytywistów St. Ruderal yard, loamy-sandy surface. Three dens tuft. FE2862 – Hajdów district, the Bystrzyca River Valley, in the vicinity of Łuszczowska St. Riverine bush, loamy surface. A dozen-odd specimen. FE3713 – Stasin district, SW part. On the edge of railway trucks, sandy surface. Two dens tuft. FE3717 – Wrotków district, in the vicinity of crossroads Diamentowa St. and Romer St. Ruderal yard, loamy surface. Dens tuft. FE3840 – Głusk district, in the vicinity of Strojanski St. Fallow, loamy surface. Several specimens.

15. *Campanula bononiensis*. Apx. A: Lublin city (Karo 1883, Koporska 1929). B: -. C: Lublin city (*leg. Drożdżewska E.* 1957, LBL). D: Rury district (*leg. Łapczyński K.* 1881, WA), Sławinek district (*leg. Karo F.* 1883, 1884, WA), Wola Sławińska district (*leg. Koporska H.* 1916, LBL), Czechów district (*leg. Fijałkowski D.* 1948, LBL), Rudnik district (*leg. Izdebski K.* 1957, LBL). E: -. F: FE2746a – Czechów district, in the vicinity of Dzbenin St. A slope of the loess escarpment. Several specimens. FE2746b – Czechów district, in the vicinity of Dzbenin St. A slope of the dirt road, loamy-sandy surface. Several specimens. FE2755 – Sławin district, in the vicinity of Altanowa St. A slope of the wkopu a dirt road. Several specimens. FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. Loess-covered slope. A dozen-odd specimen. FE2852 – Pliszczyn district, in the vicinity of Grodzicki St. Loess-covered slope. A dozen-odd specimen. FE3707 – Majdan Wrotkowski district, in the vicinity of Janowska St. Loess-covered slope. A dozen-odd specimen. FE3737 – Zembrzyce district, in the vicinity of Bryński St. A slope of the escarpment by Zembrzycki Reservoir, loamy-sandy surface. Several specimens. FE3739 – Wrotków district, in the vicinity of Makowa St. Ruderal yard, loamy-sandy surface. Several specimens.

16. *C. latifolia*. Apfs, RL [RRL], V [NRL]. A-E: -. F: FE3712 – Węglin district, in the vicinity of Węglin St. Loess ravine bottom, dry-ground forest, loamy-sandy surface. Dens tuft. FE3713 – Węglin district, in the vicinity of Węglin district. Loess ravine bottom, brushwood, loamy surface. A dozen-odd specimen.

17. *C. sibirica*. Apx. A: Lublin city (Karo 1883, Koporska 1929, Fijałkowski 1959, 1967). B-C: -. D: Ciecierzyn district (*leg. Fijałkowski D.* 1948, LBL), Rudnik district (*leg. Fijałkowski D.* 1951, LBL), Czechów district (*leg. Karo F.* 1881 komf, 1881, WA), Zembrzyce district (*leg. Moryka J.* 1947, 1956, LBL). E: FE2851 – Lublin, railway areas (Wrzesień, Świąs 2006). F: FE2766 – Czechów district, in the vicinity of Koncertowa St. Loess-covered slope. A dozen-odd specimen. FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. Loess-covered slope. Several specimens. FE2792 – Lipniak district, in the vicinity of Lazurowa St. A slope of the loess escarpment. A dozen-odd specimen. FE2831 – Rudnik district, in the vicinity of Dębowa St. A slope of the dirt road. A dozen-odd specimen. FE2832a – Kolonia Jakubowice Murowane district, NE part. A slope of the embankment of railway tracks, loamy-sandy surface. Dens tuft. FE2832b – Rudnik district, in the vicinity of Torowa St. A slope of the loess ravine. A

dozen-odd specimen. FE2833a – Pliszczyn district, in the vicinity of Zagrodna St. Miedza, loamy-sandy surface. A dozen-odd specimen. FE2833c – Pliszczyn district, in the vicinity of Łysakowska St. A slope of the loess escarpment. Several specimens. FE2840 – Rudnik district, in the vicinity of crossroads Dożynkowa St, and Bluszczowa St. The shoulder of road. A dozen-odd specimen. FE2841 – Rudnik district, in the vicinity of Naftowa St. The shoulder of a dirt road, loamy-sandy surface. Several specimens. FE2842 – Rudnik district, in the vicinity of Torowa St. The shoulder of a dirt road, loamy-sandy surface. A dozen-odd specimen. FE2843 – Pliszczyn district, in the vicinity of Zabytkowa St. A slope of the loess escarpment. A dozen-odd specimen. FE2851 – Trześniów district, SW part. The railway track margin. A slope of the loess escarpment. Isolated specimen. FE2851 – Pliszczyn district, in the vicinity of Grodzicki St. A slope of the loess escarpment. Several specimens.

18. *Carex buxbaumii*. Apm, E [RRL, NRL]. A-E:-. F: FE2853 –Jakubowice Murowane district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. Several tuft of specimens.

19. *C. davalliana*. Appe, V [NRL, RRL]. A-E:-. F: FE2853 –Jakubowice Murowane district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. Several tuft of specimens.

20. *C. divulsa* ssp. *leersii*. Appe. R [NRL]. A-E:-. F: FE3766 – Zemborzyce district, in the vicinity of Cienista St. Meadow, loamy surface. Several tuft of specimens.

21. *C. praecox*. Apm, V [NRL]. A: Lublin city (Fijałkowski 1959). B-C: -. D: Pliszczyn district (*leg. Fijałkowski D.* 1949, LBL), Rudnik district (*leg. Motyka J.* 1951, LBL), Sławinek district (*leg. Motyka J.* 1946, LBL). E: FE2883, FE3765 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2766 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. Several dens tuft. FE2832 – Kolonia Jakubowice Murowane district, E part. A slope of the embankment of railway tracks, sandy surface. Dense tuft. FE2833 – Łysaków district, in the vicinity of Łysakowska St. Loess-covered slope. Dense tuft. FE2862 – Zadębie district, in the vicinity of Turystyczna St. A slope of the embankment of railway tracks, sandy surface. Dense tuft. FE2883 – The North Railway Station. The railway track inside, sandy surface. Several dense tuft. FE3765 – Zemborzyce district, in the vicinity of Tęczowa St. Meadow, loamy surface. Dense tuft. FE3707 – Wrotków district, in the vicinity of Nadbystrzycka St, in the vicinity of railway bridge. A slope of the embankment of railway tracks, sandy surface. Dense tuft.

22. *C. umbrosa*. Apfs, RL [RRL], R [NRL]. A: Lublin city (Fijałkowski 1967). B:-. C: Lublin city (*leg. Karo F.* 1883, 1884 WA). D: Wrotków district (*leg. Fijałkowski D.* 1951, LBL), Zemborzyce district (*leg. Fijałkowski D.* 1962, LBL). E: -. F: FE2841 – Rudnik district, in the vicinity of Torowa St. The railway track, sandy-loamy surface. A dozen-odd tuft of specimens. FE2872 – Zadębie district, in the vicinity of Kasprowicz St. The railway tracks, sandy-gravel surface. Dense tuft. FE2873 – Zadębie district, in the vicinity of Mełgiewska St. The railway track margin, sandy surface. A dozen-odd tuft of specimens. FE3715 – Stary Las (Gaj), N part. Dense oak-hornbeam forest. A dozen-odd specimen. FE3718 – Majdan Wrotkowski district, in the vicinity of crossroads Janowska St., and Stary Gaj St. Leafy forest margin, sandy-loamy surface. A dozen-odd tuft of specimens. FE3724 – Stary Las (Gaj), W part. A road in pine-hornbeam forest. Dense tuft. FE3725 – Stary Las (Gaj), W part. Dense oak-hornbeam forest. A dozen-odd tuft of specimens. FE3774 – Forest Rudki, middle part. Forest margin, oak-hornbeam forest. Dense tuft. FE3778 – Dąbrowa Forest, SE part. The shoulder of forestly road. Dense tuft.

23. *Cardamine hirsuta*. Aps. A-E:-. F: FE2787 – Śródmieście district, in the vicinity of crossroads Głęboka St., and Słoneczna St. Cracks of pavement, sandy surface. Several specimens.

24. *Centaurium erythrea* ssp. *erythrea*. Apm, TP. A: Lublin city (Fijałkowski 1967). B-C: -. D: Zimne Doły district (*leg. Karo F.* 1884, WA); Helenów, Lipniak, Węglin districts (*leg. Fijałkowski D.* 1948, LBL); Stary Las forest (*leg. Mitus E.* 1961, LBL). E: FE2851, FE2842 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2737 – Jakubowice Konińskie district, N part.



Fallow, loamy-sandy surface. Several dens tuft. FE2743a – Czechów district, in the vicinity of Skowronkowa St. Fallow, loamy-sandy surface. Several specimens. FE2743b – Wola Sławińska district, in the vicinity of Skowronkowa St. Ruderal yard, loamy-sandy surface. A dozen-odd specimen. FE2745 – Czechów district, in the vicinity of Zelwerowicz St. Meadow, loamy surface. Dense tuft. FE2748 – Choiny district, in the vicinity of Jurajska St., on the edge of road, loamy-sandy surface. Several dens tuft. FE2756 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. Several tuft. FE2776 – Śródmieście district, in the vicinity of Sikorski St., the Czechówka River Valley. Drainage ditch bank, loamy surface. Several specimens. FE2786 – Czuby district, in the vicinity of crossroads Filaretów St., and Głęboka St. Green, sandy-loamy surface. Several specimens. FE2788 – Śródmieście district, in the vicinity of Dolna Marii Panny St., the Bystrzyca River Valley. River terrace, sandy-loamy surface. Several specimens. FE2792 – Lipniak district, in the vicinity of Lazurowa St. Meadow, loamy surface. Dense tuft. FE2792c – Lipniak district, in the vicinity of Liszkowski St. A slope of the loess escarpment. Dense tuft. FE2832 – Rudnik district, in the vicinity of Torowa St. Meadow, loamy surface. A dozen-odd specimen. FE2842 – Rudnik district, in the vicinity of Grodzicki St. A slope of the loess escarpment. Several dens tuft. FE2851 – Kalinowszczyzna district, in the vicinity of Wrzosowa St. Ruderal yard, loamy surface, seasonally flooded. Several tuft. FE2862 – Hajdów district, the Bystrzyca River Valley, in the vicinity of Hajdowska St. Meadow, loamy surface. FE2892 – Majdan Tatarski district, in the vicinity of Grygowa St. Ruderal yard, gravel-loamy surface. A dozen-odd specimen. FE3703 – Węglin district, in the vicinity of Węglinek St. A slope of the loess dirt road. Several specimens. FE3705 – Czuby district, in the vicinity of crossroads Bursztynowa St. and Ametystowa St. Loess ravine bottom. Several tuft. FE3711 – Węglin district, in the vicinity of Folwarczna St. Fallow, loamy-sandy surface. Dens tuft. FE3713 – Węglin district, in the vicinity of Węglinek St. Fallow, loamy-sandy surface. Several dens tuft. FE3717 – Majdan Wrotkowski district, in the vicinity of crossroads Janowska St., and Stary Gaj St. Fallow, loamy-sandy surface. Several specimens. FE3724 – Forest Stary Gaj, SW part. Forest margin, loamy-humus surface. Several tuft. FE3725 – Forest Stary Gaj, W part. Pine-spruce forest margin. A dozen-odd specimen. FE3774 – Zembrzyce district, in the vicinity of Cienista St. Meadow, loamy surface. Dense tuft. FE3778 – Dąbrowa Forest, SE part. The shoulder of road in pine-hornbeam forest. Several specimens. FE3801 – Felin district, in the vicinity of Droga Męczenników Majdanka St., area of Concentration Camp “Majdanek.” Ruderal yard, loamy-sandy surface. A dozen-odd specimen. FE3820 – Abramowice district, the Czerniejówka River Valley, in the vicinity of Rej St. Meadow, loamy surface. Dense tuft.

25. *C. pulchellum*. Apww, TP, LR [RRL]. A: Lublin city (Fijałkowski 1967). B: -. C: -. D: Rudnik district (leg. Fijałkowski D. 1985, LBL). E: -. F: FE2851a – Ponikwoda district, in the vicinity of Wrzosowa St., the Bystrzyca River Valley. Ruderal yard, sandy-loamy surface. Several specimens. FE2851b – Ponikwoda district, in the vicinity of Świdnicka St., the Bystrzyca River Valley. River terrace, loamy surface. A dozen-odd specimen. FE2852 – Jakubowice Murowane district, in the vicinity of Grodzicki St. Meadow, loamy surface. FE2862 – Hajdów district, in the vicinity of Turystyczna St. Ruderal yard, loamy surface. Several tufts.

26. *Chimaphila umbellata*. Apfs, LR [RRL]. A: Lublin city (Karo 1883). B-C: -. D: Zembrzyce district (leg. Fijałkowski D. 1949, LBL). E: -. F: FE3778 – Dąbrowa Forest, E part pine forest, sandy-loamy surface. Several specimens. FE3775 – Dąbrowa Forest, SW part, in the vicinity of Grzybowa St. Forest with pine and oak, loamy-sandy surface. Several dozen specimens. FE3785 – Dąbrowa Forest, in the vicinity of Roślinna St. Pine-oak forest, sandy surface. A dozen-odd specimens.

27. *Coronopus squamatus*. Arch, E [NRL]. A: Lublin city (Fijałkowski 1963, 1967). B: -. C: Lublin city (leg. Koperska H. 1934, LBL; leg. Fijałkowski D. 1962, LBL) E: -. F: FE2799 –

Kośminek district, in the vicinity of crossroads Żelazna St. and Garbarska St. Cracks of pavement. Dense tuft. FE2860 – Hajdów district, in Zawilcowa St. Ruderal yard, sandy-loamy surface. Several specimens. FE2861 – Hajdów district, in the vicinity of Turystyczna St. Ruderal yard, sandy surface. A dozen-odd specimen. FE2874 – Zadębie district, in the vicinity of Hajdowska St. Ruderal yard, loamy-sandy surface. A dozen-odd specimen. FE2884 – Zadębie district, in the vicinity of Hajdowska St. Ruderal yard, loamy surface. Several specimens. FE2890 – Kośminek district, in the vicinity of crossroads Długa St and Akacjowa St. Lawn, loamy-sandy surface. Dense tuft. FE3800 – Kośminek district, in Żelazna St. Cracks of pavement. Dense tuft. FE3800a – Kośminek district, the shoulder of Kunicki St., loamy-sandy surface. Dense tuft.

28. *Dactylorhiza maculata*. Apm, TP, V [RRL, NRL]. A-E:–. F: FE2832 – Rudnik district, in the vicinity of Torowa St. Meadow, loamy surface. A dozen-odd specimen. FE2853 – Pliszczyn district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. Several dozen specimens.

29. *Dianthus armeria*. Apm, TP, RL [RRL]. A-E:–. F: FE3704 – Poręba district, the shoulder of Jan Paweł II St., loamy-sandy surface. Several specimens. FE3811 – Felin district, in the vicinity of Droga Męczenników Majdanka St., area of Concentration Camp “Majdanek.” Grass, sandy-loamy surface. Several dozen specimens.

30. *Draba nemorosa*. Apx, V [RRL]. A-E:–. F: FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. A slope of the loess escarpment. A dozen-odd specimens.

31. *Epipactis helleborine*. Apfs, TP. A-E:–. F: FE2773 – Zimne Doły district, in the vicinity of Gnieźnińska St. Loess ravine in hornbeam-oak forest. FE2784 – Zimne Doły district, in the vicinity of Wojciechowska St. Loess ravine bottom in dry-ground forest. FE2874 – Zimne Doły district, in the vicinity of Nałeczowska St. Loess ravine bottom, scrub forest oak-hornbeam, loamy-sandy surface. FE3704 – Węglin district, in Poznańska St. Loess ravine bottom, scrub forest. FE3715 – Stary Las (Gaj), N part. A slope of the loess escarpment. Several specimens. FE3776 – Dąbrowa Forest, in the vicinity of Osmolicka St. The shoulder of road, loamy-sandy surface. FE3777 – Dąbrowa Forest, in the vicinity of Osmolicka St. The shoulder of road, sandy-loamy surface.

32. *Eragrostis albensis*. Agep. A-D: –. E: FE2798, FE3755, FE3783 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2765a – Sławinek district, the shoulder of Solidarności Av., sandy surface. Several specimens. FE2765b – Sławinek district, by Botanical Garden UMCS. Cracks in pavement. A dozen-odd specimen. FE2765c – Sławin district, in Solidarności Av. in the vicinity of crossroads Warszawskie Av. The shoulder of road, sandy surface. A dozen-odd specimen. FE2766 – Sławinek district, in the vicinity of crossroads Sikorski St. and Solidarności Av. The shoulder of road, loamy-sandy surface surface. Several specimens. FE2767a – Sławinek district, in the vicinity of crossroads Sikorski Av. and Solidarności Av. By the wall of allotment garden, sandy surface. Several specimens. FE2767b – Sławinek district, the shoulder of Solidarności Av., sandy surface. A dozen-odd specimen. FE2767c – Sławinek district, in the vicinity of Północna St. Cracks in pavement. A dozen-odd specimen. FE2786 – Śródmieście district, the shoulder of Głęboka St., loamy-sandy surface. Several specimens. FE2793 – Węglin district, in the vicinity of crossroads Orkan St. and Kraśnickie Av. Cracs in pavement. Several specimens. FE2796a – Czuby district, in the vicinity of crossroads Jan Sawa St. and Zan St. Cracs in pavement. A dozen-odd specimen. FE2796b – Czuby district, in the vicinity of Filaretów St. The shoulder of road, sandy surface. Several specimens. FE2798a – Rury district, area of Lublin Sugar Factory. Cracks in pavement. Several dozen specimens. FE2798b – Rury district, Ludowy Park. On the edge of road, loamy-sandy surface. Several dozen specimens. FE2799 – Kośminek district, the shoulder of Gazowa St., loamy-sandy surface. Several specimens. FE2851 – Trzeźniów district, in the vicinity of Paprociowa St. The shoulder of a dirt road, loamy-sandy surface. Several specimens. FE3704a – Poręba district, the shoulder of Jan Paweł II St., loamy-sandy surface. In large numbers dens tuft of specimens.

FE3704b – Poreba district, Jana Pawła II St., in the vicinity of allotments garden. Ruderal yard, loamy surface. Several specimens. FE3708 – Wrotków district, in the vicinity of crossroads Włościańska St., and Krochmalna St. Lawn, sandy-loamy surface. Several tuft of specimens. FE3709 – Wrotków district, in the vicinity of crossroads Nowy Świat St., and Wojenna St. The shoulder of road, loamy surface. Several specimens. FE3735 – Zemborzycze district, the shoulder of Zioloła St., sandy-loamy surface. Several specimens. FE3746 – Zemborzycze district, in the vicinity of Krężnicka St. Meadow, loamy surface. A dozen-odd specimen. FE3764 – Zemborzycze district, in Cienista St. Cracs in pavement. Several dozen tuft of specimens. FE3765 – Zemborzycze Kościelne district, in the vicinity of Letniskowa St. The shoulder of a dirt road, loamy surface. Several specimens. FE3774 – Rudki district, the shoulder of Krężnicka St., loamy-sandy surface. Several tuft of specimens. FE3820 – Abramowice district, on the edge of Makowa St., loamy-sandy surface. A dozen-odd tuft of specimen.

33. *Erucastrum gallicum*. Ageph. A: Lublin city (Fijałkowski 1978). B-E:-. F: FE3801 – Felin, in the vicinity of Droga Męczenników Majdanka St., cemetery. On the edge of road, loamy-sandy surface. One tuft of specimens.

34. *Erysimum hieraciifolium*. Apx. A-D: -. E: FE2798, FE2881, FE2883, FE2884 – Lublin, railway areas (Wrzesień, Świąś 2006). F: FE2787a – Students campus, the shoulder of Głęboka St., loamy-sandy surface. Several specimens. FE2787b – Śródmieście district, Głęboka St., University Park. On the edge of road, sandy-loamy surface. A dozen-odd specimen. FE2798 – Kośminek district, the Central Railway Station. The railway track margin, sandy-gravel surface. A dozen-odd specimen. FE2884 – Zadębie district, in the vicinity of Rataj St. Fallow, sandy-loamy surface. A dozen-odd specimen.

35. *E. marschallianum*. Agep. A-D:-. E: FE2883 – Lublin, railway areas (Wrzesień, Świąś 2006). F: FE2787a – Śródmieście district, in the vicinity crossroads of Głęboka St., and Sowiński St. A slope of the loess escarpment. Several specimens. FE2787b – Śródmieście, in the vicinity of Weteranów St. Lawn, sandy-loamy surface. Several specimens. FE2787c – Śródmieście district, in the vicinity of Głęboka St., about 50m of east Narutowicz St. Lawn, loamy-sandy surface. Isolated specimen. FE2862 – Zadębie district, in the vicinity of Turystyczna St. The railway tracks, gravelly-slag surface. Dense tuft. FE2870 – Kalinowszczyzna, in the vicinity of Niska St. Fallow, sandy-loamy surface. Several specimens. FE2874 – Zadębie district, in the vicinity of railway level crossing in Melgiewska St. A foot of railway trucks slope, sandy-loamy surface. Several specimens. FE2881a – The North Railway Station. Railway trucks, sandy-gravel surface. Several specimens. FE2881b – Majdan Tatarski district, in the vicinity of North Railway Station and Chemiczna St. A foot of railway trucks slope, loamy-sandy surface. A dozen-odd specimen. FE2882a – Zadębie, N part. The side between railway tracks, gravel surface ż. Dense tuft. FE2882b – Zadębie district, handling railway station. Square by railway trucks sandy-gravel surface. A dozen-odd specimens.

36. *Genista germanica*. Apx. A: Lublin city (Fijałkowski 1954). B-E: -. F: FE2755 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess ravine. A dozen-odd specimen. FE2756 – Czechów district, in the vicinity of Poligonowa St. Loess-covered slope. Several specimens. FE3713 – Węglin district, in the vicinity of Węglin St. Loess slope of the road. A dozen-odd specimen. FE3724 – Stary Las (Gaj), SW part. Dry-ground forest margin with admixture pine. Dense tuft. FE3747a – Dąbrowa Forest, NW part. Oak-hornbeam forest, sandy-loamy surface. A dozen-odd specimen. FE3747b – Dąbrowa Forest, NE part. Forest margin, bordered on cultivated areas, sandy-loamy surface. Several specimens. FE3748 – Dąbrowa Forest, N part. Pine-oak forest. A dozen-odd specimen.

37. *Geranium molle*. Arch. A: Lublin city (Karo 1883, Wawer 1985). B-E:-. F: FE2765 – Ślawnin district, area of University Botanical Garden. On the edge of path, loamy surface. A dozen-odd specimen. FE2775 – Śródmieście district, in the vicinity of crossroads Raławickie Av. and

Kraśnickie Av. Lawn, sandy-loamy surface. Several specimens. FE2785 – Śródmieście district, in the vicinity of crossroads Głęboka St., and Kraśnickie Av., by University Art Department. Lawn, sandy-loamy surface. Several specimens. FE2883 – Zadębie district, the shoulder of Grygowa St., sandy-loamy surface. Isolated specimen. FE3705 – Poręba district, on the edge of Jan Paweł II St. Lawn, loamy surface. Several big tufts. FE3706 – Majdan Wrotkowski district, in the vicinity of Wyżyna St. ruderal yard, sandy-loamy surface. Isolated specimen. FE3726 – Majdan Wrotkowski district, in the vicinity of Stary Gaj St. Meadow, loamy surface. Several tuft of specimens. FE3728 – Zemborzyce district, in the vicinity of crossroads Świętochowski St., and Makowa St. The shoulder of road, sandy-loamy surface. In large numbers. FE3729 – Zemborzyce district, in the vicinity of Świętochowski St. The railway tracks, sandy surface. In large numbers. FE3820 – Abramowice district, in the vicinity of crossroads Abramowicka St., and Głuska St. Fallow, sandy-loamy surface. A dozen-odd specimen.

38. *G. sibiricum*. Agep. A-E:-. F: FE2785a – LSM district, Mickiewicz Estate, in Grażyna St. Przy i in the vicinity of buildings. Lawns, sandy-loamy surface. A dozen-odd tuft of specimens and scattered throughout the space about 150m. FE2785b – LSM district, in the vicinity of Wajdeloty St. Lawn, loamy-sandy surface. Dense tuft. FE2787 – Śródmieście district, in the vicinity of Wierciński St. By the cemetery wall, ruderal yard loamy surface. Dense tuft. FE2798 – Śródmieście district, in the vicinity of Strażacka St. Lawn, loamy-sandy surface. Several tuft of specimens. FE3709 – Dziesiąta district, in the vicinity of Wojenna St., by the wall of military areas. Ruderal yard, loamy surface. A dozen-odd tuft of specimens.

39. *Gymnocarpium robertianum*. Apfs. A: Lublin city (Fijałkowski 1960). B-E:-. F: FE3714 – Stary Las (Gaj), NW part. The shoulder of road in format with hornbeam, spruce and pine. A dozen-odd specimen. FE3715 – Stary Las (Gaj), N part. Oak-hornbeam forest. A dozen-odd specimen. FE3724 – Stary Las (Gaj), W part. Oak-hornbeam forest. Several tuft of specimens. FE3725 – Stary Las (Gaj), W part. Oak-hornbeam forest. Several specimens.

40. *Hieracium aurantiacum*. Ageph. A-E:-. F: FE2786 – LSM district, in the vicinity of crossroads Chrobry St., Wyczółkowski St. Lawn, sandy-loamy surface. Several specimens. FE3702 – Weglin district, in Kraśnickie Av., in the vicinity of city boundary. The shoulder of road, sandy surface. Isolated specimen. FE3725 – Stary Las (Gaj), W part. Oak-hornbeam forest. A dozen-odd specimen. FE3803 – Felin district, in the vicinity of Witos Av. A slope of the loess escarpment. A dozen-odd dens tuft. FE3804 – Felin district, in the vicinity of Doświadczalna St. Lawn, loamy-sandy surface. Several dozen specimens.

41. *Holosteum umbellatum*. Apx. A: -. B-C: -. D: Wrotków district (*leg. Koporska H.* 1926 LBL), Rury district (*leg. Motyka J.* 1946 LBL), Trześniów district (*leg. Fijałkowski D.* 1951 LBL). E: -. F: FE2766 – Czechów district, SW part, in the vicinity of Północna St. A slope of the loess escarpment. A dozen-odd specimen. FE3706 – Czuby district, in the vicinity of Filaretów St. A slope of the loess escarpment. Dense tuft.

42. *Hypochoeris maculata*. Apm. A: Lublin city (Fijałkowski 1964). B-E:-. F: FE3831 – Abramowice district, in the vicinity of Sachsów St. Fallow, sandy-loamy surface. Several specimens.

43. *Iris sibirica*. Apww, V [NRL, RRL], TP. A-E:-. F: FE2766 – Czechów district, in the vicinity of Wyrwasa St. Loess ravine bottom. Several specimens. FE3726 – Majdan Wrotkowski district, in the vicinity of Stary Gaj St. The railway tracks margin, loamy-sandy surface. Several tufts of specimens.

44. *Koeleria macrantha*. Apm. A: Lublin city (Karo 1883). B-C:-. D: Rudnik district (*leg. Fijałkowski D.* 1951, LBL). E:-. F: FE2756 – Czechów district, in the vicinity of Koncertowa St. A slope of the loess ravine. A dozen-odd tuft of specimens. FE2784 – Zimne Doły district, in the vicinity of Wojciechowska St. A slope of the road, sandy-loamy surface. Several tuft of specimens. FE2822 – Kolonia Jakubowice Murowane district, N part. A slope of the embankment of railway

tracks, sandy-loamy surface. Several tuft of specimens. FE2832a – Rudnik district, about 1 km in N from railway station. A slope of the embankment of railway tracks, sandy-loamy surface. A dozen-odd tuft of specimens. FE2832b – Kolonia Jakubowice Murowane district, S part. The railway track margin, sandy-loamy surface. A dozen-odd tuft of specimens. FE2842 – Rudnik district, W part. A slope of the loess escarpment. Dense tuft. FE3801 – Felin district, in the vicinity of Droga Męczenników Majdanka St., area of Concentration Camp “Majdanek”. Grass, loamy-sandy surface. Several tuft specimens.

45. *Lappula squarrosa*. Aps. A: Lublin city (Karo 1883, Fijałkowski 1967). B: -. C: Lublin city (leg. Karo F. 1881, WA). D: Sławinek district (leg. Malmon K. 1957, LBL), Rudnik district (leg. Fijałkowski D. 1951, LBL), Sławinek district (leg. Fijałkowski D. 1954, 1959, LBL). E: FE2798, FE2882 – Lublin, railway areas (Wrzesień, Świąc 2006). F: FE2798 – Rury district, Lublin«s Sugar Factory. Ruderal yard, loamy surface. Several specimens. FE2883 – Majdan Tatarski district, SE part. Railway handling station. The side between railway tracks, sandy-gravel surface with slag admixture. A dozen-odd specimens.

46. *Lavathera thuringiaca*. Apx. A: Lublin city (Karo 1883; Fijałkowski 1963, 1967). B-E: -. F: FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. A slope of the loess escarpment. Several specimens. FE2787 – Śródmieście district, in the vicinity of Akademicka St., by Institute of Biology and Earth Science. Lawn, loamy-sandy surface. Isolated specimen. FE2789 – Kalinowszczyzna district, in the vicinity of Unia Lubelska Av., the Bystrzyca River Valley. A slope of the flood banks, loamy-sandy surface. Several specimens. FE2841a – Rudnik district, in the vicinity of crossroads Dożynkowa St. and Orzechowa St. A slope of the loess escarpment. Several specimens. FE2841b – Rudnik district, in the vicinity of Palmowa St. A slope of the loess ravine. A dozen-odd specimen. FE2851 – Hajdów district, in the vicinity of Trzeźniowska St., the Bystrzyca River Valley. River terrace, sandy-loamy surface. Isolated specimen. FE2852 – Pliszczyn district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. A dozen-odd specimen. FE2853 – Łysaków district, in the vicinity of Grodzickiego St. Meadow, loamy surface. Two big tufts.

47. *Leersia oryzoides*. Apww. A-E: -. F: FE2765 – Sławinek district, in the vicinity of Solidarności Av., the Czechówka River Valley. River bang, loamy surface. A dozen-odd specimen.

48. *Limosella aquatica*. Apww. A-E: -. F: FE2841 – Rudnik district, in the vicinity of Orzechowa St. On the edge of small pond. Several specimens.

49. *Nasturtium officinale*. Apww, V [RRL]. A-E: -. F: FE2797 – Rury district, in the vicinity of Wapienna St. the Bystrzyca River Valley. In the river. Dense tuft. FE3707 – Wrotków district, in the vicinity of Nadbystrzycka St., the Bystrzyca River Valley, river bang, loamy surface. Several specimens. FE3737 – Wrotków, in the vicinity of Nałkowskich St., the Bystrzyca River Valley. River bang, loamy surface. One tuft of specimens. FE3774 – Zemborzyce, in the vicinity of Cienista St. Meadow, drainage ditch. Several specimens. FE3775a – Zemborzyce district, in the vicinity of Cienista St. the Bystrzyca River Valley. River bang, loamy surface. Several tuft. FE3775b – Zemborzyce district, in the vicinity of crossroads Cienista St. and Roślinna St. Drainage ditch. Dense tuft. FE3784 – Prawiedniki district, N part, by mouth the Krężniczanka River. River bang, loamy surface. A dozen-odd specimen. FE3794 – Prawiedniki district, the Bystrzyca River Valley. River bang, loamy surface. Several specimens. FE3795 – Prawiedniki, the Bystrzyca River Valley, in the vicinity of Prawiednicka St. River bang, loamy surface. Dense tuft. FE4705 – Prawiedniki district, in the vicinity of Prawiednicka St. In the river. A dozen-odd specimens.

50. *Omphalodes scorpioides*. Apfs, E [NRL]. A-E: -. F: FE2843 – Pliszczyn district, in the vicinity of Zabytkowa St., by the manor house, park. The shoulder of road, loamy surface. Dense tuft.

51. *Onosma echioides*. Ageph. A-E: -. F: FE2755 – Sławin district, in the vicinity of Sławinkowska St. Fallow, loamy surface. Several tuft. FE2765 – Sławin district, area of University

Botanical Garden. Compost. Dense tuft. FE2774 – Sławin district, in the vicinity of Jaśminowa St. Ruderal yard, loamy-sandy surface. A dozen-odd specimen. FE2786 – University Campus, in the vicinity of Langiewicz St.. Lawn, loamy-sandy surface. A dozen-odd specimens.

52. *Ornithogalum collinum*. Ageph, TP, E [NRL, RRL]. A-E:-. F: FE2759 – Kalinowszczyzna district, in the vicinity of Walecznych St., municipal cemetery. Bank of path, loamy-sandy surface. In large numbers.

53. *O. umbellatum*. Ageph, TP. A-E:-. F: FE2759 – Kalinowszczyzna district, in the vicinity of Walecznych St., municipal cemetery. Bank of path, loamy-sandy. In large numbers. FE2767 – Czechów district, in the vicinity of Północna St. A slope of the loess escarpment. Several specimens. FE2783 – Lipniak, in the vicinity of Lipniak St. Meadow, loamy surface. Several tufts. FE2787 – Śródmieście, in the vicinity of Głęboka St. Brushwood, loamy surface. Several tufts of specimens. FE2798 – Rury district, in the vicinity of Dzierżawna St., the Bystrzyca River Valley. River terrace, humus-loamy surface. Several specimens. FE3714 – Węglin district, in the vicinity of Węglin. The shoulder of a dirt road, brushwood, sandy-loamy surface. Isolated specimen. FE3802 – Felin district, in the vicinity of Droga Męczenników Majdanka St., area of municipal cemetery. On the edge of path, loamy-sandy surface. Several specimens.

54. *Oxalis corniculata*. Ageph. A-E:-. F: FE2759 – Bursaki district, the shoulder of Spółdzielczości Pracy Av., loamy-sandy surface. Dense tuft. FE2776 – Śródmieście district, the shoulder of Raclawickie Av., sandy-loamy surface. A dozen-odd tuft of specimens. FE3714a – Stary Las (Gaj), N part. Pine-spruce forest margin. Dense tuft. FE3714b – Węglin district, in the vicinity of Węglin. In clover crop, loamy surface. Dense tuft. FE3714c. – Poręba district, in the vicinity of Forest „Stary Gaj.” The shoulder of a dirt road, sandy-loamy surface. A dozen-odd specimens.

55. *O. dillenii*. Ageph. A-E:-. F: FE2759 – Kalinowszczyzna district, in the vicinity of Walecznych St., municipal cemetery. Bank of path, sandy-loamy surface. In large numbers. FE2775 – Helenów district, in the vicinity of Wojciechowska St., grass, sandy-loamy surface. A dozen-odd specimen. FE2783 – Zimne Doly district, in the vicinity crossroads of Wojciechowska St. and Lipnik St. A loess slope of the dirt road. Dense tuft. FE2787 – Śródmieście district, in the vicinity of Raabe St. Lawn, sandy surface. Dense tuft. FE3714 – Węglin district, in the vicinity of Węglin St. Fallow, sandy-loamy surface. Several tufts.

56. *Parietaria officinalis*. Arch. A: Lublin city (Fijałkowski 1978). B-E:-. F: FE2765 – Sławinek district, area of University Botanical Garden. On the edge of path, loamy-sandy surface. Several specimens.

57. *Peplis portula*. Apwn. A: Lublin city (Fijałkowski 1967). B-E:-. F: FE2841 – Rudnik, in the vicinity of crossroads Orzechowa St. and Dożynkowa St. Bank of pond. A dozen-odd specimen. FE3707 – Śródmieście district, in the vicinity of Nadbystrzycka St., the Bystrzyca River Valley. River terrace, loamy surface. Several specimens. FE3783 – Prawiedniki district, Forest Rudki, the Nędznica River Valley. River bang, loamy surface. Several specimens.

58. *Petasites hybridus*. Apm, LR [RRL]. A-E:-. F: FE2758a – Czechów district, in the vicinity of Elsner St. A slope of the loess escarpment. Several specimens. FE2758b – Czechów district, in the vicinity of crossroads Elsner St. and Chodźki St. Lawn, loamy-sandy surface. Isolated specimens.

59. *Poa bulbosa*. Apm, DD [RRL]. A-E:-. F: FE2786 – Śródmieście district, University Park. On the edge of path, loamy-sandy surface. Several tuft of specimens. FE3747 – Zemborzyce district, in the vicinity of Zemborzycka St. Meadow, sandy-loamy surface. Dense tuft.

60. *Polygala amarilla*. Apm. A: Lublin city (Fijałkowski 1964). B-C: -. D: Rury district (*leg. Karo F.* 1881, 1883, WA), Rudnik district (*leg. Fijałkowski D.* 1951, LBL). E: -. F: FE2843 – Pliszczyn district, in the vicinity of Pliszczyńska St. Meadow, loamy surface. A dozen-odd specimens.

61. *Primula veris*. Apm. A-C: -. D: Wola Sławińska district (*leg. Koporska H.* 1924, WA) E: FE2841 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2756 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. A dozen-odd specimen. FE2766 – Czechów district, W part, area of training ground. A slope of the loess escarpment. A dozen-odd specimen. FE3749 – Dąbrowa Forest, in the vicinity of Osmolicka St. Pine-hornbeam forest margin. Several specimens. FE3773 – Dąbrowa Forest in the vicinity of Krężnicka St. Fallow, sandy-loamy surface. A dozen-odd specimen. FE3774 – Dąbrowa Forest, SW part. Oak- pine forest, sandy-loamy surface. Dense tuft. FE3776 – Dąbrowa Forest, SW part. Forest with hornbeam and lime. Several dozen specimens. FE3785 – Dąbrowa Forest, SW part., oak forest, sandy-loamy surface. Several specimens.

62. *Rhynchospora alba*. Ape, V [RRL]. A-E:-. F: FE2876 – Biskupie district, in the vicinity of Biskupie. Meadow, peat-loamy surface. A dozen-odd tuft of specimens.

63. *Rosa gallica*. Apx, TP, V [NRL], CR [RRL]. A: Lublin city (Fijałkowski 1959, 1964). B-C: -. D: Helenów district (*leg. Fijałkowski D.* 1948, LBL). E: -. F: FE2756 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. Several dense tufts.

64. *Rosa jundzillii*. Apx. A-D: -. E: FE2799 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2756 – Czechów district, in the vicinity of Poligonowa St. Loess ravine bottom. Several specimens.

65. *Salvia nemorosa*. Apx. A: Lublin city (Koporska 1929; Fijałkowski 1959, 1967). B-D:-. E: FE2882, FE2883 – Lublin, railway areas (Wrzesień, Święs 2006). F: FE2843 – Pliszczyn district, in the vicinity of Pliszczyńska St. Among fields under cultivation. A slope of the loess escarpment. A dozen-odd specimen. FE2882a – Zadebie district, in the vicinity of Car Factory. The side between railway tracks, sandy-gravel surface. Several specimens. FE2882b – Zadebie district, area of railway handling station. Ruderal yard, sandy-gravel surface. Several specimens. FE3716 – Stary Las (Gaj), N part. In the vicinity of railway trucks, sandy-loamy surface. A dozen-odd specimens.

66. *Saxifraga granulata*. Apx. A: Lublin city (Fijałkowski 1964). B:-. C: Lublin city (*leg. Moryka J.* 1946, LBL). D: Holes behind Saski Garden (*leg. Koporska H.* 1881, LBL), Sławinek district (*leg. Fijałkowski D.* 1946, LBL), Helenów district (*leg. Fijałkowski D.* 1947, LBL), Rudnik district (*leg. Fijałkowski D.* 1951, LBL). E:-. F: FE2841 – Rudnik, in the vicinity of Torowa St. In the vicinity of railway trucks. A slope of the loess escarpment. Isolated specimens.

67. *Senecio barbareaifolius*. Apm. A-E:-. F: FE2763 – Sławin district, in the vicinity of crossroads Wądolna St., and Główna St. Meadow, loamy surface. A dozen-odd specimens.

68. *Thalictrum flavum*. Apfs. A-E:-. F: FE2773 – Zimne Doły district, in the vicinity of Wojciechowska St. Loess ravine bottom. Several specimens.

69. *T. lucidum*. Apm. A-E:-. F: FE2756a – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. A dozen-odd specimens. FE2756b – Czechów district in the vicinity of Koncertowa St. Loess ravine bottom. Several specimens. FE2773 – Zimne Doły district, in the vicinity of Wojciechowska St. Loess ravine bottom, dry-ground forest. Several specimens.

70. *T. simplex*. Apx. A-E:-. F: FE2746 – Czechów district, w rejonie Zelwerowicz St. A slope of the loess escarpment. FE2756a – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. FE3775 – Zemborzyce, in the vicinity of Cienista St., the Bystrzyca River Valley. Meadow, loamy surface. Everywhere several specimens.

71. *Thladiantha dubia*. Agep. A-E:-. F: FE2765 – Sławin district, University Botanical Garden. Ruderal yard, loamy-sandy surface. Dense tuft. FE2787 – University Campus, Maria Curie-Skłodowska Sq. Lawn, sandy-loamy surface. Dense tuft. FE2788a – Śródmieście district, in the vicinity of Dolna Marii Panny St. On the building wall. Dense tuft of specimens. FE2788b – Śródmieście district, in the vicinity of crossroads Rusalka St. and Dolna Marii Panny St. The

shoulder of road, sandy-loamy surface. Dense tuft of specimens. FE2792 – Lipniak district, in the vicinity of crossroads Leśna St. and Liszkowski St. Brushwood. Several specimens. FE2798 – Rury district, in the vicinity of Wapienna St. The shoulder of bike path, loamy-sandy surface. Dense tuft. FE2851 – Jakubowice Murowane district, in the vicinity of Grodzicki St. Fallow, loamy-sandy surface. Several tufts of specimens. FE2890 – Majdan Tatarski district, in the vicinity of Krańcowa St. Lawn, loamy-sandy surface. Several. FE3704 – Poreba district, in the vicinity of Jan Paweł II St. The shoulder of dirt road, loamy-sandy surface. Dense tuft.

72. *Veronica austriaca*. Apx. A: Lublin city (Karo 1883, Koporska 1929, Fijałkowski 1964, 1967). B–C: –. D: Rury district (*leg. Koporska H.* 1916, LBL), Czechów and Sławinek district (*leg. Moryka J.* 1946, LBL), Rury district (*leg. Malmon K.* 1957, LBL), Łysaków district (*leg. Fijałkowski D.* 1951, LBL), Rudnik district (*leg. Izdebski K.* 1957, LBL). E: –. F: FE2755 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. A dozen-odd specimens. FE2755d – Czechów district, in the vicinity of Altanowa St. A slope of the loess ravine. FE2766 – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. Several specimens. FE2774 – Zimne Doły district, in the vicinity of Wojciechowska St. A slope of the loess ravine. Dense tuft. FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. A slope of the loess escarpment. A dozen-odd specimens. FE2853 – Trzeźniów district, in the vicinity of Grodzicki St. A slope of the loess escarpment. Several specimens. FE3708 – Wrotków, in the vicinity of crossroads Nowy Świat St., and Smoluchowski St. On the edge of railway trucks, gravely-slag surface. A dozen-odd specimens. FE3774 – Zemborzyce district, in the vicinity of Tęczowa St. A slope of loess dirt road. A dozen-odd specimens.

73. *V. teucrium*. Apx. A–E:–. F: FE2756a – Czechów district, in the vicinity of Koncertowa St. A slope of the loess escarpment. Several tufts of specimens. FE2756b – Czechów district, in the vicinity of Poligonowa St. A slope of the loess escarpment. One tuft of specimens. FE2762 – Wola Sławińska district, in the N from brickyard. A slope of the loess escarpment. Several tufts of specimens. FE2779 – Śródmieście district, in the vicinity of Sienna St., Old Jewish Cemetery. A slope of the loess escarpment. Several tufts of specimens. FE2832 – Kol. Jakubowice Murowane district, SW part. A slope of the loess ravine. Several tuft specimens.

74. *V. urticifolia*. Apx. A–E:–. F: FE2756 – Czechów district, in the vicinity of Koncertowa St. A slope of the loess hill. A dozen-odd specimens. FE3725 – Stary Las (Gaj), NW part. Oak-hornbeam forest. Several specimens. FE3765 – Dąbrowa Forest, W part. Forest with hornbeam, spruce and pine. Several specimens. FE3774 – Dąbrowa Forest, S part. Oak-pine forest. Several specimens. FE3776 – Dąbrowa Forest, SE part, in the vicinity of Osmolicka St. Lawn, sandy-loamy surface. Several specimens. FE3777 – Dąbrowa Forest, SE part. Oak-pine forest. Several specimens.

## DISCUSSION OF RESULTS

1. The paper contains a list of 74 stations rare vascular plants in the territory of Lublin city.

2. Among the species listed apophytes (54 species) numerically dominate over anthropophytes (20 species).

3. The most interesting group of plants comprises 22 species rare and endangered on the regional and national scale: *Androsace septentrionalis*, *Artemisia scoparia*, *Asplenium ruta-muraria*, *Campanula latifolia*, *Carex buxbaumii*, *C. davalliana*, *C. praecox*, *C. umbrosa*, *Centaurium pulchellum*, *Chimaphila*



*umbellata*, *Coronopus squamatus*, *Dactylorhiza maculata*, *Dianthus armeria*, *Draba nemorosa*, *Iris sibirica*, *Nasturtium officinale*, *Omphalodes scorpioides*, *Ornithogalum collinum*, *Petasites hybridus*, *Poa bulbosa*, *Rosa gallica*, *Rhynchospora alba*.

4. The second principal group of the plants studied is represented by the species reported earlier from the investigated area, but from indeterminate stations. They are the following 9 species: *Erucastrum gallicum*, *Geranium molle*, *Gymnocarpium robertianum*, *Hypocheris maculata*, *Koeleria macrantha*, *Lavatera thuringiaca*, *Parietaria officinalis*, *Peplis portula*, *Rosa gallica*.

5. The other group of plant is composed of species new in the area of Lublin city. It comprises 32 species: *Achlillea pannonica*, *Alchemilla glaucescens*, *Asplenium ruta – muraria*, *Bidens connata*, *Carex buxbaumii*, *C. davalliana*, *Cardamine hirsuta*, *Dactylorhiza maculata*, *Dianthus armeria*, *Draba nemorosa*, *Epipactis helleborine*, *Geranium sibiricum*, *Hieracium aurantiacum*, *Iris sibirica*, *Leersia oryzoides*, *Limosella aquatica*, *Nasturtium officinale*, *Omphalodes scorpioides*, *Onosma echioides*, *Ornithogalum collinum*, *O. umbellatum*, *Oxalis corniculata*, *O. dillenii*, *Petasites hybridus*, *Poa bulbosa*, *Rhynchospora alba*, *Senecio barbareaifolius*, *Thalictrum flavm*, *T. simplex*, *Thladiantha dubia*, *Veronica teucrium*, *V. urticifolia*.

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