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## CUPRINS

## CONTENT

### Paleontologie

### Paleontology

ZOLTÁN CZIER: <i>Banatozamites calvus</i> Czier sp. nov. and <i>Bucklandia aninaensis</i> Czier sp. nov. from the Lower Jurassic of Anina, Romania. <i>Banatozamites calvus</i> Czier sp. nov. și <i>Bucklandia aninaensis</i> Czier sp. nov. din jurasicul inferior de la Anina, România.....	5
--	---

EUGEN KESSLER & MÁRTON VENCZEL: Bird remains from the Middle Miocene of Subpiatră (W-Romania). <i>Resturi de păsări din miocenul mediu de la Subpiatră (Vestul României)</i> .....	27
--	----

### Botanică

### Botany

VASILE MAXIM DANCIU & DORINA GOLBAN: The Herbarium of Simonkai L. in the collection of the Cris County Museum (Part II.). <i>Ierbarul Simonkai L. din colecția Muzeului Țării Crișurilor (partea a II-a)</i> .....	37
--	----

### Zoologie

### Zoology

TAMÁS DOMOKOS & JÓZSEF LENNERT: Standard malacofaunistical work of Sălaj County and western part of the Plopișului/Șesului Mountains mania). <i>Cercetări malacofaunistice standard din județul Sălaj și partea de vest a Munților Plopiș/Șes</i> .....	167
---	-----

ADRIAN GAGIU: Catalog of the hoverflies (Diptera: Brachycera: Syrphidae) from the collection of Vladimir Brădescu deposited in Țării Crișurilor Museum, Oradea. <i>Catalogul sirfidelor (Diptera: Brachycera: Syrphidae) din colecția Vladimir Brădescu aflate la Muzeul Țării Crișurilor, Oradea..</i>	207
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### Muzeologie

### Museology

DORINA GOLBAN: Proiectarea depozitelor de paleontologie/geologie din noua clădire a Muzeului Țării Crișurilor, Oradea. <i>Designing the paleontological/geological deposits for the new building of Țării Crișurilor Museum, Oradea</i> .....	217
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<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>5 - 26</b>	<b>Oradea, 2009</b>
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## ***Banatozamites calvus* Czier sp. nov. and *Bucklandia aninaensis* Czier sp. nov. from the Lower Jurassic of Anina, Romania**

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**Abstract.** The new Bennettitalean species *Banatozamites calvus* and *Bucklandia aninaensis* are described from the mining locality Anina, situated in Banat region, Romania. The material originates from the Valea Terezia Member of the Steierdorf Formation, from Hettangian *pro parte* – Sinemurian continental deposits of the Getic Realm. *Banatozamites calvus* is a leaf with narrow pinnae, possessing half-concealed rachis and closely set or slightly distanced flat pinnulae. The pinnulae possess asymmetrical rounded apex, and usually simple veins. The lamina is lack of trichomes and of papillae. The adaxial epidermis consists of very sinuous-walled epidermal cells. The abaxial epidermis is differentiated into stomatal-free and stomatal bands. Stomata are densely scattered, arranged mainly in three rows. The stomatal apparatus, having semi-oval guard cells and mostly rectangular subsidiary cells, is not covered by roof cells. *Bucklandia aninaensis* is a small stem with petioles, belonging very probably to the plant that has *Banatozamites calvus* leaves. The stem and the petioles possess fine longitudinal ridges, and cuticle that indicates rows of rectangular to rounded-elongated cells. *Banatozamites calvus* and *Bucklandia aninaensis* appear in the *Banatozamites chlamydostomus* Subzone of the *Clathropteris meniscioides* Biozone. The genus *Banatozamites* with its species, *B. chlamydostomus*, *B. remotus*, *B. calvus*, as well as the species *Bucklandia aninaensis*, is endemic element of the European Mesophytic.

**Keywords.** Macroflora, Mesophytic, Romania.

## Introduction

Fourteen years ago, the Bennettitalean genus *Banatozamites* was known solely based on the genotype *B. chlamydostomus* Czier 1996. The second species, named *Banatozamites remotus* Czier 2008, has been recently created only after a time longer than a decade. This was possible owing to fortunate discoveries of new leaf impressions and cuticle-bearing compressions. Some of the newly identified specimens, kept in the collections of the Botanical Department of the Hungarian Natural History Museum at Budapest (HNHM-BP), however, are not assignable to these two species, although their characters show assignment to the genus. Such fossil leaves and a stem constitute subject of this study.

Collected presumably in the 19<sup>th</sup> Century, the specimens originate from the lower Jurassic Anina coal bed, which belongs to the Getic Realm of the Southern Carpathians. All specimens originate from the litho- and biostratigraphic units from where the already known species of *Banatozamites* originate. The geological data regarding the fossiliferous deposits around the mining locality Anina (Banat region, Romania) were extensively presented and discussed by numerous authors, e.g. Kudernatsch (1855, 1857), Andrae (1855), Hantken (1878), Krasser (1921), Mutihac (1959, 1990), Semaka (1962), Năstăseanu (1964, 1984), Humml (1969), Bițoianu (1987), Bucur (1991, 1997), Givulescu (1998), Czier (2000a, 2000b, 2000c, 2008).

## Material and methods

The material that constitutes the subject of this study consists of three hand specimens (HNHM-BP. 602481/1A1, 602481/1A2, 602481/1B), two light microscope slides (LM 3, 4) and a scanning electron microscope stub (SEM 5).

The specimens are on the faces of a grey-blackish piece of finely granulated sandstone. This kind of rock commonly appears at Anina, in the sterile intercalations of the coal seams. The leaves are mainly preserved as impressions, but fortunately, some leaflets possess well-preserved cuticles. Although the stem is a completely coalified compression, and such samples seldom are suitable for cuticular analysis, as an exception to this rule, contains some cuticle-bearing parts.

Preparations have been done by macerating a pinnula, and a small part of the stem, respectively, in Schulze's reagent (HNO<sub>3</sub> plus KClO<sub>3</sub>). After the washing with water, the solution has been neutralized with KOH, and then cleared with distillate water. Cuticles were mounted in glycerine-jelly either for LM or on transparent film for SEM.

## Systematic palaeontology

SPERMATOPHYTA

CYCADEOIDALES

*Banatozamites* Czier 1996

Type. *Banatozamites chlamydostomus* Czier, 1996

***Banatozamites calvus*** Czier sp. nov.

Plate 1, figures 1, 2 *pro parte*; Plate 2, figures 1 – 2; Plate 3, figure 2; Text-figures 1 – 6

*Derivation of name.* Latin *calvus*, glabrous, hairless, smooth. After the smooth lamina, bearing no trichomes, no papillae, and no stomatal-covering roofs. For details, see Váczy (1980).

*Holotype.* Hand specimen HNHM-BP. 602481/1A1 (Pl. 1, fig. 1; Text-figs. 1, 2, 3), LM slide 4 (Pl. 2, figs. 1, 2; Text-fig. 4), SEM stub 5 (Pl. 3, fig. 2; Text-figs. 5, 6).

*Paratype.* Hand specimen HNHM-BP. 602481/1A2 (Pl. 1, fig. 2 *pro parte*).

*Repository.* Botanical Department of the Hungarian Natural History Museum, Budapest, Hungary.

*Type locality.* Anina, Romania.

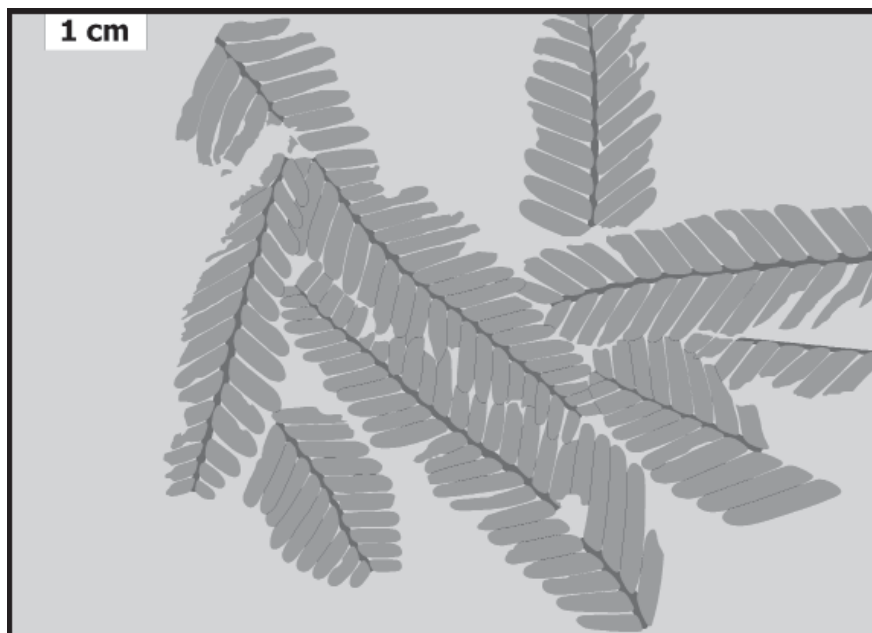
*Lithostratigraphic unit.* The Valea Terezia Member of the Steierdorf Formation (Bucur 1991).

*Biostratigraphic unit.* The *Banatozamites chlamydostomus* Subzone of the *Clathropteris meniscioides* Biozone (Czier 1999).

*Age.* Hettangian *pro parte* - Sinemurian.

*Diagnosis.* Leaf possessing strongly to slightly but mainly normally asymmetrical narrow pinnae. Rachis semi-concealed by the base of pinnulae. Pinnulae set close together or slightly distanced each from the others, disposed alternately to oppositely, flat, linear, with margins entire and asymmetrical rounded apex. More or less obliquely arising veins, usually simple, occasionally dichotomised once in the basal half of pinnulae, running mostly parallel, in the distal third very slightly curved in the acroscopic direction, ending in the apex and in the distal two third of the acroscopic margin. Non-trichomate and non-papillate lamina. Adaxial epidermis consisting of more or less conspicuous rows of randomly oriented, isodiametric to rectangular epidermal cells. Cell walls very sinuous, with deep sinuosities. Abaxial epidermis differentiated in stomatal-free and stomatal bands. All bands with sinu-

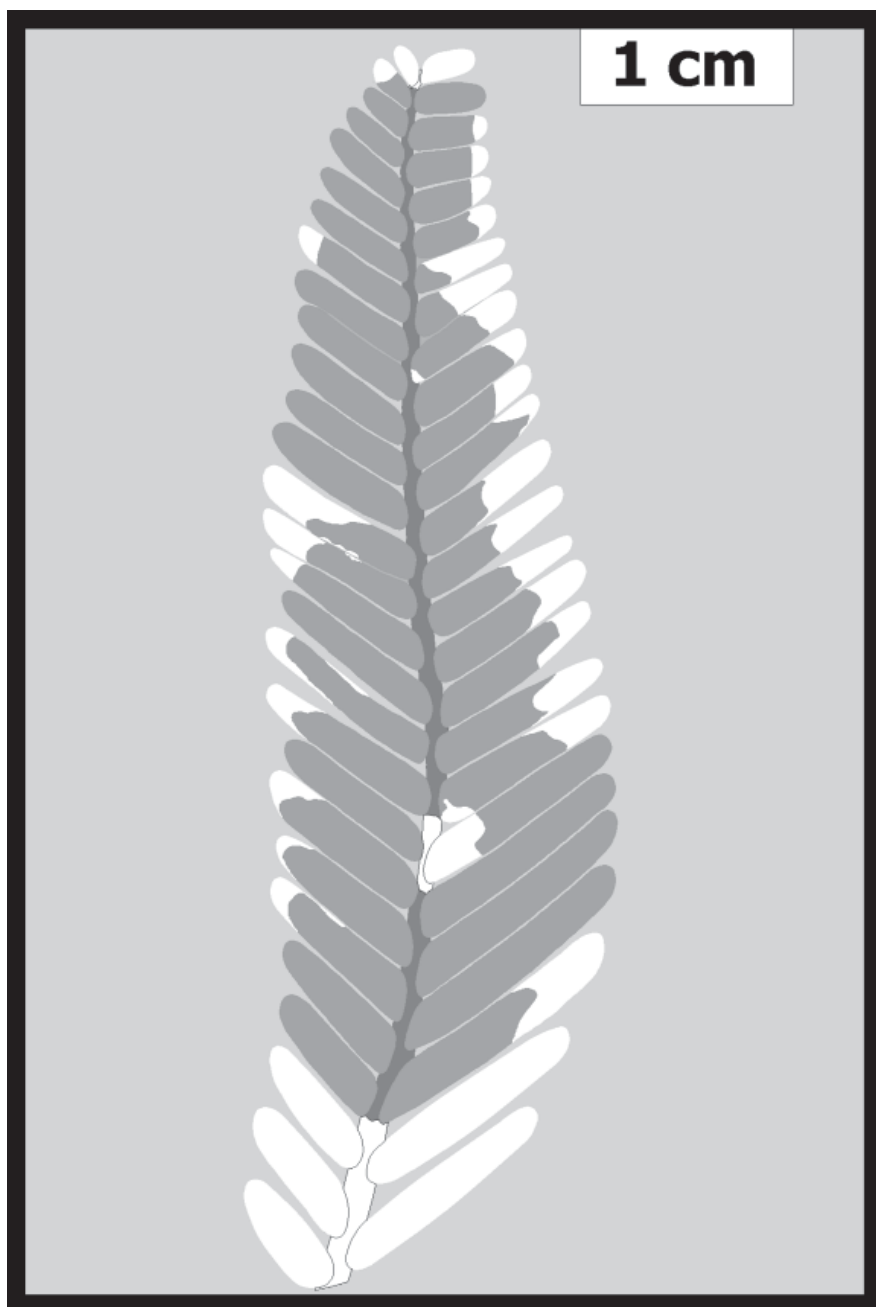




**Fig. 1.** *Banatozamites calvus* sp. nov. Narrow pinnae. Holotype.

ous-walled epidermal cells, slightly larger than the cells of the adaxial epidermis. Stomata arranged mostly in three rows per stomatal band. Stomatal apparatus possessing guard cells with spindle-shaped thickenings, and mostly rectangular, sometimes rounded or irregular subsidiary cells. Guard-cells semi-oval, characterised by width/length ratio  $\frac{1}{3}$ . Walls of the subsidiary cells usually very sinuous or sinuous, sometimes almost straight. Stoma-covering roof lacking.

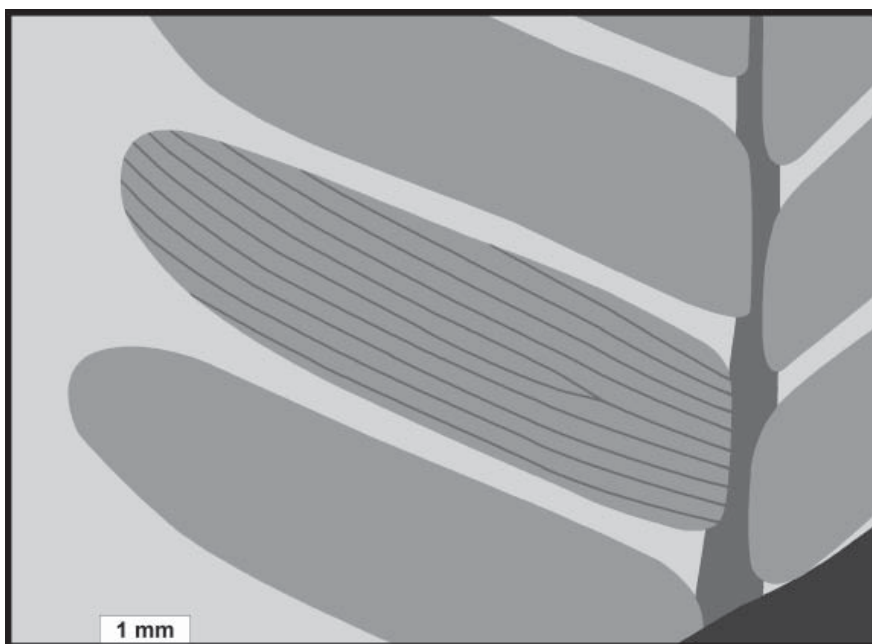
*Supplementary description.* The almost parallel disposition of several pinnae (Fig. 1) suggests a possibly and very probably bipinnate habit of the leaf. On the upper face of the rock there are 28 pinnae belonging to the holotype (Pl. I – Fig. 1). The pinna on the lower face of the rock is the paratype (Pl. I – Fig. 2 *pro parte*). Supposing the bipinnate habit, all the pinnae were initially disposed in a single direction. Their slightly disordered appearance may be the result of their break in fragments during the sedimentation. A young pinna is preserved on a length of 50 mm. Although it has incomplete base and apex, the reconstruction (Fig. 2) shows that initially, the entire pinna was no much longer, just of about 62 mm.



**Fig. 2.** *Banatozamites calvus* sp. nov. Reconstruction of a young pinna. Holotype.

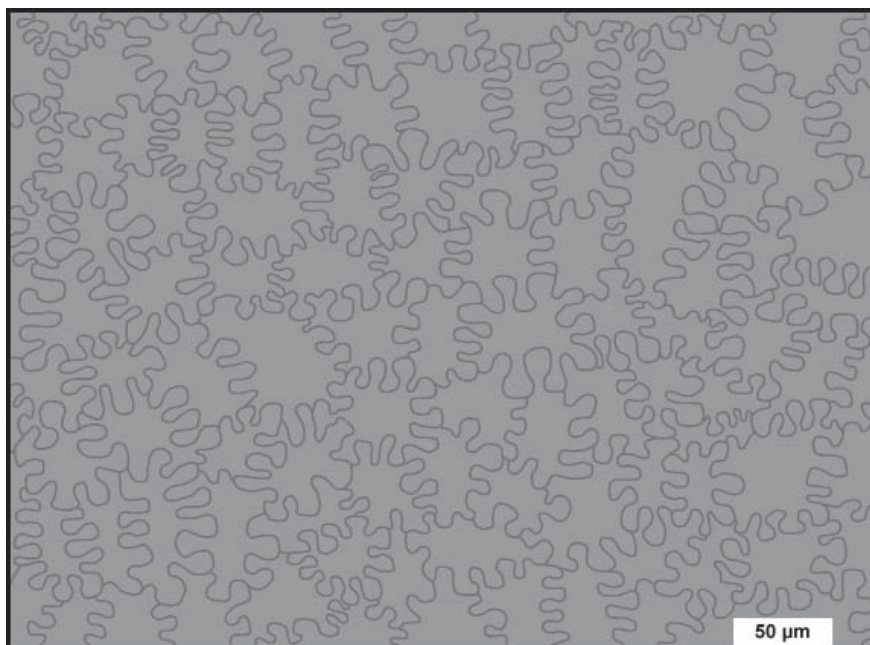


Mature pinnae are about twice longer, the most complete of them being preserved on a length of 98 mm. They are about 15 mm wide on a rather long portion, the width decreasing gradually to about 5 mm near the apex. The pinnae are generally characterised by long and narrow habit, acute to acuminate end. Despite of the fact that the pinnae of *Banatozamites calvus* are narrower than the pinnae of *B. chlamydostomus* and *B. remotus*, they are so long, that their surface may exceed the value known in the case of the latter species. For the most part, the pinnae are normally asymmetrical, regarding the pinnulae insertion angle and their length. The rest of the pinnae are strongly, slightly, or very slightly asymmetrical. The rachis is smooth and slender, not wider as 1 mm, with average width of 0.8 mm, the width decreasing distally to about 0.5 mm. It appears as a narrow channel on the face of the pinna. The pinnulae are attached with their whole bases on the upper face of the rachis, at angle of about 60°, in many instances between 55° – 65°. The pinnulae of the reconstructed asymmetrical young pinna arise at angle of 70° at the left of the rachis, and 45° at the right of it. The attachment angle may be therefore between 45° – 70°. This range is useful in the taxonomy of the *Banatozamites*, although it is not a specific diagnostic character. Some pinnulae of *B. chlamydostomus* and *B. remotus* may be attached at angles between the limits measured on *B. calvus*, but this happens only in few cases. Growing alternately to oppositely, the pinnulae may change their position even in the same pinna, but they never overlap each other. In all the cases, at least a very small gap exists between them. They are linear, with margins entire, slightly narrowing near the apex. The acroscopic margin is straight on its almost whole length. The basiscopic margin, however, in the apical part bends forward, the result being an asymmetrical apex. The asymmetry of the pinnula apex is a specific character, present in all *Banatozamites calvus* pinnulae. This feature appears also in other cases, but it is not exclusiveness of the other species too. In two third of the cases has been observed on *B. chlamydostomus* pinnulae, but just in half of the cases on the pinnulae of *B. remotus*. Mature *B. calvus* pinnulae, in the medial portion of the pinnae, are 8 – 12 mm long and 2 mm wide (1.5 – 3 mm). In the apical portion of the pinna, the pinnulae are much smaller, their length decreasing to about four mm, and the width even to one mm. Venation consists typically of nine (eight to ten) veins, arising more or less obliquely from the whole base of pinnula. Almost each vein of each pinnula is simple. Just in few cases have been observed pinnulae of which one vein dichotomises. In such cases, that vein forks only once, in the basal half of the pinnula (Fig. 3). Owing to the simplicity of the venation, taking also the occasional dichotomisation into consideration, the number of veins in the middle of the pinnulae is between eight and eleven. The venation's density in the middle of a typical pinnula is between strict limits, of four to five veins per mm.



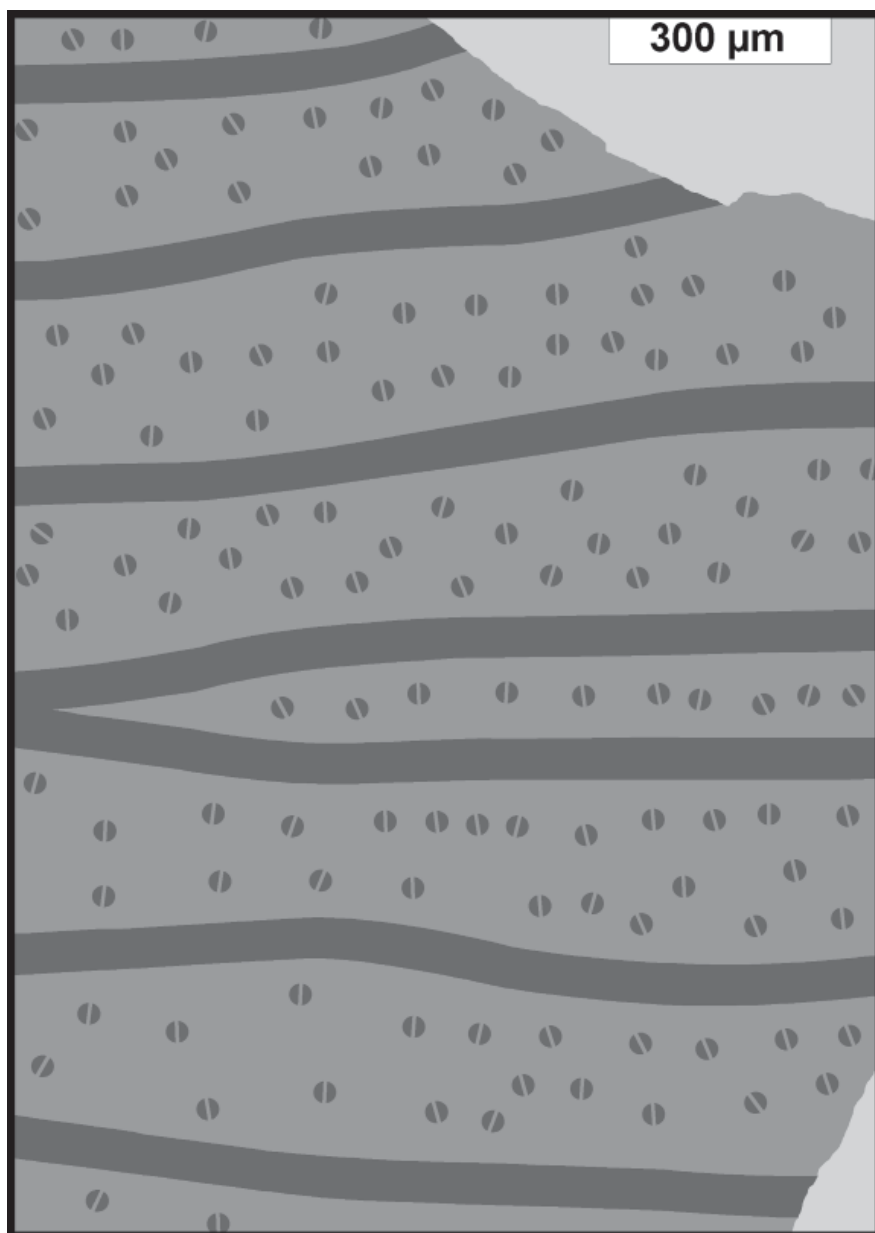
**Fig. 3.** *Banatozamites calvus* sp. nov. Shape, attachment, and venation of pinnulae. Veins directions based on macro- and microscopic analysis. Holotype.

Although cuticles are preserved on rather small areas of the pinnulae, they are normally detachable where present, being sufficiently thick and hard to give very good quality to all preparations. The cuticular analysis has clearly demonstrated the hypostomatic character of the lamina. The upper cuticle shows no differences between the epidermal cells of the venal or intervenal regions (Pl. II – Fig. 1). The adaxial epidermis contains cells with dimensions of 24 - 48/ 20 - 40  $\mu\text{m}$ . All the cell walls have deep sinuosities. The length of the sinuosities is between 10 - 25  $\mu\text{m}$  („wave-length”), their width between 7 - 20  $\mu\text{m}$  („amplitude”) (Fig. 4). Abaxial epidermis (Pl. II – Fig. 2) consists of 80 - 150  $\mu\text{m}$  wide bands of epidermal cells (corresponding to the veins) and of 90 - 210  $\mu\text{m}$  broad stomatal bands (corresponding to the regions between the veins). The epidermal cells of the abaxial epidermis have dimensions of 24 - 66/ 18 - 64  $\mu\text{m}$ . They are oriented parallel with the veins. Their walls are sinuous, although the wall's sinuosities are slightly smaller than those of the adaxial epidermal cell's are. The stomata in the stomatal bands are the most frequently in three rows, sometimes in two or four rows. Occasionally, bands formed by a single row of stomata also appear, where a vein dichotomises.

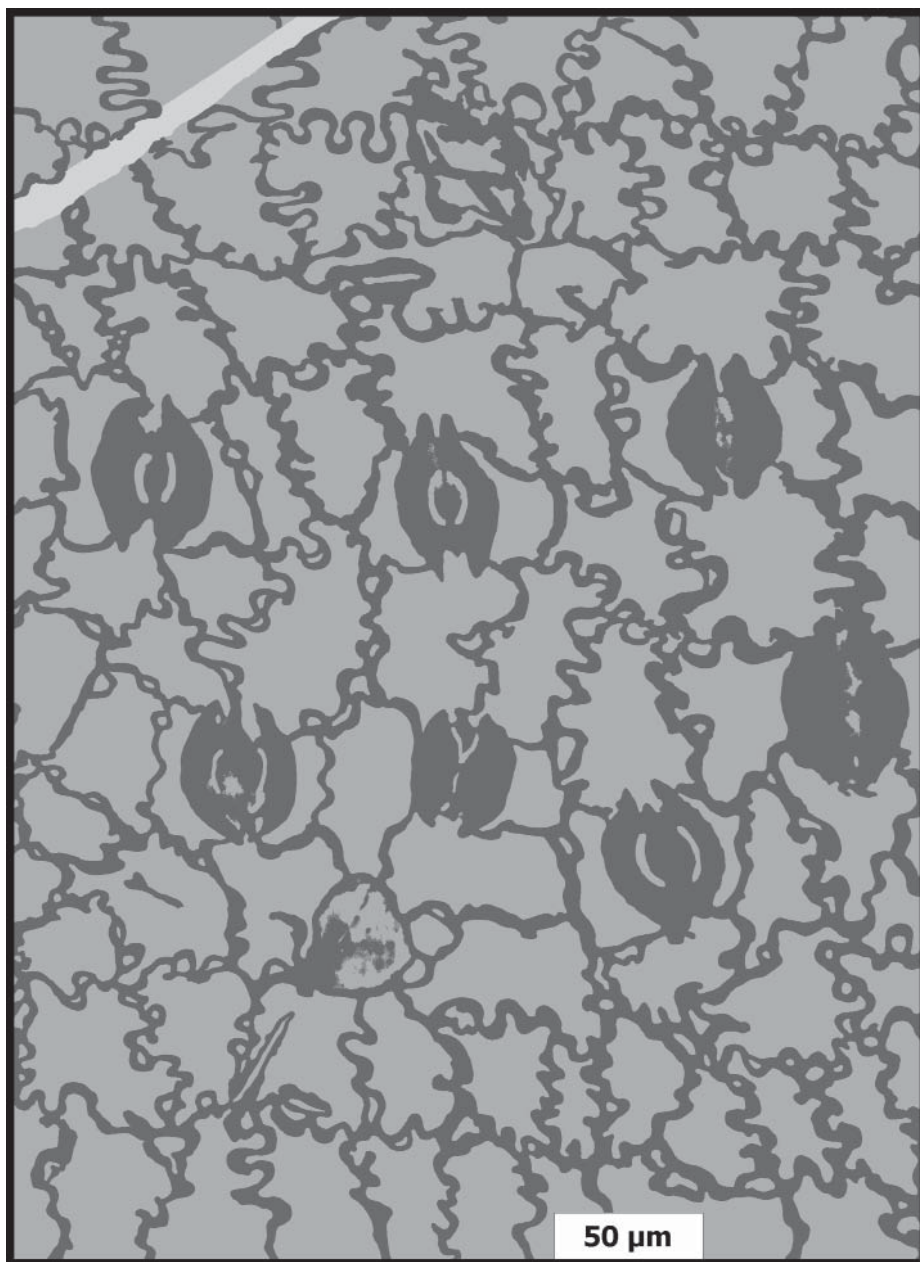


**Fig. 4.** *Banatozamites calvus* sp. nov. Adaxial cuticle showing very sinuous-walled epidermal cells. Holotype.

All stomata are transversely oriented, the pore direction being perpendicular to the veins (Fig. 5). The stomatal apparatus is paracytic (Fig. 6). Stoma is oval, typically 45  $\mu\text{m}$  long and 30  $\mu\text{m}$  wide (Pl. III – Fig. 2). In other words, each of the two guard cells has semi-oval shape, having the width/length ratio of  $\frac{1}{3}$ . This is a very characteristic value for the species *Banatozamites calvus*, easily distinguishable from the value  $\frac{1}{4}$  in the case of *B. chlamydostomus*, and  $\frac{1}{2}$  in the case of *B. remotus*. Owing to the outer thickenings, the guard cells appear as pointed at the ends. The subsidiary cells that usually are rectangular, and just in very few cases rounded or irregular in shape, are about 30  $\mu\text{m}$  (12 – 48  $\mu\text{m}$ ) wide. With few exceptions when their walls are almost straight, the walls of these cells are sinuous to very sinuous. The length of the pore is about 18  $\mu\text{m}$ . Stomata are densely scattered, with density of 115/  $\text{mm}^2$  (100 – 130/  $\text{mm}^2$ ). Stomatal index is about 12 (10 – 14).



**Fig. 5.** *Banatozamites calvus* sp. nov. Abaxial cuticle. The continuous dark bands correspond to the veins. Stomata are represented by circles, each with a line in the middle, which indicates the direction of the pore. Holotype.



**Fig. 6.** *Banatozamites calvus* sp. nov. Abaxial cuticle, showing a stomatal band between two non-stomatal bands. Holotype.

*Bucklandia* Presl in Sternberg 1825

Type. *Bucklandia anomala* (Stokes & Webb 1824) Presl in Sternberg 1825

***Bucklandia aninaensis*** Czier sp. nov.

Plate 1, figure 2 *pro parte*; Plate 3, figure 1

*Derivation of name.* After the mining locality Anina.

*Holotype.* Hand specimen HNHM-BP. 602481/1B (Pl. 1, fig. 2 *pro parte*), LM slide 3 (Pl. 3, fig. 1).

*Repository.* Botanical Department of the Hungarian Natural History Museum, Budapest, Hungary.

*Type locality.* Anina, Romania.

*Lithostratigraphic unit.* The Valea Terezia Member of the Steierdorf Formation (Bucur 1991).

*Biostratigraphic unit.* The *Banatozamites chlamydostomus* Subzone of the *Clathropteris meniscioides* Biozone (Czier 1999).

*Age.* Hettangian *pro parte* - Sinemurian.

*Diagnosis.* Stem at least 10 cm long and about 1.5 cm broad, bearing petioles. Petioles about 5 mm wide, longer than 2 cm, arising at angle of about 40°. Surface of stem and of petioles with fine longitudinal ridges. Cuticle showing rows of rectangular to rounded-elongated cells with straight and smooth walls.

*Supplementary description.* The stem is a 16 mm wide compression, preserved on a length of 112 mm (Pl. I – Fig. 2 *pro parte*). It is strongly coalified in the matrix, being visible half of its surface. Where visible, a number of 38 longitudinal prominent ridges are seen, running equidistantly, parallel with the straight margins of the compression. Two petiole fragments are present at one side of the stem; the distance between the petioles is three cm. One petiole arises from the stem. The other, lying near the stem, is broken. The petioles have on their exposed face four to five ridges, slightly stronger than the ridges of the stem. A single kind of cuticle is present, and only on small areas, on the exposed face of the stem, where a coalified layer of one to two mm thickness preserves them. The rows in which the cells are, almost everywhere are conspicuous (Pl. III – Fig. 1).

**Discussions and comparisons**

Preserved usually as fragments, the vegetative organs of the plants assigned to order Bennettitales (Cycadeoidales) only in exceptional cases remain



anatomically connected in fossil state. As a rule, they are preserved on the faces of different rock samples collected from the same fossiliferous deposit, or on the face of the same sample, but at certain distance one from other. Palaeobotanists can say therefore, that such fossil impression or compression fragments belong probably, or perhaps just possibly, to one or several plant specimens. This is why they provide different organs with different generic names, even in those few cases when the fragments very probably belong to the same plant. The famous middle Jurassic flora of Yorkshire is a good example in this respect. Harris (1969), described from there leaves, stems, and reproductive organs, assigning them to different Bennettitalean genera. He tried to associate *Ptilophyllum pecten* leaves with *Bucklandia pustulosa* stems and *Williamsonia leckenbyi* ovulate cones, but the resulting plant reconstruction shows a rather unusual cycadophyte habit. Moreover, he found some stems, indistinguishable from *Bucklandia pustulosa*, associated with *Ptilophyllum pectinoides* leaves and *Williamsonia hildae* cones, but he did not gave figured restoration for a theoretical association. According to Delevoryas (1975), however, Harris „emphasised that he has seen no organic connection of parts but felt strongly that consistent association of parts cannot be ignored”.

Being a follower of Harris' conception, I feel strongly that the Anina leaves and the stem probably belong to the same plant, but I emphasize, that there is no organic connection between these organs. Based on the generic characters, the leaves belong to the genus *Banatozamites* Czier 1996, and the stem to *Bucklandia* Presl in Sternberg 1825. Many characters do not allow assignment of the leaves to the existent species. For this reason, the new species *Banatozamites calvus* is proposed. The table below (Tab. 1) presents the main differences between the new species and the other two species of the genus.

Since Seward (1917) pointed out, it is widely known that the genus *Bucklandia* contains stems of many Mesophytic Bennettitales. Because this generic name designates stems of plants with leaves attributed to several genera like *Ptilophyllum* and *Zamites*, I consider that we may use it also for stems of plants having *Banatozamites* leaves. The Anina stem almost surely belongs to the plant with leaves assigned to the new species *Banatozamites calvus*. This is a supplementary reason, why *Bucklandia aninaensis* also is proposed as new species.

The asymmetry of the pinnae, caused by the different attachment angles and length of the pinnulae, is an interesting character worthy to detailed future investigations. This character is present in all the described specimens of the genus *Banatozamites*, so it might be a generic character. A conclusion in this respect will result hopefully when the study of all the specimens will arrive to the end.



**Tab. 1.** Main differences between the species of genus *Banatozamites*.

Character	<i>Banatozamites chlamydostomus</i>	<i>Banatozamites remotus</i>	<i>Banatozamites calvus</i>
Asymmetry of pinnae	normal	very strong	strong to very slight; mainly normal
Value that the pinnae surface may exceed (Value that the pinnae length may exceed x Value that the pinnae width may exceed)	6600 mm <sup>2</sup> (110 mm x 60 mm)	1155 mm <sup>2</sup> (55 mm x 21 mm)	1470 mm <sup>2</sup> (98 mm x 15 mm)
Average width of pinnae rachis	1.5 mm	1.2 mm	0.8 mm
Measure in which the rachis is concealed by the basal portion of pinnulae	Almost entirely	Partly	Half
Setting of pinnulae	Closely	Distanced by gaps equalling about half of their width	Closely or slightly distanced by small gaps
Disposition of pinnulae	Alternately	Alternately	Alternately to op- positely even in the same pinna
Shape of pinnulae	Linear or rectangular, sometimes slightly falcate	Linear or slightly falcate	Linear
Measure of the pinnulae convexity toward the adaxial surface	More or less	Slightly	Not at all
Attachment angles of pinnulae	65° – 80°	45° – 90°	45° – 70°
Shape of the pinnula apex	Rounded	Rounded to slightly obtuse	Rounded
Asymmetry of the pinnula apex	In two third of the cases	In half of the cases	Always
Dimensions (Length / Width) of pinnulae	22 – 32 mm / 6 – 11 mm	9 – 12 mm / 1.7 – 2.5 mm	4 – 12 mm / 1 – 3 mm
Arisement of the veins	Perpendicularly	Slightly obliquely	More or less obliquely
Direction of the veins	Slightly divergent	Almost parallel	Parallel
Appearance of simple veins in each pinnula	Occasionally	Half of the total number of veins	Always
Appearance of forked veins in each pinnula	Always	Half of the total number of veins	Occasionally
Dichotomization of the veins	Once or repeatedly at all levels	Once at all levels	Once in the basal half of pinnulae
Ending of the veins	In the apex, in the whole acroscopic mar- gin, and in the distal half of the basiscopic margin	In the apex and in the distal half of the margins	In the apex and in the distal two third of the acroscopic margin

Number of veins per base of a typical pinnula	16	8	9
Density of the venation in the middle of a typical pinnula	3 veins/mm	5 veins/mm	4 – 5 veins/mm
Detachability of the cuticles	Normal	Easy	Normal
Thickness of the cuticles before the maceration	Normal	Thick	Normal
Conspicuousness of the rows of the adaxial epidermal cells	More or less	Dominant	More or less
Orientation of the adaxial epidermal cells	Usually with their longest sides parallel	Usually with their longest sides parallel	Randomly
Presence or absence of trichomes on the adaxial epidermis	Absent	Present	Absent
Shape of the epidermal cells of the adaxial epidermis	Rectangular	Rectangular	Isodiametric to rectangular
Dimensions (Length / Width) of the epidermal cells of the adaxial epidermis	40 – 60 $\mu\text{m}$ / 25 – 40 $\mu\text{m}$	30 – 110 $\mu\text{m}$ / 30 – 70 $\mu\text{m}$	24 – 48 $\mu\text{m}$ / 20 – 40 $\mu\text{m}$
Shape of the cell-walls of the adaxial epidermal cells	Markedly sinuous, with normal sinuosities	Markedly sinuous, with normal sinuosities	Very sinuous, with deep sinuosities
Dimensions („Wavelength” / „Amplitude”) of the cell-walls sinuosities of the adaxial epidermal cells	5 – 13 $\mu\text{m}$ / 8 – 15 $\mu\text{m}$	8 – 24 $\mu\text{m}$ / 5 – 13 $\mu\text{m}$	10 – 25 $\mu\text{m}$ / 7 – 20 $\mu\text{m}$
Presence or absence of stomatal bands in the abaxial epidermis	Present	Absent	Present
Arrangement of stomata in the abaxial epidermis	In stomatal bands, in 2 (1 – 3) rows; almost always in 2 rows, sometimes in 3 rows; in a single row where a vein dichotomises	Irregularly scattered	In stomatal bands, in 3 (1 – 4) rows; the most frequently in 3 rows, sometimes in 2 or 4 rows; occasionally in a single row where a vein dichotomises
Width of the stomatal bands / Width of the non-stomatal bands	60 – 220 $\mu\text{m}$ / 130 – 200 $\mu\text{m}$	Not measurable (epidermis not differentiated)	90 – 210 $\mu\text{m}$ / 80 – 150 $\mu\text{m}$
Presence or absence of trichomes on the normal epidermal cells of the abaxial epidermis	Absent	Present (very numerous)	Absent
Presence or absence of papillae on the normal epidermal cells of the abaxial epidermis	Present	Present	Absent
Shape of the guard cells	Semi-ellipsoidal	Semi-circular	Semi-oval

Width/Length ratio of each guard cell	$\frac{1}{4}$ (12 $\mu\text{m}$ / 50 $\mu\text{m}$ )	$\frac{1}{2}$ (20 $\mu\text{m}$ / 40 $\mu\text{m}$ )	$\frac{1}{3}$ (15 $\mu\text{m}$ / 45 $\mu\text{m}$ )
Shape of the guard cell thickening	Crescent	Half-ring	Spindle
Shape of the subsidiary cells	Rounded	Rectangular to rounded	Mostly rectangular, sometimes rounded or irregular
Width of each subsidiary cell	18 $\mu\text{m}$ (12 – 24 $\mu\text{m}$ )	45 $\mu\text{m}$ (30 – 60 $\mu\text{m}$ )	30 $\mu\text{m}$ (12 – 48 $\mu\text{m}$ )
Shape of the walls of the subsidiary cells	Almost straight	Almost straight	Usually very sinuous or sinuous, sometimes almost straight
Length of the porus	30 $\mu\text{m}$	20 $\mu\text{m}$	18 $\mu\text{m}$
Stomatal density	40 – 50 stoma/ $\text{mm}^2$	80 – 90 stoma/ $\text{mm}^2$	100 – 130 stoma/ $\text{mm}^2$
Stomatal index	9 (8 – 10) %	14 (12 – 16) %	12 (10 – 14) %
Presence or absence of the stoma-covering roof	Present	Present	Absent

At least some of the following characters also might be generic, but not differentially diagnostic: the fact that the pinnula base never covers the base of the pinnula on the opposite side of the rachis, the entire margins of pinnulae, the very good preservation state of the cuticles, the adaxial cuticle showing no differentiation of the epidermal cells of the venal or intervenal regions, the arrangement in rows of the adaxial epidermal cells, the absence of papillae on the adaxial epidermis, the orientation parallel with the veins of the epidermal cells in the abaxial epidermis. Next researches probably will clarify these problems too. The discovery of the new species *Banatozamites calvus* has now proven that numerous other characters might be not generic. These are specific characters, namely the alternate disposition of the pinnulae, the dichotomisation at all levels of some veins, the rectangular shape of the adaxial epidermal cells, the orientation of the adaxial epidermal cells usually with their longest sides parallel to the margins, the markedly sinuous walls of the adaxial epidermal cells, the presence of papillae on the abaxial epidermis, and the almost straight walls of the subsidiary cells of the stomatal apparatus.

*Bucklandia anomala*, a combination based on *Clathraria anomala* Stokes & Webb 1824, is the genotype of *Bucklandia* Presl in Sternberg 1825. This genus is distinct from *Bucklandia* R. Brown ex Griffith 1836, which is a later homonym referring to Hamamelidae specimens. According to Zhang (1999), that is a synonym of *Exbucklandia* R. W. Brown 1946.

Harris (1969) described from the Jurassic of England the species *Bucklandia gigas* Seward 1917, and *B. pustulosa* Harris 1969. Barale *et al.* (1974) described from the Jurassic of France *Bucklandia insignis* (Saporta) Barale *et al.* 1974. Several species, published by Sharma (1971, 1972, 1974), originate from the Jurassic deposits of India: *Bucklandia sahnii* Bose 1953, *B. guptai* Sharma 1967, *B. dichotoma* Sharma 1969. The genus is known also from Cretaceous deposits, several species being described from Japan, e.g. *Bucklandia choshiensis* Nishida 1969, *B. tsuruokae* Nishida & Nishida 1983, *B. kerae* Saiki & Yoshida 1999.

### Conclusions

The leaf *Banatozamites calvus* principally is characterised by narrow pinnae with half concealed rachis, closely set or slightly distanced flat pinnulae with asymmetrical rounded apex and almost always simple veins, lamina without trichomes and papillae, adaxial epidermis with very sinuous-walled epidermal cells, abaxial epidermis differentiated in stomatal-free and stomatal bands, densely scattered stomata arranged mainly in three rows, stomatal apparatus with semi-oval guard cells and mostly rectangular subsidiary cells, not covered by roof. *Bucklandia aninaensis* is a small stem with petioles, which very probably belongs to the plant with *Banatozamites calvus* leaves. The stem and the petioles possess fine longitudinal ridges, and cuticle indicating rows of rectangular to rounded-elongated cells with straight and smooth walls.

Like the two previously known species *Banatozamites chlamydostomus* and *B. remotus*, the new species *B. calvus* appears in the *Banatozamites chlamydostomus* Subzone of the *Clathropteris meniscioides* Biozone. All the specimens originate from the same fossil locality, Anina, from the same lower Jurassic (Hettangian pro parte – Sinemurian) continental deposits of the Getic Realm. Other occurrences being not known, *Banatozamites* still appears to be an endemic genus of the autochthonous European Mesophytic flora. The low stomatal index of all the *Banatozamites* species indicates in my opinion warm and wet climate, and high CO<sub>2</sub> level, but this is only a preliminary statement.

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## Plates

**Plate I.** 1. *Banatozamites calvus* sp. nov. Leaf with numerous pinnae. Holotype. 2. Upper left corner – centre – lower right corner: *Bucklandia aninaensis* sp. nov. Stem. Holotype. Lower left corner: *Banatozamites calvus* sp. nov. Leaf fragment. Paratype.

**Plate II.** *Banatozamites calvus* sp. nov. Cuticles (LM). Holotype. 1. Adaxial cuticle, indicating rows of epidermal cells. 2. Abaxial cuticle, with stomatal-free bands between stomatal bands.

**Plate III.** 1. *Bucklandia aninaensis* sp. nov. Cuticle (LM). Holotype. 2. *Banatozamites calvus* sp. nov. Stomatal apparatus (SEM). Holotype.



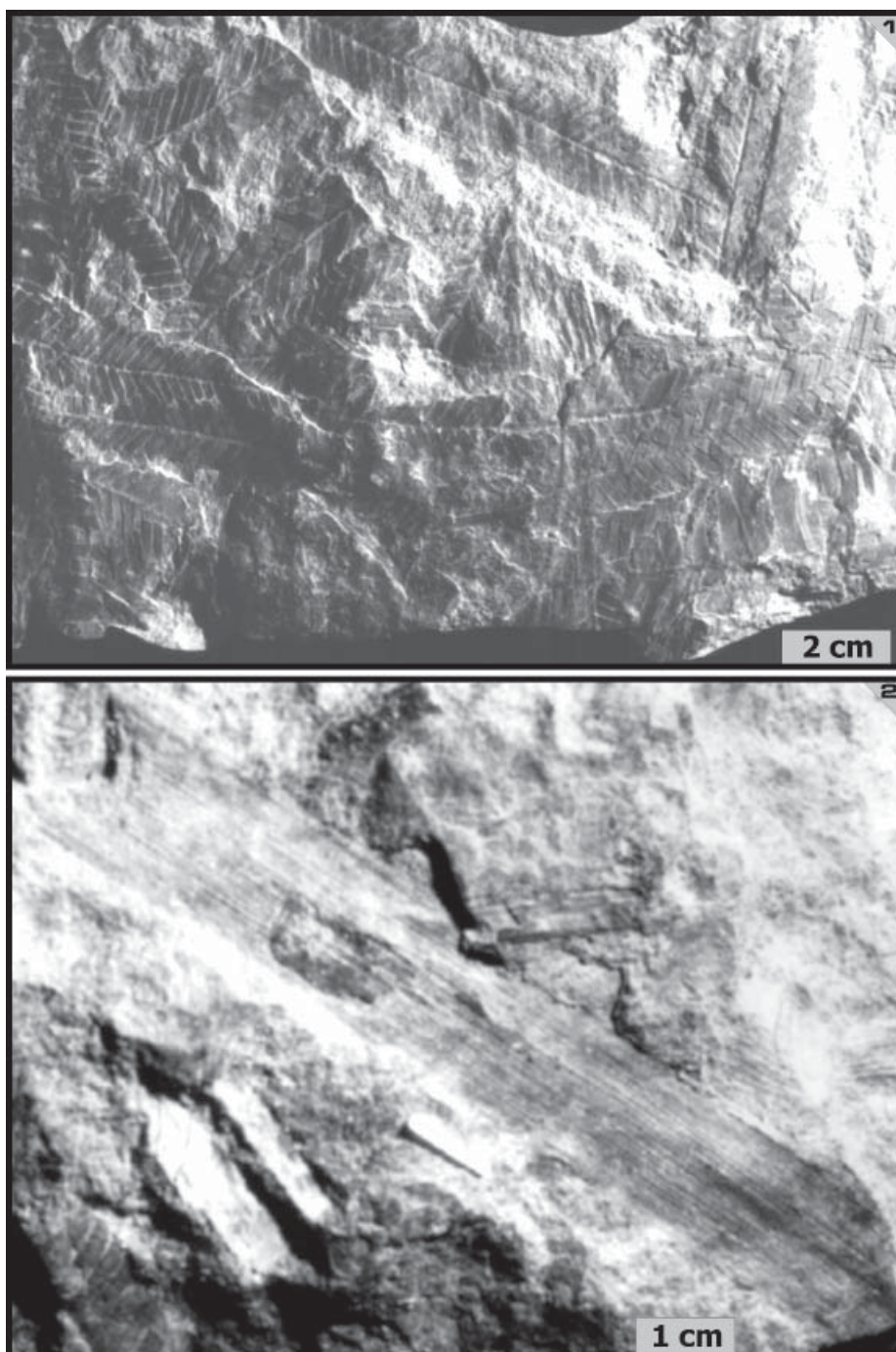


Plate I.

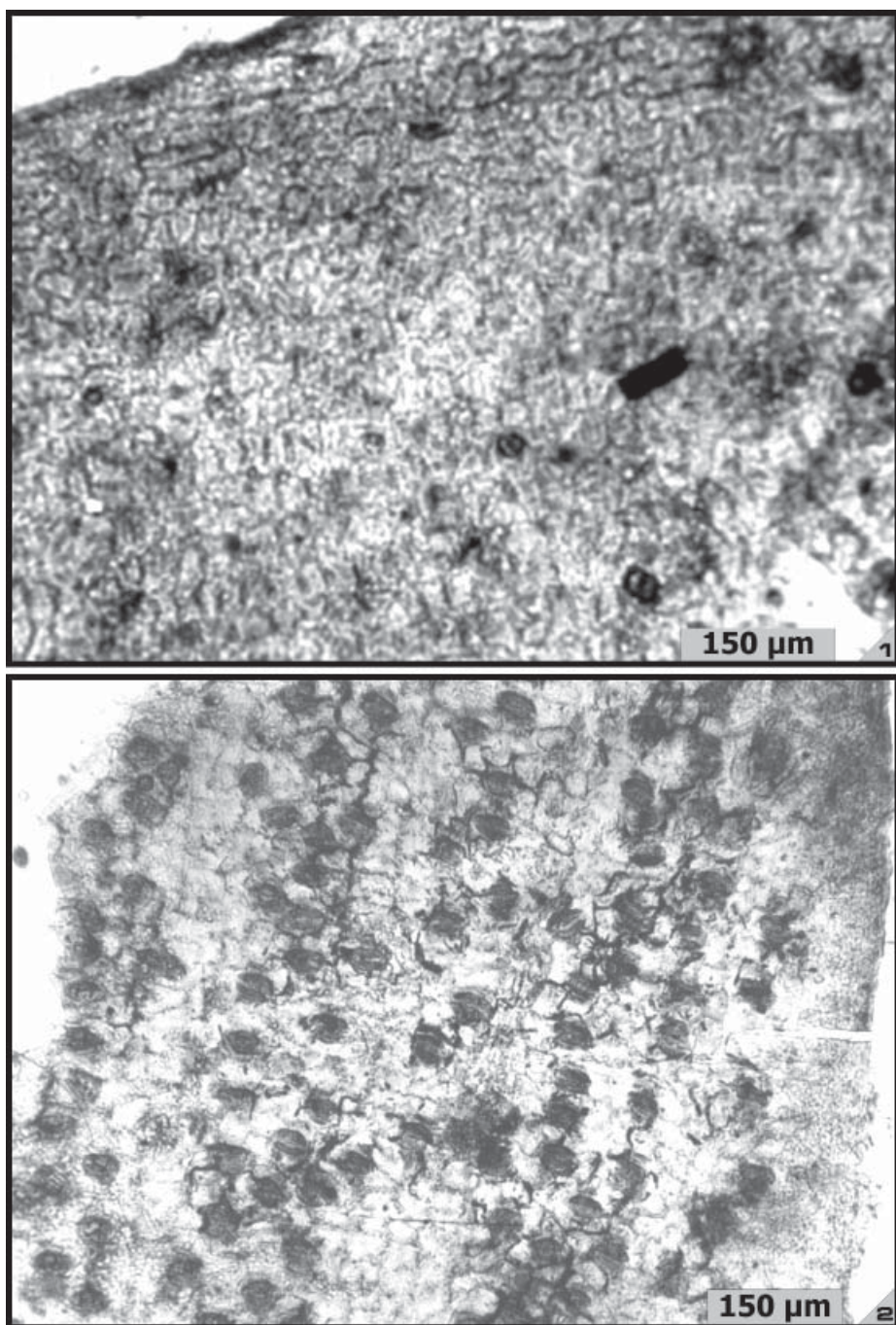


Plate II.



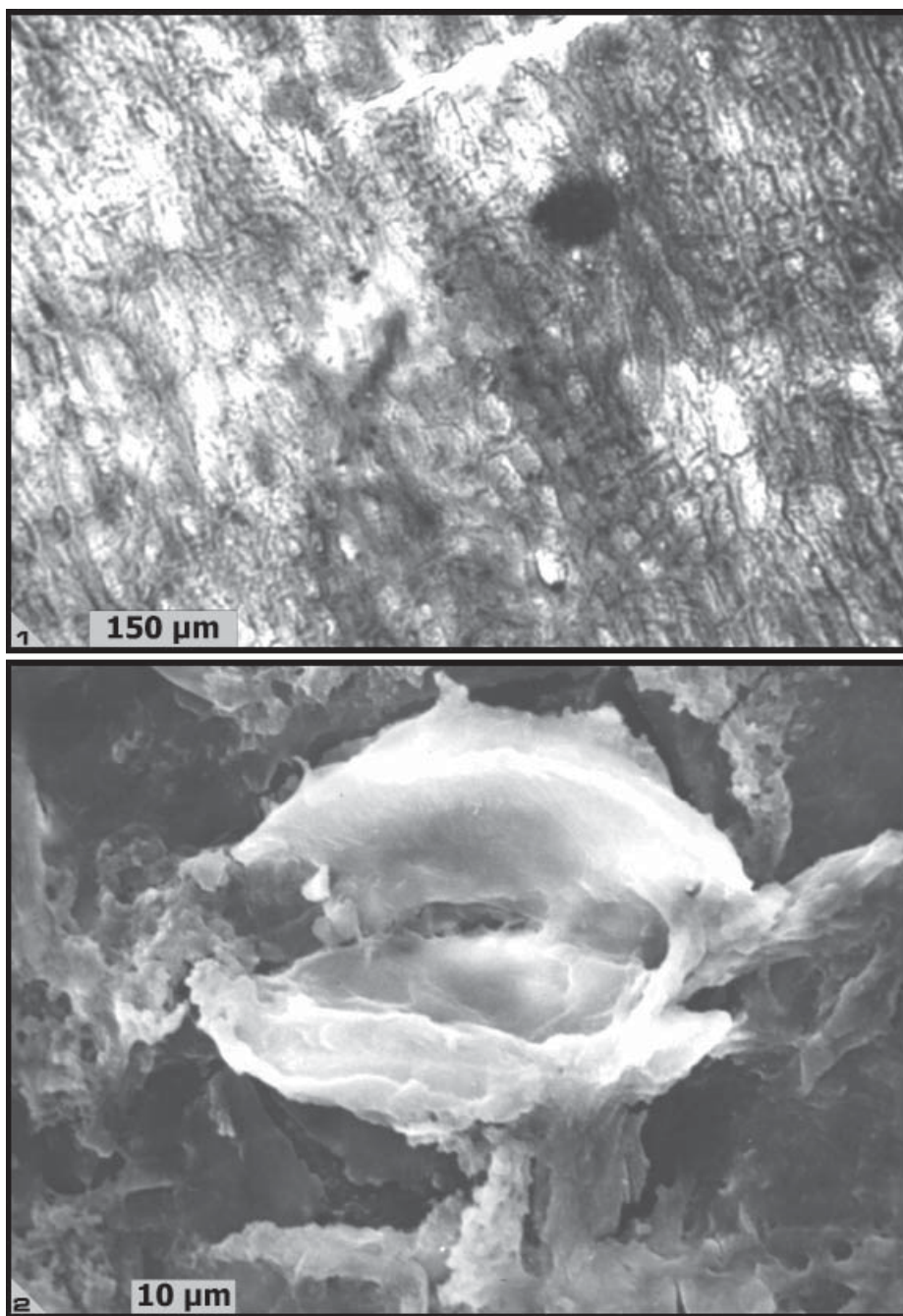


Plate III.

<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>27 - 36</b>	<b>Oradea, 2009</b>
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## Bird remains from the Middle Miocene of Subpiatră (W-Romania)

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**Abstract.** The Middle Miocene locality of Subpiatră 2/1R yielded at least 13 different bird taxa, which collectively represent six orders, eleven families and three species. However, due to their fragmentary state most remains could not be identified below familial level. The findings identified belong to extinct taxa, typical for the European Miocene and they are known from the sites in the Carpathian Basin of similar age. The composition of the fauna indicates various surroundings including forests, grasslands, lakes and swamps.

### Introduction

The locality of Subpiatră (Bihar County, Romania) is situated near the town of Aleșd, about 40 km east to Oradea. The fossil bearing deposits were identified in the summer of 2004 during a geological survey downward the Rece Creek (a tributary brook of Crișul Repede river) near the village of Subpiatră. The main outcrop, named as Subpiatră 2/1R, is situated in the right slope of the Rece Valley in a small ravine (N 47° 0.379' and E 22° 18.683') at an elevation of 296 m above sea levels; the outcrops from the left side of that ravine is named Subpiatră

2/1L. The sediments consisting of sandy clays and silts, interbedded into clay and calcareous clay layers, were extremely rich in terrestrial mollusks, otoliths and microvertebrates (Hír & Venczel 2005, Venczel et al. 2005, Venczel & Hír 2008). According to the above authors, the list of vertebrates includes indeterminate fish, lissamphibians (*Triturus* sp., *Latonia gigantea*, *Rana* sp.), reptiles (*Diplocynodon* sp., *Ophisaurus* sp., *Lacerta* sp., Varanidae indet., Colubrinae indet., *Vipera* sp.), rodents (*Eurolagus fontannesii*, *Muscardinus sansaniensis*, *Myoglis meini*, *Megacricetodon* sp., *Democricetodon brevis*) and indeterminate insectivores. The age of the fossiliferous layers, based on key rodent taxa, is late Badenian (MN 6) (Hír & Venczel 2005).

In the present paper we introduce the avian remains found in the last few years (2004-2007) at the Miocene site of Subpiatră 2/1R and 2/1L in Bihor County. The fossils described hereunder belong to the paleontological collection of the Țării Crișurilor Museum in Oradea, Romania. The identification of the tiny and fractional remains gave rise to major difficulties; due to this fact they could mostly be identified on levels of family and genus. This applies even more to the many variations of talons.

### Material and methods

The osteological and biometrical comparison of the fossil material was made in the recent and fossil comparative collection of the Hungarian Natural History Museum. The anatomical terminology follows Baumel et al. (1979). The measurements were taken following the standards in Von den Driesch (1976), Gál (2002) and Solti (1996).

**Acronyms used.** MÁFI = Magyar Állami Földtani Intézet, Budapest (Geological Institute of Hungary, Budapest); MTC = Muzeul Țării Crișurilor, Oradea, Romania; NHMH: Natural History Museum of Hungary, Department of Geology and Paleontology, Budapest; SU – Subpiatră locality.

**Abbreviations used in the text.** We used the following abbreviations concerning the skeletal parts: prox. = proximal epiphysis; dist. = distal epiphysis; diaf. = diaphysis; cor. = coracoideum; scap. = scapula; hum. = humerus; tib. = tibiotarsus; tmts. = tarsometatarsus; ph. ped. = phalangae pedis; ph. ungh. = phalanx unghualis, dig. = digiti. The abbreviations used for the measurements are as follows: GL (A) = greatest length; Lm (B) = medial length; Bp (C) = width of the proximal end; C1 = thickness of the proximal end; Dp (D) = depth of the proximal end; SC(E) = smallest width of the corpus; E1 = thickness of the corpus, on carpometacarpus width of the metacarpus II.; Bd (F) = width of the distal end, Dd (G) = depth of the distal end.

### Systematics

Ord. Ardeiformes (Wagler) 1830

Fam. Ardeidae Vigors, 1825

†*Proardeola* Harrison, 1979

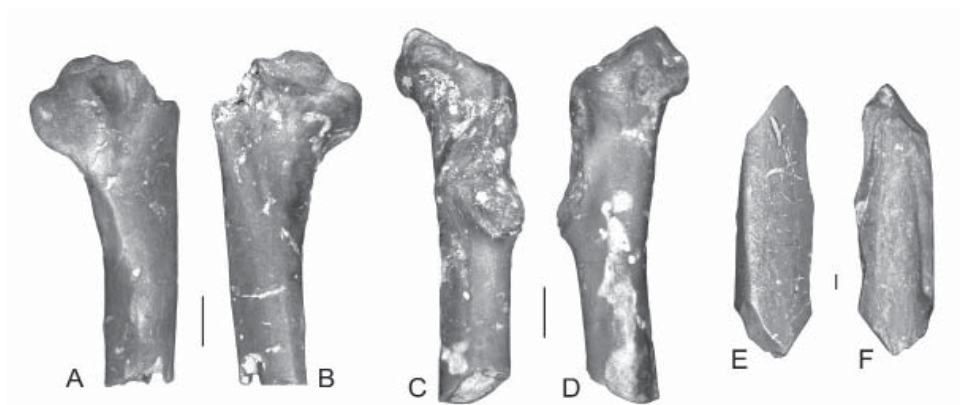
*Proardeola walkeri* Harrison, 1979

(Fig. 1: A, B)

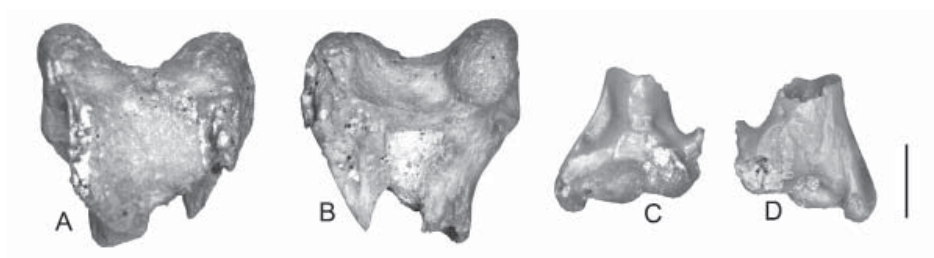
**Material:** cranial fragment of left scapula, with missing *acromion* (SU-2/1R, 2007: MTC No. 24451)

Sizes: scapula: B = ap. 7-8 mm; length of *facies articularis humeralis* (D)=5,42 mm; width of *facies articularis humeralis* (D1)=3,1 mm; E= 2,91 mm.

**Discussion:** It bares resemblance to the recent Squacco heron (*Ardeola ralloides*). Literature (Harrison 1979, Cheneval 1983) gives no mention of scapula among the findings, so the pieces could only be identified by their size and resemblance to *A. ralloides*. The shape of the *facies articularis humeralis* and the position and form of the *tuberculum coracoideum* has also helped the identification.



**Fig. 1.** A, B: *Proardeola walkeri* (cranial fragment of left scapula); C, D: *Palaeortyx gallica* (cranial fragment of right coracoideum); E, F: Gruidae gen. et sp. indet. (diaphysis fragment of left tarsometatarsus). A: lateral surface; B: costal surface; C: dorsal surface; D: medial aspect; E: dorsal aspect; F: plantar aspect. Scale equals 2mm.



**Fig. 2.** A, B: *Anas albae* (distal epiphysis of left tibiotarsus); C, D: Muscipapidae gen. et sp. indet. (distal fragment of humerus). A: caudal view; B: cranial view; C: cranial surface; D: caudal surface. Scale equals 2mm.

Ord. Anseriformes Wagler, 1831  
 Fam. Anatidae Leach, 1820  
 Subfam. Anatinae (Vigors, 1825)  
*Anas* Linnaeus, 1758  
*Anas albae* Jánosy, 1979  
 (Fig. 2: A, B)

**Material:** distal epiphysis of left tibiotarsus (SU-2/1R, 2007: MTC No. 24452)  
 Sizes: F=5,91 mm; G= 5,36 mm.

**Comparative material:** -recent: *Anas crecca* Linnaeus, 1758 (MTM, n=17); *A. querquedula* Linnaeus, 1758 (MTM, n=7).

**Discussion:** The rather petite (even smaller than the Eurasian teal, *Anas crecca*) extinct species of teal has been described based on a slim carpometacarpus from Polgárdi 2 (Jánosy 1991). The fossil had been gathered by Tivadar Kormos, and was categorized as '*Mergus* sp.' by W. Čapek due to the relatively short *synostosis metacarpalis distalis* (Lambrecht, 1912, 1933). A scapula fragment was found at the Late Pliocene site of Csarnóta 2., while the site of Csarnóta 3. yielded a proximal fragment of tibiotarsus (Kessler 2009a).

Given that no remains of distal tibiotarsus had been found the sole material to help categorization were the corresponding parts of skeletons of small recent *Anas* species. From the original places of occurrence (Sansan, France, MN 6; Attenfeld, Öhningen and Steinheim, Germany, MN 7; Credința, Romania, MN 8; Mátraszőlös I. and Rudabánya, Hungary, MN 6-8 and MN 9) of the even smaller



*Anas velox* (Milne-Edwards 1868) the literature gives no mention of tibiotarsus, so this also could not have been used for the purpose of identification.

Mlíkovský (2002: 124) classified the material defined by Jánossy as part of the genus *incertae sedis* due to the lack of illustration, but the newly made revision (Kessler 2009a) has proven the validity of the species.

**Occurrence:** only on the sites listed above.

Ord. Galliformes (Teminck, 1820)

Fam. Phasianidae Vigors, 1825

†*Palaeortyx* Milne-Edwards, 1869 / syn. †*Palaeoperdix* Milne-Edwards, 1871

*Palaeortyx gallica* Milne-Edwards, 1869 / syn. *P. intermedia* Ballmann, 1969 / syn.

*Coturnix gallica* Mlíkovský, 2002

(Fig. 1: C, D)

**Material:** cranial fragment of right coracoideum (SU-2/1L, 2004: MTC No. 24453)

Sizes: C = 3,43 mm; D = 5,65 mm; E = 2,57 mm.

**Comparative material:** - recent *Coturnix coturnix* (Linnaeus, 1758) (MTM, n=9), *Perdix perdix* (Linnaeus, 1758) (MTM, n=59); - fossil: *Palaeortyx intermedia* Ballmann, 1969 (MTM, MÁFI); *Palaeocryptonix hungaricus* Jánossy, 1991 (MTM, MÁFI).

Description: A bigger gallinacean than the species *Palaeortyx brevipes* (Milne-Edwards, 1869) / syn. *Palaeortyx grivensis* (Lydekker, 1893) / syn. *Coturnix gallica* (Mlíkovský, 2002) based on the data by Göhlich & Mourer-Chauviré, 2005.

**Occurrence:** the species' type locality ranges from Grive-Saint-Alban, France (Late Miocene, MN 8) to Mălușteni, Eastern Romania (MN15) across the Carpathian Basin. Other known sites of the species are Grund, Austria (MN 5) (Göhlich 2003), Mátraszőlős 1, Hungary (MN 6-8) (Gál et al 1998-99; Kessler 2009a), and Rudabánya, Hungary (MN9) (Jánossy 1976, Jánossy 1993, Kessler 2009a).

**Discussion:** Many gallinaceans have been described from the Tertiary period of Europe, with an outstanding number of species and identified individual findings in the genus *Palaeortyx* (MP 16 – MN 13). The species *P. gallica* (Milne-Edwards, 1869); *P. brevipes* (Milne-Edwards, 1869); *P. ocyptera* (Milne-Edwards, 1892); *P. edwardsi* (Depéret, 1887); *P. grivensis* (Lydekker, 1893); *P. maxima* (Lydekker, 1893); *P. depereti* (Ennouchi, 1930); *P. joleaudi* (Ennouchi, 1930); *P. miocaena* (Gaillard, 1939); *P. phasianoides grivensis* (Ballmann, 1969); *P. intermedia* (Ballmann, 1969); *P. longipes* (Milne-Edwards, 1869); *P. prisca* (Milne-Edwards, 1869) have been renamed and reclassified ever so many times in the past decades. Mlíkovský (2002) categorized all of them as members of the genres *Coturnix* and

*Alectoris*, although the revision of the genus definitive in this case is that of Göhlich & Mourer-Chauviré (2005).

Perdicidae sp. indet.

**Material:** four phalanges unghualis (SU2/1R, 2006: MTC Nr. 24454/1-4)

Sizes: A= 2,98 mm; 3,24 mm; 3,28 mm; 3,68 mm.

**Description:** Based on the size and characteristics of the talons they also belong to the *Palaeortyx* species described above.

Ord. Ralliformes (Reichenbach, 1852)

Fam. Gruidae Vigors, 1825

Gruidae gen. et sp. indet.

(Fig. 1: E,F)

**Material:** diaphysis fragment of left tarsometatarsus (SU2/1R, 2006: MTC No. 24455)

Sizes: E1: ap. 10-11 mm.

**Description:** According to the fragments only the order and family can be concluded, from the frontal and lateral side of the diaphysis.

Crane remains were found at two localities in the nearby regions. In the Carpathian Basin, the Late Miocene site of Csákvár (MN 11) yielded a fragment of coracoideum from *Grus pentelici* (Gaudry, 1862) / syn. *Pliogrus pentelici* (Gaudry, 1862) (Kretzoi 1957). In Romania, a distal fragment of tarsometatarsus from *Grus miocenicus* (Grigorescu & Kessler, 1977) was found at the Middle Miocene site of Credinta, Dobrogea (MN 8) (Grigorescu & Kessler 1977).

Fam. Rallidae Vigors, 1825

Rallidae gen. et sp. indet.

**Material:** three phalanges unghualis (SU2/1R, 2004: MTC No. 24456/1-3); phalanx unghualis (SU2/1R, 2007: MTC No. 24456/4)

Sizes: A= 4,04-4,75 mm; B= 2,02-2,17 mm.

**Description:** From the size of the typical rallus-like talons, we can only identify the family and its smaller genus typical of the Neogene, the *Rallicrex* and the bigger *Porzana* species. Remains are primarily supposed to belong to *Rallicrex polgar-densis* (Jánossy, 1991). Due to the fact that talons are missing from the findings so far we do not have any material for comparison, but the genus is common to

the Tertiary of the Carpathian Basin. Species having been reported are *Rallicrox kolozsvariensis* (Lambrecht, 1933) from the Middle Oligocene site of Kolozsvár-Fellegvár (MP 24) (Lambrecht 1933) and *R. polgardensis* from the Middle Miocene site of Mátraszőlős 1 (MN 6-8), the Late Miocene site of Polgárdi 4 and 5 (MN 13), Csarnóta 2 (MN 15-16), and the Late Pliocene site of Beremend 26 (MN 16) (Jánossy 1991, Kessler 2009b).

Ord. Coraciiformes Forbes, 1884

Fam. Meropidae Vigors, 1825

Meropidae gen. et sp. indet.

**Material:** phalanx unghualis (SU2/1R, 2007: MTC No. 24457)

Size: A= 2,51 mm.

**Discussion:** the talon resembling those of roller's (Coraciiformes) and similar in shape and size to the bee-eaters' (Meropidae) could not be identified on levels of genus and species. In the Carpathian Basin – and of this genus from the Tertiary period of Europe – only the species *Merops radobojsensis* (Meyer, 1865) found in the Middle Miocene site of Radoboj, Croatia and revised by Mlíkovsky (1997) is known. It has also been reported by Kessler (2009c) from the Middle Miocene site of Rudabánya (MN 9). The talon from Subpiatră can possibly be credited to this species.

Ord. Passeriformes (Linnaeus, 1758)

Fam. Sittidae (Bonaparte, 1831)

Sittidae gen. et sp. indet.

**Material:** phalanx unghualis (SU2/1R, 2006: MTC No. 24458)

Fam. Certhiidae (Vigors, 1825)

Certhiidae gen. et sp. indet.

**Material:** phalanx unghualis (SU2/1R, 2004: MTC No. 24459)

Fam. Muscicapidae, Vigors, 1825

Muscicapidae gen. et sp. indet.

(Fig. 2: C, D)

**Material:** Fragmentary distal humerus (SU2/1R, 2006: MTC Nr. 24460), phalanx unghualis (SU2/1R, 2004: MTC Nr. 24461)

Fam. Sylviidae, Vigors, 1825  
Sylviidae gen. et sp. indet.

**Material:** phalanx unghualis (SU2/1R, 2004: MTC Nr. 24462)

Fam. Laniidae, Swainson, 1834  
Laniidae gen. et sp. indet.

**Material:** phalanx unghualis (SU2/1R, 2006: MTC Nr. 24463)

Passeriformes gen. et sp. indet.

**Material:** phalanx pedis (SU2/1R, 2006: MTC Nr. 24464)

**Discussion:** remains of perching birds consisting solely of toe joints and talons can only be identified to family levels. Despite the fact that many materials are known of this order from the Tertiary and even more from the Neogene the genus – not to mention the species – of only a few could be categorized thus far around the globe, those mainly being remains of relatively large crow-type birds. Identifying these remains to at least this level is important due to the information they provide on paleoecology.

### **Paleoecological and Paleogeographical Assessment**

According to the fauna list we can distinguish areas of forests, fields of grass, lakes and swamps. Typical to the former are songbirds, to the fields are smaller gallinaceae, while waters and swamps are characterized by pochards, rails, petite herons and cranes.

Aside from the skeletal fragments of the crane other findings indicate the food remains of a medium-sized or small predator. The pochards, cranes, gallinaceae, rails and also the songbirds are of the smaller species of their genera.

Findings identified belong to the extinct taxons typical of Miocene in Europe, and they are known from the sites in the Carpathian Basin of similar age. The talons categorized on levels of family or genera belong supposedly to those of species already known from the area.

### **Results and Conclusions**

Despite the relatively few findings and the difficulties, six orders, eleven families and three species had been identified: *Proardeola walkeri*, *Anas albae* and

*Palaeortyx gallica*, all of them known from the Miocene of the Carpathian Basin. Other remains identified to levels of genus and family also brings important information to the bird fauna of the Carpathian Basin.

### Acknowledgements

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<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>37 - 166</b>	<b>Oradea, 2009</b>
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## The herbarium of Simonkai L. in the collection of the Cris County Museum (Part II.)

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**Abstract.** The present paper continues valuing the corpus of data and information contained in one of the first herbaria in Transylvania, to be found in the botanical collection of the Museum of the Cris County, namely, that of Simonkai Lajos (1851-1910). Subsequent to processing the material by ordering it in an updated taxonomical classification, with the mention of the items accepted denomination and the most common synonyms, the location (where identified), respectively the date and the author of their collection, where indicated, we now present a number of 997 taxons, of 313 genuses and 90 families, that according to the taxonomical classification employed here (*Systema Naturae 2000*) belong to the phyla *Bryophyta* (clas. *Bryopsida*) and *Tracheophyta* ( clas. *Magnoliopsida* and *Liliopsida*).

### Introduction

The present paper continues to value data and information contained in one of the first herbaria in Transylvania, to be found in the botanical collection of the Cris County Museum, namely that of Simonkai Lajos (alias Simkovics L. - 1851-1910) after its author had published an initial part regarding species of fungi, algae, moss, lichens, ferns (Danciu & Golban 2008). We now present the remain-



ing material, respectively, species of phyla *Bryopyta* (clas. *Bryopsida*, not included in the first part) and *Tracheophyta* (clas. *Magnoliopsida* and *Liliopsida*).

### Material and method

As previously mentioned (see Part I), the examined material consists of herbarium sheets to be found in the collection of the Cris County Museum in Oradea, according to the inventory number following the accepted botanical denomination. In rendering the denomination of the species we considered the accepted botanical name with the mention of the reference of its first description and its synonyms. To check and update our data we employed the data of the Royal Botanic Garden Edinburgh – *Flora Europaea*, *Global Biodiversity Information Facility*. (<http://www.gbif.org>), and *uBio Portal* ([www.ubio.org/portal/-5k](http://www.ubio.org/portal/-5k)). We also consulted V.Ciocarlan's study (2000) that made use of the rules and recommendations of the International Code for Botanic Cataloguing as well as the site *Systema Naturae 2000* (<http://taxonomicom.taxonomy.nl>) in order to update the taxonomic classification. We also mentioned the present location where the collection was done (if it was mentioned on the label), the locality (if marked), the date and the name of the author (where they are mentioned which, in our case, meant the author who collected, determined and fixed the herbarium sheet).

Abbreviations used in our study: n. = number of inventory; ref. = reference for the firstly mentioned description of the species; leg. = the author who collected and determined the plant; Ord. = the order; Fam. = the family.

### The systematic part

Kingdom *Plantae* Haeckel, 1866  
 Subkingdom *Viridiplantae* Cavalier-Smith, 1981  
 Phylum *Bryophyta* A. Braun, in Ascherson, 1860  
     Clas. *Bryopsida*  
     Subclas. *Bryidae*  
     Superord. *Bryanae*  
     Ord. *Bryales*  
     Fam. *Bartramiaceae* Schwaegr. in Willd.:  
     Gen. *Philonotis* Bridel, 1827

***Philonotis fontana* (L. ex. Hedw)Brid.** – (n. 5790) – ref.: *Philonotis fontana* (Hedw.) Brid., *Bryologia Universa* 2: 18. 1827. Basionym: *Mnium fontanum* Hedw.,

Species Muscorum Frondosorum 195. 1801.; sin.: *Bartramia fontana* (L. ex Hedw.) Turner ; *Bartramia fontana* var. *alpina* (Brid.) P.Beauv.; *Philonotis fontana* var. *borealis* I.Hagen; *Bartramia fontana* var. *falcata* (Hook.) Bruch & Schimp.; *Bartramia fontana* var. *minor* Bals.-Criv. & De Not.; *Bartramia parvula* Norrl.; *Mnium fonomnta* L. ex Hedw.; *Philonotis adpressa* Fergusson; *Philonotis alpicola* var. *borealis* (I.Hagen) Podp.; *Philonotis borealis* (I.Hagen) Limpr.; *Philonotis crassicolis* (Burchard, Botanisches Centralblatt 37: 105. 1889); *Philonotis parvula* (Norrl.) Lindb. ex H.Philib.; *Philonotis seriata* var. *adpressa* (Fergusson) Bryhn; *Philonotis seriata* var. *mollis* (Schimp.) Loeske ; *Philonotis tomentella* var. *borealis* (I.Hagen) Loeske; - Romania, Hunedoara (Retezat), Zănoaga, 31.07.1872, leg. Simkovics L.

Obs.: Even if the label is not signed, the handwriting and the researched area belong to Simkovics.

**Superord. Hypnanae W.R. Buck & B. Goffnet, 2000 ex W.R. Buck et al., 2005**

Ord. *Hypnales*

Fam. *Hylocomiaceae* (Broth) M. Fleisch.

Gen *Pleurozium* Mitten, 1869, nom. cons.

***Pleurozium schreberi* (Willd. ex Brid.) Mitt.** – (n. 5852) – ref.: *Journal of the Linnean Society, Botany* 12: 537. 1869. Basionym: *Hypnum schreberi* Willd. ex Brid. ; *Muscologia Recentiorum* 2(2): 88. 1801.; *Species Muscorum Frondosorum* 236. 1801.; sin.: *Calliergonella schreberi* ; *Hylocomium parietinum* Lindb.; *Hylocomium schreberi* (Willd. ex Brid.) De Not.; *Hypnum schreberi* Willd. ex Brid.; *Pleurozium schreberi* var. *secundum* Arnell & C.E.O.Jensen; *Stereodon schreberi* (Willd. ex Brid.) Mitt. ; no location and date; leg. Holuby.

Fam. *Leucodontaceae* Schimp.

Gen *Pterogonium* O. Swartz, 1801

***Pterogonium gracile* (Hedw.) Sm.** – (n. 5788) – ref.: *English Botany* 16: 1085. 1803 [1802]. Basionym *Pterigynandrum gracile* Hedw (*Species Muscorum Frondosorum* 80. 1801.); sin.: *Grimmia ornithopodioides* F.Web. & D.Mohr; *Pterigynandrum gracile* Hedw.; *Pterogonium gracile* var. *harlecense* D.A.Jones; *Pterogonium ornithopodioides* (F.Web. & D.Mohr) Lindb.; - Ramania. Banat, Băile Herculane, 1874, leg. Simkovics L.

**Phylum Tracheophyta Sinnott, 1935 ex Cavalier-Smith, 1998**

**Subphylum Euphyllophyta**

Infraphylum “*Radiatopses*” Kenrick & Crane, 1997

**Clas. Magnoliopsida Brongnart, 1843**

**Subclas. Nymphaeidae (Horan, 1834) J.W.Walker ex Takhtajan, 1997**

**Superord. Ceratophyllanae (Bischoff, 1839) Takhtajan, 1997, ex Reveal &**

**Doweld, 1999**Ord. *Ceratophyllales* Bischoff, 1839Fam. *Ceratophyllaceae* Gray, 1821Gen *Ceratophyllum* L., 1753

***Ceratophyllum demersum* L.** – (n. 4174) – ref.: Sp. Pl. ed. 1 992 (1753); sin.; *Ceratophyllum apiculatum* Cham.; *Ceratophyllum demersum* var. *apiculatum* (Cham.) Aschers.; *Ceratophyllum demersum* var. *apiculatum* (Cham.) Garcke; - Romania, Bihor, Tărian, Jule 1878, leg. Simkovics L.

***Ceratophyllum submersum* L.** - (n. 4173) – ref.: Sp. Pl. ed. 2 1409 (1763); - Romania, Bihor, between Sânmartin and Seleuş (Oradea), 15.10.1877, leg. Simkovics L.

**Superord. *Nymphaeanae* (Dum., 1829) Thome ex Reval, 1992**Ord. *Nymphaeales* Dumortier, 1829Fam. *Nupharaceae* A. Kemer, 1891Gen *Nuphar* J.E. Smith

***Nuphar lutea* Sm.** – (n. 3940) – ref.. Reference: Fl. Graec. Prodr. 1: 361 (1809), sin.: *Nymphosanthus luteus* (L.) Fernald; *Nymphaea lutea* L.; - Poland, Suwalki, Barannen, 14.07.1873, leg. C. Sanio.

Fam. *Nymphaeaceae* Salisbury, 1805Subfam. *Nymphaeoidae*Trib *Nymphaeae*Gen *Nymphaea* L., 1753

***Nymphaea lotus* L. var. *thermalis* (DC.) Tuzson** – (n. 3939) – Ref.: Sp. Pl. ed. 1 511 (1753), Math. Természettud. Ért. 25(4):32, 36. 1907; - sin.: *Castalia thermalis* (DC) Simonk.; *Nymphaea thermalis* DC.; *Nymphaea lotus* L. forma *thermalis* (DC.) Tuzson; - Romania, Bihor, Oradea (thermal waters), 20.10.1877, leg. Simkovics L.

**Subclas. *Ranunculidae* Takhtajan ex Reval, 1992****Superord. *Ranunculanae* Takhtajan ex Reval, 1992**Ord. *Ranunculales* Dumortier, 1829Fam. *Ranunculaceae* Adans., 1763, nom. cons.Subfam. *Ranunculodeae*Trib *Adonidae*Gen *Adonis* L., 1753

***Adonis hybrida* H. Wolff** – (n. 3928) – ref.: Fl. Eur. 1: 4. 1878; sin.; *Adonis x hybrida* H. Wolff.; - Romania, Cluj, Cluj-Napoca, 17.04. – 31.05.1878, leg. Simkovics L.

***Adonis vernalis* L.** – (n.3927) – ref.: Sp. Pl. ed. 1 547 (1753); sin.: *Adonanthe vernalis* (L.) Spach; *Chrysocyathus vernalis* (L.) Holub; – Romania, Cluj, Cluj-Napoca, 17.04. – 31.05.1878, leg. Simkovics L.

***Adonis volgensis* Steven ex DC.** – (n. 3930) – Ref.: Reg. Veg. Syst. Nat. 1: 545 (1817); – Romania, Cluj, Cluj-Napoca, 17.04. – 31.05.1878, leg. Simkovics L.

***Adonis walziana* (L.) Grec.** – (n. 3929) – ref.: Magyar Novenyt. Lapok ii. (1878) 151; sin.: *Adonis x walziana* Simonk.; – Romania, Cluj, Cluj-Napoca, 17.04. – 31.05.1878, leg. Simkovics L.

Trib *Anemoneae*  
Gen *Anemone* L., 1753

***Anemone nemorosa* L.** – (n. 3926) – ref.: Sp. Pl. ed. 1 541 (1753), sin.: *Anemone nemorosum* (L.) Holub; - Romania, Bihor, Oradea. 15.09. 1878; leg. Simkovics L.

Trib *Ranunculae*  
Gen *Ceratocephala* Moench., 1794

***Ceratocephala testiculata* (Crantz) Roth** - (n. 3931) – ref.: Enum. 1: 1014 (1827), sin.: *Ranunculus testiculatus* Crantz; *Ceratocephala orthoceras* DC.; - Hungary, Pest, Budapesta, 28.04.1874, leg. Simkovics L.

Gen *Hepatica* P. Miller, 1754

***Hepatica transsilvanica* Fuss.** – (n. 3923) – ref. Verh. Mitt. Siebenb. Ver. Naturw. 1: 83 (1850); - sin.; *Hepatica angulosa* auct., non (Lam.) DC.; - Romania, Braşov, Braşov, 10.04.1877. leg. J. Barth.

Gen *Pulsatilla* P. Miller, 1754

***Pulsatilla montana* (Hoppe) Rchb.** – (n. 3925) – ref.: Fl. Germ. Excurs. 733 (1832); sin.: *Anemone montana* Hoppe; *Anemone balkana* Gürke; - Romania, Cluj, Cluj-Napoca ( Fâneţele); April 1878; leg. Simkovics L.

***Pulsatilla patens* (L.) Mill.** – (n. 3924) – ref. Gard. Dict. ed. 8 no. 4 (1768). - sin. *Anemone patens* L.; - Romania, Cluj, Cluj-Napoca (Fâneţele); 17.04. – 01.06.1878; leg. Simkovics L.

Gen *Ranunculus* L. 1753

***Ranunculus ficaria* L.** – (n.3934) – ref.: Sp. Pl. ed. 1 550 (1753), sin.. *Ficaria degenii* Hervier; *Ficaria nudicaulis* A.Kern.; *Ficaria ranunculoides* Roth; *Ficaria verna* Huds.; *Ficaria vulgaris* A.St.-Hil.; - Romania, Caraş-Severin, Baziaş, April. 1874, leg. Simkovics L.

***Ranunculus mediterraneus* (Griseb.) Steffen** – (n. 3935) – ref.: 1864, Österr. Bot. Z., 14 : 182.; sin.: *R. sardous* (subsp. *sardous* ?); - Hungary, Pest, Szentendre (Szt. Endre), 01. 08. 1876, leg. Simkovics L.

***Ranunculus trichophyllus* Chaix** – (n. 3933) – ref.: Hist. Pl. Dauph. 1: 335 (1786), sin.: *R. paucistamineus* Tausch; *R. brattius* Beck; *Batrachium confervoides* Fr.; *R. drouetii* F.W.Schultz ex Godr.; *R. flaccidus* Pers.; *Batrachium drouetii* (F.W.Schultz ex Godr.) Bosch; *Batrachium divaricatum* (Schränk) Wimm.; *Batrachium paucistamineum* (Tausch) F.W.Schultz; *R. divaricatus* Schrank; *Batrachium trichophyllum* (Chaix) Bosch; - Romania, Bihor, Oradea, 29.04.1877, leg. Simkovics L.

***Ranunculus tripartitus* DC.** – (n. 3932) – ref.: Icon. Pl. Gall. Rar. 1: 15 (1808), sin.: *Ranunculus lutarius* (Revel) Bouvet; *Batrachium obtusiflorum* (DC.) Gray; *Batrachium tripartitum* (DC.) Gray; *R. obtusiflorus* (DC.) Moss; *R. petiveri* W.D.J.Koch; - Romania, Bihor, Sânmartin (Pețea rivulet), 24.06.1879, leg. Simkovics L.

Subfam. *Helleboroideae*

Gen *Helleborus* L., 1753

***Helleborus purpurascens* Waldst. & Kit.** – (n. 3936) – ref.: Pl. Rar. Hung. 2: 105 (1802-1803); - Hungary, Pest., Pilisszanto (Pilis – Szantho), 03.05.1874, leg. Simkovics L.

Subfam. *Thalictroideae*

Gen *Thalictrum* L., 1753

***Thalictrum minus* L. subsp. *minus*** – (n. 3922) – Ref.: Sp. Pl. ed. 1 546 (1753); Sched. crit. 259. 1822; - sin.: *Thalictrum collinum* Wallr. (*Schedulae Criticae* : 259. 1822.); *T. majus* Crantz; *T. minus* L. subsp. *majus* (Crantz) Rouy & Foucaud.; *T. minus* var. *nutans* Regel ex Boiss.; *T. elatum* Jacq. *T. flexuosum* Bernh.; *T. jacquinianum* Bernh.; *T. medium* Jacq; *T. silvaticum* W.D.J.Koch; - Hungary; Fejer, Adony, 21.07.1871; leg. I.A. Tauscher.

Subfam. *Trollioideae*

Trib *Delphinieae*

Gen *Aconitum* L., 1753

***Aconitum variegatum* L. subsp. *variegatum*** – (n. 3938) – ref.: Sp. Pl. ed. 1 532 (1753) ; sin.. *A. rostratum* Bernh. ex DC.; *A. odontandrum* E.D.Wissjul.; *A. cammarum* Jacq.; *A. gracile* Rchb.; *A. judenbergense* (Rchb.) Gáyer; - Romania, Bihor, Oradea - Băile Felix, 06.09. 1879, leg. Simkovics L.

Gen *Consolida* (DC) S.F. Gray, 1821

***Consolida regalis* Gray subsp. *regalis*** – (n. 3937) - Nat. Arr. Brit. Pl. 2: 711 (1821); sin.: *Consolida regalis* Gray subsp. *arvensis* (Opiz) Soó; *Delphinium consolida* L.; *D. consolida* L. subsp. *consolida*; *D. consolida* L. subsp. *arvense* (Opiz) Graebn.; - Romania, Bihor, Oradea, Jun. 1878, leg. Simkovics L.

Ord. *Papaverales* Dumortier, 1829

Fam. *Fumariaceae* A.P. de Candolle, 1821

Trib *Corydaleae*

Gen *Corydalis* A.P. de Candolle, in Lamarck & de Candolle, 1805

***Corydalis cava* (L.) Schweigg. & Körte** - (n. 3943) – ref.: Fl. Erlang. 2: 44 (1811) – sin.: *Corydalis bulbosa* auct., non DC.; - Hungary, Pest, Budapest (in the forest), April 1875, leg. Simkovics L.

***Corydalis solida* (L.) Clairv.** – (n. 3944) – ref.: Svensk Bot. 8: t. 531 (1817) – sin.: *Corydalis halleri* Willd.; *C. tenella* Ledeb. ex Nordm.; *C. bulbosa* (L.) DC.; *C. tenuis* Schott, Nyman & Kotschy; - Romania, Bihor, Oradea (the Șomleu hills), April 1876, leg. Simkovics L.

Trib *Fumarieae*

Gen *Fumaria* L., 1753

***Fumaria officinalis* var. *scandens* Rchb.** – (n. 3946) – ref.: Sp. Pl. ed.1 700 (1753); sin.: *Fumaria scandens* Rchb; *Fumaria scandens* E. Mey; - Serbia, Voievodina, Verșeț (Vrsac, Versec), 18.05.1874, leg. Simkovics L.

***Fumaria rostellata* Knaf.** – (n. 3947) – ref.: Flora (Regensb.) 29: 290 (1846), - Romania, Mehedinți, Svinița (sunny vineyards), 25.05.1874, leg. Simkovics L.

***Fumaria schleicheri* Soy.-Will.** – (n. 3948) – ref.: Obs. Pl. Fr. 17 (1828), - Hungary, Pest, Budapest, 01.08.1875, leg. Simkovics L.

***Fumaria vaillantii* Loisel.** – (n. 3949) – ref.: Jour. Bot. Rédigé 2: 358 (1809); sin.: *Fumaria officinalis* auct. non L.; - Hungary, Pest, Budapest, 19.06.1872, leg. Simkovics L.

Fam. *Hypecoaceae* H.M. Wilkomm & J.M.C. Lange., 1880

Gen *Hypecoum* L., 1753

***Hypecoum imberbe* Sm.** – (n. 3945) – ref.: Fl. Graec. Prodr. 1: 107 (1806) – sin.: *Hypecoum grandiflorum* Benth.; *Hypecoum glaucescens* Guss.; *Hypecoum aequilobum* auct., non Viv.; - France, Pyrenees Orientales, Perpignon, April 1874, leg. Debeaux.



Fam. *Papaveraceae* Adans., 1763, nom. cons.

Subfam. *Chelidonioideae*

Trib *Chelidonieae*

Gen *Chelidonium* L., 1753

***Chelidonium majus* L.** – (n. 3942) – ref.. Sp. Pl. ed. 1 505 (1753); - Romania, Bihor, Oradea, May 1878, leg. Simkovics L.

Subfam. *Papaveroideae*

Trib *Papavereae*

Gen *Papaver* L., 1753

***Papaver dubium* L.** – (n. 3941) – ref.. Sp. Pl. ed. 1 1196 (1753)- sin.. *Papaver obtusifolium* Desf.; *Papaver modestum* Jord.; *Papaver hirtodubium* Fedde; - Romania, Bihor, Oradea, May – June. 1877, leg. Simkovics L.

**Subclas. *Caryophyllidae* Takhtajan, 1967**

**Superord. *Caryophyllanae* Takhtajan, 1967**

Ord. *Caryophyllales*

Fam. *Caryophyllaceae* Durande, 1782, nom. cons.

Gen *Petrorhagia* (Seringe) Link, 1831

***Petrorhagia prolifera* (L.) P.W.Ball & Heywood** – (n. 4022) – ref.: Bull. Brit. Mus. (Bot.) 3: 161 (1964); sin.: *Tunica prolifera* (L.) Scop.; *Kohlrauschia prolifera* (L.) Kunth; *Dianthus prolifera* L.; - Hungary, Baranya, Harkany, and Nyiregyhaza, (Szabolcs-Szatmar-Bereg, ) (in the forest, by the salt lake), July / 5. August. 1873, leg. Simkovics L. (Hungaria, Flora Com. Baranya)

***Petrorhagia saxifraga* (L.) Link** – (n. 4021) – ref.: Handb. 2: 235 (1829); sin.: *Tunica rigida* (L.) Boiss.; *Kohlrauschia saxifraga* (L.) Dandy; *Tunica saxifraga* (L.) Scop.; Romania, between Teregova (Caraş-Severin) and Sadova (Dolj), 04 08. 1872, leg. Simkovics L.

Subfam. *Alsinoideae*

Trib *Alsineae*

Gen *Arenaria* L., 1753

***Arenaria collina* Neill** – (n. 4071/b) – ref.: Fl. Ross. i. 349; sin.: *Arenaria collina* Turcz. ex Ledeb.; - Hungary, Pest, the Csepel island, Schilleny, 28.06.1848, I.A. Tauscher.

***Arenaria grandiflora* L. var. *grandiflora*** – (n. 4070) – ref.: Syst. Nat. ed. 10 2: 1034 (1759); sin.: *Arenaria triflora* L.; *A. mixta* Lapeyr; *A. grandiflora* var. *triflora*

sensu Merino (Fl.Gal. 3:529 – 1909) ; - France, Indre et Loire, Chinon, 04.05. – 20.06.1879, leg. E.H. Tourlet.

***Arenaria procera* Spreng. subsp. *procera*** - (n. 4069) – ref.: name status Accepted, sin.: *Arenaria graminifolia* Schrad., non Ard.; *A. graminifolia* auct., non Ard., nec Schrad.; *A. procera* Spreng. subsp. *glabra* (F.N.Williams) Holub; *A. micradenia* P.A.Smirn.; *A. saxatilis* sensu Ikonn., non L.; *A. polaris* Schischk.; *A. koriniana* Fisch.; *A. syreistschikowii* P.A.Smirn.; *A. stenophylla* Ledeb.; - Hungary, Gyongyos, 01.05.1874, leg. Simkovics L.

***Arenaria serpyllifolia* L.** – (n. 4068) – ref.: Sp. Pl. ed. 1 423 (1753); sin.: *Minuartia olonensis* (Bonnier) P.Fourn.; - Slovakia, Rimavska Sobota (Rimaszombat), Rakospatal, 1868, leg. Fabry.

#### Gen *Moehringia* L., 1753

***Moehringia muscosa* L.** – (n. 4066) – ref.: Sp. Pl. ed. 1 359 (1753); - Romania, Caras-Severin, Băile Herculane, May – August 1872 – 74, leg. Simkovics L.

***Moehringia trinervia* (L.) Clairv.** – (n. 4067) – ref.: Man. Herb. Suisse ed. 1 150 (1811); sin.: *Alsine trinervia* (L.) Crantz; *Arenaria trinervia* L.; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

#### Gen *Holosteum* L., 1753

***Holosteum umbellatum* L.** – (n. 4065) – ref.: Sp. Pl. ed. 1 88 (1753); sin.: *Holosteum syvaschicum* Kleopov; - Hungary, Budapest (on the field), 05.04.1876, leg. Simkovics L.

#### Gen *Minuartia* L., 1753

***Minuartia hirsuta* (M.Bieb.) Hand.-Mazz. subsp. *frutescens* (Kit.) Hand.-Mazz.** – (4074) – ref.: Ann. Naturh. Mus. (Wien) 23: 152 (1909); sin.: *Alsine frutescens* Kit.; *Minuartia cataractarum* Janka; *Minuartia frutescens* (Kit.) Tuzson; - Romania, Mehedinti, Svinita, May-June 1874, leg. Simkovics L.

***Minuartia glomerata* (M.Bieb.) Degen** – (n. 4079) – ref.: Mitt. Naturw. Ver. Steierm. 46: 319 (1910); sin.: *Alsine glomerata* (M.B.) Fenzl. – Hungary, Pest, Budapesta (Gellerthegey – XI), 22.05.1872, leg. Simkovics L.

***Minuartia laricifolia* (L.) Schinz & Thell.** – (n. 4072) – ref.: Bull. Herb. Boiss. ser. 2 7: 403 (1907); sin.: *Alsine laricifolia* (L.) Crantz; *Alsine laricifolia* (L.) Crantz var. *laricifolia*; *Alsine striata* (L.) Gren.; *Minuartia striata* (L.) Mattf.; - Croatia, Rijeka (Fiume), Grobnik, undated, leg. Dr. Feuttinger.

***Minuartia rubra* (Scop.) McNeill** - (n.4073) – ref.: Feddes Repert. 68: 173 (1963); sin.: *Alsine jacquinii* W.D.J.Koch; *Alsine fasciculata* auct., non (L.) Wahlenb.;

*Minuartia cymifera* (Rouy & Foucaud) Graebn.; *Minuartia fasciculata* auct., non (L.) Hiern; *Minuartia fastigiata* (Sm.) Rchb.; - Hungary, Pest, Budapest, (Hidegkút), 29.06.1873, leg. Simkovics L.

***Minuartia setacea* (Thuill.) Hayek subsp. *banatica* (Rchb.) Prodán** - (n. 4077) - ref.: Fl. Rep. Pop. Române 2: 80 (1953); sin.: *Alsine banatica* Heuff.; - Romania, Cluj, Turda, [the Turda Pass (Cheile Turzii)], 21.07.1878, leg. Simkovics L.

***Minuartia setacea* (Thuill.) Hayek** – (n. 4078) - ref.: Fl. Steierm. 1: 271 (1908); sin.: *Alsine setacea* (Thuill.) Mert. & W.D.J.Koch; *Alsine setacea* (Thuill.) Mert. & W.D.J.Koch var. *setacea*; - Hungary, Pest, Budapest (Sashegy), May – June 1871, leg. Simkovics L.

***Minuartia verna* (L.) Hiern** – (n.4075) – ref.: Jour. Bot. (London) 37: 320 (1899); sin.: *Alsine verna* (L.) Wahlenb.; *Alsine verna* (L.) Wahlenb. var. *Verna*; *Arenaria verna* L.; *Minuartia caespitosa* (Ehrh.) Degen; - Romania, Cluj, Turda, the Turda Pass (Cheile Turzii), caves, 27.07.1878, leg. Simkovics L.

***Minuartia verna* (L.) Hiern** – (n. 4071/a) – ref.: Jour. Bot. (London) 37: 320 (1899); sin.: *Arenaria verna* L.; *Alsine verna* (L.) Wahlenb.; *Alsine verna* (L.) Wahlenb. var. *verna*; *Minuartia caespitosa* (Ehrh.) Degen; - Ungaria, Pest, Csepel island, Schilleney, 28.06.1848, I.A. Tauscher.

***Minuartia viscosa* (Schreb.) Schinz & Thell.** – (n. 4076) – ref.: Bull. Herb. Boiss. ser. 2 7: 404 (1907); sin.: *Alsine viscosa* Schreb.; *Minuartia piskunovii* Klovov; *Minuartia tenuifolia* (L.) Hiern, non Nees ex Mart. subsp. *viscosa* (Schreb.) Briq.; - Romania, Arad, Ineu (Boros Jenő), 15.06.1873, leg. Simkovics L.

#### Gen *Myosoton* Moench, 1794

***Myosoton aquaticum* (L.) Moench** – (n. 4058) – ref.: Meth. 225 (1794); sin.: *Malachium aquaticum* (L.) Fr.; *Cerastium aquaticum* L.; *Stellaria aquatica* (L.) Scop.; - Romania, Bihor, Oradea (the Fatanos forest), 25.08.1877, leg. Simkovics L.

#### Gen *Stellaria* L., 1753

***Stellaria graminea* L.** – (n. 4063) – ref.: Sp. Pl. ed. 1 422 (1753); sin.: *Alsine graminea* (L.) Britt.; *Stellaria graminea* var. *latifolia* Peterm.; - Romania, Bihor, Oradea, 03. – 20.05.1877, leg. Simkovics L.

***Stellaria holostea* L.** – (n. 4061) – ref.: Sp. Pl. ed. 1 422 (1753); sin.: *Alsine holostea* L.; - Romania, Bihor, Oradea, 29.04.1877, leg. Simkovics L.

***Stellaria longipes* Goldie** – (n.4062) – ref. *Edinburgh Philosophical Journal* 6(12): 327. 1822.; sin.: *Alsine longipes* (Goldie) Coville; *A. palmeri* Rydb.; *A. stricta* (Richaerds.) Rydb.; *Alsine validus* Goodding; *Stellaria laxmannii* Fisch; *S. montana* Hulten.; *S. palmeri* (Rydb.) Tidestrom; *S. stricta* Richaerds; *S. valida*

(Goodding) Coult. & A. Nels.; - Hungary, Hajdu – Bihar, Kismarja, 17.07.1876, leg. Simkovics L.

***Stellaria media* (L.) Vill.** – (n. 4060) – ref.: Hist. Pl. Dauph. 3: 615 (1789); sin.: *Alsine media* L.; *Stellaria media* (L.) Cirillo; *Stellaria media* subsp. *media* (L.) Vill.; *Stellaria media* (L.) Vill. subsp. *vulgaris* Raunk.; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Stellaria nemorum* L.** - (n. 4059) – ref.: Sp. Pl. ed. 1 421 (1753); sin.: *Alsine nemorum* (L.) Macloskie; - Romania, Bihor, Aleșd, Pădurea Neagră (in the forest) 25.05.1878, leg. Simkovics L.

***Stellaria uliginosa* Murray** - (n. 4064) – ref.: Prodr. Stirp. Gotting. 55 (1770); sin.: *Alsine uliginosa* (Murr.) Britt.; *Stellaria alsine* Grimm, nom. inval.; - Romania, Bihor, Aleșd, Poiana Neagră (on the river bank), 25.05.1878, leg. Simkovics L.

Subfam. *Caryophylloideae*  
Trib *Caryophylleae*  
Gen *Dianthus* L., 1753

***Dianthus armeria* L.** – (n. 4023) – ref.: Sp. Pl. ed. 1 410 (1753) – sin.: *Dianthus epirotus* Halácsy; - Hungary, Pest, Budapest (on the Harshegy hills), 22.06.1872, leg. Simkovics L.

***Dianthus carthusianorum* L.** – (n. 4025) – ref.: Sp. Pl. ed. 1 409 (1753); sin.: *Dianthus vaginatus* Chaix; *Dianthus carpaticus* Wol.; *D. commutatus* (Zapal.) Klokov; *D. sanguineus* Vis.; *D. leucophoeniceus* (Dörf. & Hayek) Tutin; *D. bukovinensis* Klokov; *D. tenuifolius* Schur; *D. atrorubens* All.; *D. giganteus* d'Urv. subsp. *italicus* Tutin; *D. puberulus* (Simonk.) A.Kern.; *D. rogowiczii* Kleopow; *D. velebiticus* Borbás; *D. capillifrons* (Borbás) H.Neumayer; *D. polonicus* Zapall.; - Austria, Tirol, Niederdorf, 17.06.1874, leg. M. Huter.

***Dianthus carthusianorum* L. var. *reflexus* Neibr.** – (n. 4024) – ref.: Sp. Pl. ed. 1 409 - 410 (1753); - Romania, Bihor, Pietroasa, 16-17.07.1879, leg. Simkovics L.

***Dianthus caryophyllus* L.** – (n. 4031) – ref.: Sp. Pl. ed. 1 410 (1753); sin.: *Dianthus arbuscula* Lindl.; *Dianthus deltoides* L. ; *Dianthus morrisii* Hance; *Tunica morrisii* (Hance) Walp.- Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza (cultivated field), sept. 1870, leg. Simkovics L.

***Dianthus collinus* Waldst. & Kit. subsp. *glabriusculus* (Kit.) Thaisz** – (n. 4028) – ref.: Növ. Közl. 29: 121 (1932); sin.: *Dianthus piatr-neamtzui* Prodán; *Dianthus piatra-neamtzui* Prodán; *Dianthus glabriusculus* (Kitanov) Borbás; - Romania, Bihor, Oradea (hayfield), 10.06.1877, leg. Simkovics L.

***Dianthus collinus* Waldst. & Kit.** – (n. 4029) – ref.: Pl. Rar. Hung. 1: 51 (1801); - Hungary, Pest, Budapest (Szocsnyhagy), 12.10.1873, leg. Simkovics L.

***Dianthus deltoides* L.** – (n. 4030) – ref.: Sp. Pl. ed. 1 411 (1753); sin.: *Dianthus caryophyllus* L.; - Hungary, Nograd, Losoncz, (on the field), 30.06.1877, leg. Kunozt Ianos.

***Dianthus diutinus* Kit.** – (n. 4026) – ref.: Österreichs Fl. ed. 2 1: 655 (1814); sin.: *Dianthus polymorphus* M.Bieb. pro parte; - Hungary, Fejer, Ercsi (on the pasture), May – 7 Jun. 1871, leg. I.A. Tauscher.

***Dianthus furcatus* Balb.** – (n. 4034) – ref. Mém. Acad. Sci. (Turin) 10-11: 13 (1804); sin.: *Dianthus benearensis* Loret; *D. requienii* Gren. & Godr.; *D. alpester* Balb.; *D. fallens* Timb.-Lagr.; - France, Hautes Pyrenees, Port de Gavarnie, 16.07.1870, leg. H. Bordere.

***Dianthus giganteus* d'Urv.** – (n. 4027) – ref.: Mém. Soc. Linn. Paris 1: 301 (1822); *Dianthus carthusianorum* var. *banaticus* Heuff.; *D. croaticus* Borbas; *D. haynaldianus* Borbas; *D. subgiganteus* Formanek; *D. vandasii* Velen.; - Romania, Mehedinti, Plavisevita, 23.05.1874, leg. Simkovics L.

***Dianthus graniticus* Jord.** – (n. 4036) – ref.: Obs. Pl. Crit. 7: 13 (1849); - France, Loire, St. Juste, Ligerem, endemical, 10.08.1874, leg. .A. Liegard.- (Flora Ligerensis)

***Dianthus petraeus* Waldst. & Kit.** – (n. 4033) – ref.: Pl. Rar. Hung. 3: 246 (1808); - Romania, Caraș-Severin, Golobac, 25.06.1874, leg. Simkovics L.

***Dianthus pyrenaicus* Pourr.** – (n. 4035) – ref.: Mém. Acad. Sci. Toulouse 3: 318 (1788); sin.: *Dianthus attenuatus* Sm.; *Dianthus requienii* sensu Willk. pro parte, non Gren. & Godr.; *Dianthus maritimus* Rouy; - France, Pyrenees orientales, Mont Louis, Jule 1872, leg. Bordere.

***Dianthus serotinus* Waldst. & Kit.** – (n. 4032) – ref.: Pl. Rar. Hung. 2: 188 (1804); - Hungary, Pest, Budapest (Rakos), 23.09. 1873, leg. Simkovics L.

#### Gen *Gypsophila* L. 1753

***Gypsophila fastigiata* L.** – (n. 4018) - ref.: Sp. Pl. ed. 1 407 (1753); sin.: *Gypsophila arenaria* Waldst. & Kit. var. *arenaria*; *Gypsophila dichotoma* Besser; - Hungary, Budapest, Rakos, 08.07.1875, leg. Simkovics L.

***Gypsophila muralis* L.** – (n. 4020) – ref.: Sp. Pl. ed. 1 408 (1753); - Hungary, Jasz-Nagykun-Solnok, Kisujszallas, 11.08.1872, leg. Simkovics L.

***Gypsophila paniculata* L.** – (n. 4019) – ref.: Sp. Pl. ed. 1 407 (1753); - Hungary, Szabolcs-Szatmar-Bereg, Nyirgyhaza, 1868, leg. Simkovics L.

***Gypsophila repens* L.** – (n. 4017) – ref.: Sp. Pl. ed. 1 407 (1753); - France, Environs de Cannes, 29.05.1877, leg. I. Heilmann.

#### Trib *Sileneae*

#### Gen *Agrostemma* L., 1753

***Agrostemma githago* L.** – (n. 4057) – ref.: Sp. Pl. ed. 1 435 (1753); sin.:

*Agrostemma linicola* Terechov; *Lychnis githago* (L.) Scop.; *Githago segetum* auct.; - Romania, Bihor, Oradea – Băile Felix, 17.06.1877, Simkovics L.

Gen *Silene* L., 1753

***Silene alpestris* Jacq.** – (n. 4037) – ref.: Fl. Austr. 1: 60 (1773); sin.: *Silene quadrifida* L., nom. ambig.; *Heliosperma arcanum* Zapall.; *Silene alpestre* (Jacq.) Rchb.; - Italy, Abruzzo, Valle dell'Orfenta, 14 aug. 18.. ?, leg. H. Groves (Herbarium H. Groves - Florentia).

***Silene armeria* L.** – (n. 4039) – ref.: Sp. Pl. ed. 1 420 (1753); sin.: *Silene lituanica* Zapal.; - Italy, Trentino-Alto Adige, Bressanone (Brixen), no date, leg. A. Kerner

***Silene borysthena* (Gruner) Walters** - (n.4047) – ref.: Feddes Repert. 69: 47 (1964); sin.: *Silene parviflora* (Ehrh.) Pers., non Moench; *S. otites* (L.) Wibel subsp. *pubescens* (Schur) Dostál; *S. otites* (L.) Wibel subsp. *otites* var. *borysthena* Gruner; *S. ehrhartiana* Soó; *S. otites* (L.) Wibel subsp. *parviflora* (Ehrh.) Hayek; *Otites parviflora* (Ehrh.) Stankov; *Otites borysthena* (Gruner) Klokov; - Hungary, Pest, Budapest (Csepel island– Soroksar), 04.07.1875, leg. Simkovics L.

***Silene bupleuroides* L.** – (n. 4049) – ref.: Sp. Pl. ed. 1 421 (1753); sin.: *Silene longiflora* Ehrh. subsp. *longiflora*; *Silene longiflora* Ehrh.; - Hungary, Pest, Budapest (Kamaraerdo), Sept. 1873, leg. Simkovics L.

***Silene conica* L.** – (n. 4043) – ref.: Sp. Pl. ed. 1 418 (1753); - Hungary, Pest-Pilis-Solt-Kis-Kun, Vacz, (Naszal hills), 31.05.1871, leg. Simkovics L.

***Silene dichotoma* Ehrh.** – (n. 4044) – ref.: Beitr. Naturk. 7: 143 (1792); sin.: *Silene mathei* Péntzes; - Hungary, Fejer, 19.06.1872, leg. I.A. Tauscher.

***Silene flavescens* Waldst. & Kit.** – (n. 4041) – ref.: Pl. Rar. Hung. 2: 191 (1804); sin.: *Silene subcorymbosa* Adamovic; - Romania, Caraș-Severin, Mehadia, 26.05.1874. leg. Simkovics L.

***Silene gallinyi* Rchb.** – (n. 4055) – ref.: Fl. Germ. Excurs. 815 (1832); sin.: *Silene trinervia* Sebast. & Mauri; - Romania, Mehedinți, Ogradina (on the river gravel), 27.07.1874, leg. Simkovics L.

***Silene grafferi* Sm.** – (n. 4053) – Italy, Apruzzo, Sarboris - Monte Ana, 14 August, 18.. ?, leg. O. Groves (Herbarium O. Groves - Florentia) .

***Silene inaperta* L.** – (n. 4056) – ref. Sp. Pl. ed. 1 419 (1753); - Italy, Abruzzo, 26.07.1875, leg. Porta – Rigo.

***Silene italica* (L.) Pers. subsp. *nemoralis* (Waldst. & Kit.) Nyman** - (n. 4048) – ref.: Consp. 90 (1878); sin.: *Silene jundzillii* Zapal.; *Silene nemoralis* Waldst. & Kit.; - Serbia, Voievodina, Vîrșeț (Vrsac), 18.05.1874, leg. Simkovics L.

***Silene nutans* L.** – (n. 4050) – ref.: Sp. Pl. ed. 1 417 (1753); - Romania, Bihor, Oradea (Șomleu hills), 25.05.1877, leg. Simkovics L.

***Silene otites* (L.) Wibel** – (n. 4046) – ref. Prim. Fl. Werthem. 241 (1799); sin.:



*Silene otites* (L.) Wibel subsp. *eu-otites* Graebn.; *Otites pseudotites* (Besser ex Rchb.) Klokov; *O. polaris* (Kleopow) Stankov; *O. artemisetorum* Klokov; - Hungary, Szabolcs-Szatmár-Bereg, Nyiergyhaza, 26.08.1872, leg. Simkovics L.

***Silene transsilvanica* Schur** – (n. 4051) – ref.: Rozpr. Wydz. Mat.-Przyr. Polsk. Akad. Um. (Biol.) ser. 3 11B: sin. possibile: *Silene nutans* L. subsp. *dubia* (Herbich) Zapal; *Silene dubia* Herbich; - Romania, Mehedinți, Șvinița ( mt. Trescovat), 26.05.1874, leg. Simkovics L.

***Silene saxifraga* L.** – (n. 4040) - ref.: Sp. Pl. ed. 1 421 (1753); sin.: *Silene petraea* Waldst. & Kit.; *S. stojanovii* Panov; *S. saxifraga* L. subsp. *petraea* (Waldst. & Kit.) Gus.; *S. fruticulosa* Sieber subsp. *taygetea* (Halácsy) Hayek; *S. saxifraga* L. subsp. *eusaxifraga* Hayek; *S. velcevii* Jordanov & Panov; *S. fruticulosa* Sieber subsp. *fruticulosa*; *S. fruticulosa* Sieber subsp. *eufruticulosa* Hayek; *S. taygetea* Halácsy; - Romania, Caraș-Severin, Băile Herculane (on the rocks), 30.05.1874, leg. Simkovics L.

***Silene uniflora* Roth subsp. *thorei* (Dufour) Jalas** – (n. 4054) – ref.: Willdenowia 14: 48 (1984); sin.: *Silene thorei* Dufour; - France, Basses - Pyrenees (Pyrenees – Atlantiques) , Aquitania, Biarritz (on the sards), July 1873, leg. Bordere.

***Silene vallesia* L.** – (n. 4042) – ref.: Syst. Nat. ed. 10 2: 1032 (1759); - France, Alpes Maritimes, Environs de Cannes, July 1877, leg. Heilmann.

***Silene viridiflora* L.** – (n. 4052) – ref.: Sp. Pl. ed. 2 597 (1763); - Romania, Bihor, Saldabagiu – Băile Felix (at the forest skirt), 20.06. – 02.09.1877, leg. Simkovics L.

***Silene viscosa* (L.) Pers.** – (n. 4045) – ref.: Syn. Pl. 1: 497 (1805); sin.: *Melandrium viscosum* (L.) Kelak.; *Elisanthe viscosa* (L.) Rupr.; - Hungary,, Budapesta (Rakos), 27.05.1875, leg. Simkovics L.

***Silene vulgaris* (Moench) Garcke** - (n. 4038) – ref.: Fl. Nord-Mittel-Deutschl. ed. 9 64 (1869); sin.: *Silene inflata* Sm.; *S. campanulata* Saut.; *S. cucubalus* Wibel; *S. cucubalus* Wibel subsp. *cucubalus*; *S. venosa* Asch.; *S. venosa* Asch. subsp. *venosa*; *S. latifolia* (Mill.) Britten & Rendle, non Poir.; - Romania, Timiș, Iasenova, 28.06.1874. leg. Simkovics L.

Subfam. *Paronychioideae*

Trib *Corrigioleae* L., 1753

Gen *Corrigiola* L.

***Corrigiola litoralis* L.** – (n. 4080) – ref.: Sp. Pl. ed. 1 271 (1753); - Germany, Neisse (on the sands), 15.10.1872, leg. Bochmann.

Trib *Paronychieae*

Gen *Herniaria* L.

***Herniaria glabra* L.** – (4081) – ref.: Sp. Pl. ed. 1 218 (1753); sin.: *Herniaria ceretana* Sennen; *H. ceretana* (Sennen) Sennen; *Herniaria vulgaris* Hill; *H.*

*kotovii* Klokov; *H. suavis* Klokov; *H. corrigioloides* Lojac.; *H. rotundifolia* Vis.; - Romania, Mehedinti, Orsova (Poarta de Fier), in the townside riverbed, on the banks of the Danube, 25.05 – 28.07.1874, leg. Simkovics L.

***Herniaria hirsuta* L.** – (n. 4083) – ref.: Sp. Pl. ed. 1 218 (1753); sin.: *Herniaria diandra* Bunge; *H. permixta* Guss.; -Hungary, Zala, the Badacsany hills, 17.08.1873, leg. Simkovics L.

***Herniaria latifolia* Lapeyr.** – (n. 4084) – ref.: Hist. Abr. Pyr. 127 (1813); sin.: *Herniaria pyrenaica* J.Gay; - France, Hautes-Pyrenees, Saugue, January 1873, leg. Bordere.

***Herniaria incana* Lam.** – (n. 4082) – ref.: Encycl. Méth. Bot. 3: 124 (1789); sin.: *Herniaria besseri* (Fisch.) DC.; *H. macrocarpa* Sibth. & Sm.; - Hungary, Pest, Budapesta (Gellertegy – XI), 22.05.1872, leg. Simkovics L.

#### Gen *Paronychia* J. Hill., 1756

***Paronychia cephalotes* (M.Bieb.) Besser** - (n. 4085) – ref.: Enum. Horto Cremen. 4 (1830); sin.: *Paronychia taurica* Borhidi & O. Muniz.; - Hungary, Budapest (Sashegy), Juny 1874, leg. Simkovics L.

***Paronychia polygonifolia* D.C** - (n. 4087) – ref.: Fl. Fr.ed.3. 3, 403 (1805); sin.: *Chaetonychia polygonifolia* (Vill.) Samp.; *Ferriera polygonifolia* (Vill.) Bubani; *Illecebrum alpinum* Chaix; *Illecebrum polygonifolia* Vill.; *Paronychia alpina* E.H.L. Krause; *Paronychia argentea* Lam. subsp. *polygonifolia* (Vill.) Rouy; *Paronychia trinervis* Dulac (nom. illeg.); *Paronychia polygonifolia* (Vill.) D.C ; *Plotzia polygonifolia* (Vill.) Samp.; - France, Hautes-Pyrenees, Cauterets, September 1877, the label, lacios the author's name. (Herbier Mouillefarine).

#### Trib *Polycarpeae*

#### Gen *Polycarpon* L., 1753

***Polycarpon tetraphyllum* (L.) L.** – (n. 4086) – ref.: Syst. Nat. Ed. 10. 2. 881 (1759); sin.: *Mollugo tetraphylla* L.; - Slovakia, Bratislava (Szt. Gyorgy), 15.09.1873, leg. Simkovics L.

#### Subfam. *Scleranthoideae*

#### Gen *Scleranthus* L., 1753

***Scleranthus annuus* L. f. *pleschincola* Rchb.** – (n. 4088) – ref.: Sp. Pl. ed. 1, 406 (1753); - Romania, Caraş-Severin, Sadova Noua, 07.08.1874, leg. Simkovics L.

***Scleranthus perrenis* L** – (n. 4089) – ref.: Sp. Pl. Ed.1. 406 (1753)..- Serbia, Voievodina, Vršet, 18.08.1874, leg. Simkovics L.

Subord. *Chenopodiineae*  
Fam *Amaranthaceae* Adams, 1763, nom. cons.  
Subfam. *Amaranthoideae*  
Trib *Amarantheae*  
Gen *Amaranthus* L., 1753

***Amaranthus deflexus* L.** – (n. 4581) – ref.: Mantissa Alt. 295 (1771); sin.: *Amaranthus argentinus* Speg.; *Euxolus deflexus* Raf.; - Croația, Pola, Istria, 09.04.1874, leg. Freyn.

***Amaranthus lividus* L.** – (n. 4582) – ref.: Sp. Pl. ed. 1 990 (1753); sin.: *Amaranthus blitum* L.; *Amaranthus polygonoides* L.; *Amaranthus ascendens* Loisel.; *Amaranthus viridus* auct. non L. - Romania, Bihor, Oradea (Seleuș), 13.10.1878, leg. Simkovics L.

***Amaranthus retroflexus* L.** – (n. 4579) – ref.: Sp. Pl. ed. 1 991 (1753); sin.: *Amaranthus* ; *bulgaricus* Kov.; *Amaranthus retroflexus* var. *salicifolius* I.M. Johnston; - Croația, Rijeca (Fiume), 28.04.1875, leg. Staub.

***Amaranthus viridis* L.** – (n. 4580) – ref.: Sp. Pl. ed. 2 1405 (1763); sin.: *Amaranthus gracilis* Poir.; *Amaranthus gracilis* Desf. ; *Euxolus viridis* (Linnaeus) Moquin ; - Hungary, Pest, Budapest (Gellert), 30.08.1875, leg. Simkovics L.

Fam *Chenopodiaceae* Ventenat, 1799  
Subfam. *Polycnemoideae*  
Gen *Polycneum* L., 1753

***Polycnenum arvense* L.** – (n. 4583) – ref.: Sp. Pl. ed. 1 35 (1753); sin.: *Polycnenum minus* Kit.; - Hungary, Baranya, Terentas, July-August 1873, leg. Simkovics L.

***Polycnenum heuffelii* Láng** - (n. 4586) – ref.: Syll. Pl. Nov. Ratisbon. (Königl. Baier. Bot. Ges.) 2: 219 (1828); - Hungary, Pest, Szt. Endre, August-September, 1875, endemic, leg. Simkovics L.

***Polycnenum majus* A.Braun** – (n. 4585) – ref.: Flora (Regensb.) 24: 151 (1841); sin.; *Polycnenum arvense* var. *simplex* Wallr. - Romania, Bihor, Oradea, Betfia (the wester side of the Șomleu hills), 14.07.1876, leg. Simkovics L.

***Polycnenum verrucosum* Láng** – (n. 4584) – ref.: Syll. Pl. Nov. Ratisbon. (Königl. Baier. Bot. Ges.) 1: 179 (1824); - Romania, Bihor, Oradea, Biharea, hayfield, 04.10.1876, leg. Simkovics L.

Subfam. *Chenopodioideae*  
Trib *Corispermeae*  
Gen *Corispermum* L., 1753

***Corispermum marschallii* Steven** – (n. 4587) – ref.: Mém. Soc. Nat. Moscou 5:

336 (1814); sin.: *Corispermum volgicum* Klocov; -Hungary, Pest, Insula Csepel, Szt. Miklos, 17.08.1875, leg. Simkovics L.

***Corispermum nitidum* Kit.** – (n. 4588) – ref.: Österreichs Fl. ed. 2 1: 7 (1814); - Hungary, Pest., Budapesta, 19.09.1873, leg. Simkovics L.

**Superord. *Polygonanae* Takhtajan ex Reval, 1992**

Ord. *Polygonales* Dumortier, 1829

Fam. *Polygonaceae* Durande, 1782

Subfam. *Polygonoideae*

Trib *Polygoneae*

Gen *Polygonum* L., 1753

***Polygonum arenarium* Waldst. & Kit.** – (n, 4612) – ref.: Pl. Rar. Hung. 1: 69 (1801); - Hungary , Pest, Budapest, 08.10.1873, leg. Simkovics L. (Flora Com. Pestianenesis).

***Polygonum amphibium* var. *emersum* Michx.** – (n, 4606) – ref.: Sp. Pl. ed. 1 361 (1753); sin.: *Polygonum amphibium* L. (basionym); *Persicaria amphibia* (L.) Gray; *Persicaria amphibium* var. *emersa* (Michx.) Hickman; *Persicaria coccinea* (Muhl. ex Wild.) Greene; *Persicaria muehlenbergii* (S. Wats.) Small.; *Polygonum amphibium* var. *coccineum* (Muhl. ex Wild.) Farw.; *Polygonum coccineum* Muhl. ex Wild.; *Polygonum muehlenbergii* S. Wats.; - Hungary, Budapesta (Pest) and Niyereghaza (Szabolcs-Satmar-Bereg), July 1875 – 77, leg. Simkovics L.

***Polygonum lapathifolium* L.** – (n, 4607) – ref.: Sp. Pl. ed. 1 360 (1753); Syn. Pl. 1: 440 (1805) – pt. *Polygonum nodosum* Pers.; sin.: *Polygonum nodosum* Pers.; *Polygonum paniculatum* Andr.; *Polygonum incanum* F.W.Schmidt; *Polygonum incarnatum* Ell. ; *Polygonum linicola* Sutulov; *Polygonum nodosum* Pers. ; *Polygonum oneillii* Brenckle; *Polygonum zaporoviense* Klovov; *Polygonum scabrum* Moench; *Polygonum andrzejowskianum* Klovov; *Polygonum hypanicum* Klovov; *Persicaria lapathifolia* (L.) S.F. Gray ; *Persicaria incarnata* (Ell.) Small ; *Persicaria tomentosa* (Schrank) Bickn. ; - Hungary, Baranya, 13.08.1873, leg. Simkovics L.

***Polygonum hydropiper* L.** – (n, 4610) – ref.: Sp. Pl. ed. 1 361 (1753); sin.: *Persicaria hydropiper* (L.) Opiz; *Polygonum hydropiper* var. *projectum* Stanford; - Romania, Bihor, Oradea, July-September 1878, leg. Simkovics L.

***Polygonum minus* Huds.** – (n, 4611) – ref.: Fl. Angl. ed. 1 148 (1762); sin.: *Persicaria minor* (Huds.) Opiz; - Romania, Bihor, Oradea, August-September 1878, leg. Simkovics L.

***Polygonum mite* Schrank** – (n, 4609) - ref.: Baier. Fl. 1: 668 (1789); sin.: *Pericaria mitis* (Schrank) Assenov; *Persicaria mitis* (Schrank) Holub ; *Polygonum mite* ; - Hungary, Pest, Budapest, August 1875, leg. Simkovics L.

***Polygonum persicaria* L.** – (n, 4608) – ref.: Sp. Pl. ed. 1 361 (1753); sin.: *Persicaria maculata* (Raf.) S.F. Gray; *Persicaria persicaria* (L.) Small.; *Persicaria*

*ruderalis* (Salisb.) C.F. Reed; *Persicaria ruderalis* var. *vulgaris* (Webb & Moq.) Reed; *Persicaria vulgaris* Webb & Moq.; *Polygonum dubium* Stein.; *Polygonum fusiforme* Greene; *Polygonum minus* auct. non Huds.; *Polygonum persicaria* var. *ruderales* (Salisb.) Meisn.; *Polygonum vulgaris* Samp.; - Romania, Bihor, Oradea, 26.08.1877, leg. Simkovics L.

Trib *Rumiceae*  
Gen *Rumex* L., 1753

***Rumex acetosa* L.** – (n, 4605) – ref.: Sp. Pl. ed. 1 337 (1753); sin.: *Acetosa fontano-paludosa* (Kalela) Holub; *Acetosa pratensis* Mill.; *Rumex acetosa* subsp. *fontano-paludosa* (Kalela) Hyl.; *Rumex acetosa* subsp. *pratensis* (Mill.) A Blytt & O.C. Dah; *Rumex fontanopaludosis* Kalelal; - Romania, Bihor, Oradea, 07 – 10.06. 1877, leg. Simkovics L.

***Rumex acutus* L. (pro sp.)** – (n, 4596) – ref.: *Flora Britannica* 1: 391-392. 1800. ; sin.: *Rumex x acutus* L. (pro sp.); *Rumex crispobtusifolius* Meisn.; *Rumex crispus x obtusifolius*; *Rumex x pratensis* Mert & W.D.J. Koch; *Rumex pratensis* Mert. & W.D.J.Koch; - Romania, Bihor, Roşiori, 02.07.1897, leg. Simkovics L.

***Rumex bihariensis* Simk.** – (n, 4597) – Romania, Bihor, Oradea, 29.06.1877, leg. Simkovics L.

***Rumex confusus* Simk.** – (n. 4598) – ref.: ITIS – Taxonomic Serial No. 504908; sin.: *Rumex x confusus* Simonkai; - Romania, Bihor, Oradea, 07.07.1877, leg. Simkovics L.

***Rumex conglomeratus* Murray** – (n. 4592) – ref.: Prodr. Stirp. Gotting. 52 (1770); sin.: *Rumex nemorosus* Schrad.; - Hungary, Fejer, Sotol, Ercsi, 01.07.1876, leg. I.A. Tauscher.

***Rumex crispus* L.** – (n. 4593) – ref.: Sp. Pl. ed. 1 335 (1753); sin.: *Rumex odontocarpus* I.Sándor; - Romania, Bihor, Oradea (damp places), 09.06. 1879, leg. Simkovics L.

***Rumex x erubescens* Simokai** – (n. 4600) – sin.: *Rumex erubescens* Simokai; *Rumex patientia x Rumex obtusifolius*; - Romania, Bihor, Sântandrei, 23.06. – 07.07.1877, leg. Simkovics L.

***Rumex maritimus* L.** – (n. 4589) – ref.: Sp. Pl. ed. 1 335 (1753); sin.: *Rumex fueginus* Phil. ; *Rumex maritimus* var. *athrix* St. John; *Rumex maritimus* var. *fueginus* (Phil.) Dusen; *Rumex maritimus* subsp. *fueginus* (Phil.) Hultén; *Rumex maritimus* var. *persicarioides* (L.) R.S. Mitchell; *Rumex persicarioides* L. ; - Hungary, Hajdu-Bihar, M. Rabe, dry swamps, 01.08.1877, leg. Simkovics L.

***Rumex palustris* Sm.** (n. 4590) – ref.: Fl. Brit. 1: 394 (1800); - Romania, Bihor, Oradea, (damp places), Jule 1878, leg. Simkovics L.

***Rumex plaustrides* Simk.** – (n. 4591) – Romania, Bihor, Oradea (damp places), 28.06.1877, leg. Simkovics L.

***Rumex patientia* L.** – (n. 4599) – ref.: Sp. Pl. ed. 1 333 (1753); - Romania, Bihor, Oradea, Băile 1 Mai, 07.07.1879, leg. Simkovis L.

***Rumex stenophyllus* Ledeb.** - (n. 4594) – ref.: Fl. Altaica 2: 58 (1830); - Hungary, Hajdu-Bihar, M. Rabe, 01.08.1877, leg. Simkovics L.

***Rumex stenophyllus* Ledeb.** - (n. 4595) – ref.: Fl. Altaica 2: 58 (1830) sin.: *Rumex odontocarpus* Sandor ex Borbás; - Hungary, Pest, Budapest, 30.08.1875, leg. Simkovics L.

***Rumex pulcher* L.** – (n. 4604) – ref.: Sp. Pl. ed. 1 336 (1753); sin.: *Rumex pulcher* subsp. *divaricatus* (L.) Murb.; - Romania, Bihor, Oradea (by the railway), June 1877, leg. Simkovics L.

***Rumex sanguineus* L.** – (n. 4603) – ref.: Sp. Pl. ed. 1 334 (1753); sin.: *Lapathum sanguineum* (L.) Lam.; *Rumex nemorosus* Schrad. ex Willd.; - Romania, Bihor, Oradea (forest), June 1878, leg. Simkovics L.

***Rumex obtusifolius* L. subsp. *silvestris* Celak.** – (n. 4601) – ref.: Prodr. Fl. Bohm. 159 (1871); sin.: *Rumex silvestris* Wahbr.; *Rumex obtusifolius* L. var. *microcarpus* Dierb.; *Rumex obtusifolius* L. ssp. *silvestris* (Wallr.) Celak.; *Rumex obtusifolius* L. subsp. *silvestris* (Wallr.) Rech.; *Rumex obtusifolius* L. var. *silvestris* (Wallr.) Koch.; *Rumex obtusifolius* L.; - Romania, Bihor, Oradea, 23-28.06.1877, leg. Simkovics L.

***Rumex obtusifolius* subsp. *transiens* (Simonk.) Rech.f.** – (n. 4602) – ref.: Beih. Bot. Centralbl. 49(2):52. 1932; sin.: *Rumex silvestri* Wahbr. f. *transiens*; *Rumex silvestris* var. *transiens* Simonk. (basionim); *Rumex silvestris* var. *transiens* (Simonk.) Kubat; - Romania, Bihor, Oradea (on the bank of the Crişului Repede River), July 1878, leg. Simkovics L.

### **Superord. *Plumbaginanae* Takhtajan ex Revel, 1992**

Ord. *Plumbaginales* Lindley, 1833

Fam. *Plumbaginaceae* Durande, 1782, nom. cons.

Subfam. *Statioideae*

Gen *Armeria* Willdenow, 1809, nom. cons.

***Armeria alliacea* (Cav.) Hoffmanns. & Link** – (n. 4570) – ref.: Fl. Port. 1: 441 (1813-1820); sin.: *Armeria plantaginea* Willd.; *Armeria rigida* Wallr.; *Armeria allioides* Boiss.; *Armeria bupleuroides* Gren. & Godr.; *Armeria plantaginea* Willd. subsp. *plantaginea*; *Armeria montana* Wallr.; *Armeria arenaria* (Pers.) Schult.; *Armeria capitella* Pau; *Armeria plantaginea* Willd. subsp. *praecox* (Jord.) Nyman; *Armeria castellana* Boiss. & Reut. ex Leresche; *Armeria plantaginea* Willd. subsp. *castellana* (Boiss. & Reut. ex Leresche) Nyman; *Armeria plantaginea* Willd. subsp. *bupleuroides* (Gren. & Godr.) Nyman; *Armeria plantaginea* Willd. subsp. *plantaginea*; *Statice alliacea* Cav.; *Statice plantaginea* All.; *Statice rigida* (Wallr.) Samp.; - France, Rhone-Alpes, Loire, 1870, leg. A. Legrand.



Gen *Goniolimon* Boissier, in Alph. de Candolle, 1848

***Goniolimon tataricum* (L.) Boiss.** - (n. 4572) – ref.; Prodr. 12: 632 (1848) sin.; *Statice tatarica* L.; - Romania, Cluj, Cluj-Napoca, 18.07.1878, leg. Simkovics L.

Gen *Limonium* P. Miller, 1754, nom. cons.

***Limonium gmelinii* (Willd.) Kuntze** - (n. 4571) – ref.; Revis. Gen. 2: 395 (1891); sin.: *Statice gmelinii* Willd.; *Statice gmelinii* Willd. var. *gmelinii*; - Hungary, Hajdu-Bihar, Hajduszoboszlo (Szoboszlo), Koncza, 1877 – 77, leg. Simkovics L.

**Subclas. *Hamamelididae* Takhtajan, 1997**  
**Superord. *Faganae* (Engler, 1892) Takhtajan, 1997**

Ord. *Corylales* Dumortier, 1829

Fam. *Betulaceae* Gray, 1821

Gen *Alnus* P. Miller, 1754

***Alnus barbata* C.A. Mey.** – (n. 4648) – ref.: Verz. Pfl. Casp. Meer. 43. 1831; sin.: *Alnus barbata* C.A. Mey; *Alnus denticulata* C.A. Mey. ; *Alnus glutinosa* subsp. *barbata* (C.A. Mey) Yaltirik. ; *Alnus glutinosa* var. *acutifolia* Spach ; *Alnus glutinosa* var. *barbata* (C.A. Mey.) Ledeb. ; *Alnus glutinosa* var. *denticulata* (C.A. Mey.) Ledeb.; - Romania, Bihor, between Bratca and Ponor, 30.05.1878, leg. Simkovics

***Alnus glutinosa* (L.) Gaertn.** – (n. 4646) – ref.: Fruct. Sem. Pl. 2: 54 (1790); sin.: *Betula alnus* var. *glutinosa* L.; *Betula glutinosa* (L.) Lam.; - Hungary, Pest, Budapest, 23.07.1875, leg. Simkovics L.

***Alnus incana* (L.) Moench** – (n. 4647) – ref.: Meth. 424 (1794); sin.: *Alnus februarica* var. *incana* (L.) Kuntze ; *Betula alnus* var. *incana* L.; *Betula incana* (L.) L.f.; - Romania, Hunedoara, Munții Retezat, Rau de Mori (Malomviz, Mihldorf), 12.08.1874, leg. Simkovics L.

Gen *Betula* L., 1753

***Betula humilis x pubescens*** – (n. 4645) – ref.: Baier. Fl. 1: 421 (1789); - Poland, Sarker Bruch, 05.08.1873, leg. C. Sanio

***Betula pendula* Roth** – (n. 4643) – ref.: Tent. Fl. Germ. 1: 405 (1788); sin.: *Betula verrucosa* Ehrh.; *Betula alba* sensu H.J. Coste, non L.; *Betula alba pendula* Aiton; *Betula aetnensis* Raf.; - Romania, Bihor, Aleșd, Pădurea Neagră, April-May 1876, leg. Simkovics L.

***Betula pubescens* Ehrh.** – (n. 4644) – ref.: Beitr. Naturk. 6: 98 (1791); sin.: *Betula alba* L.; *Betula alba* subsp. *pubescens* (Ehrh.) Regel ; *Betula alba* var. *pubescens* (Ehrh.) Spach; *Betula pubescens* var. *typica* H. Winkl.; *Betula odorata* Bechst.; - label missing, the location, date and author a unidentified.

Fam. *Corylaceae* Mirbel, 1815

Subfam. *Carpinoideae*

Gen *Carpinus* L., 1753

***Carpinus betulus* L.** – (n. 4639) – ref.: Sp. Pl. ed. 1 998 (1753); sin.: *Carpinus betulus* var. *quercifolia* (Desf.) Tzvelev; *Carpinus betulus* var. *typica* Koehne; *Carpinus carpinizza* Kil.; *Carpinus caucasica* Grossh.; *Carpinus compressus* Gillib. ; *Carpinus intermedia* Wierzb. ex Rchb.; *Carpinus nervata* Dulac; *Carpinus quercifolia* Desf. ex Steud.; *Carpinus sepium* Lam.; *Carpinus ulmifolia* Salisb.; *Carpinus ulmoides* Gray; *Carpinus vulgaris* Mill.; - Romania, Bihor, Oradea forest, April 1878, leg. Simkovics L.

***Carpinus betulus* L.** – (n. 4641) – ref.: Sp. Pl. ed. 1 998 (1753); sin.: *Carpinus betulus* var. *quercifolia* (Desf.) Tzvelev; *Carpinus betulus* var. *typica* Koehne; *Carpinus carpinizza* Kil.; *Carpinus caucasica* Grossh.; *Carpinus compressus* Gillib. ; *Carpinus intermedia* Wierzb. ex Rchb. ; *Carpinus nervata* Dulac; *Carpinus quercifolia* Desf. ex Steud. ; *Carpinus sepium* Lam.; *Carpinus ulmifolia* Salisb.; *Carpinus ulmoides* Gray; *Carpinus vulgaris* Mill.; - Romania, Bihor, Oradea, forest, 20.06.1878, leg. Simkovics L.

***Carpinus orientalis* Mill.** – (n. 4640) – ref.: Gard. Dict. ed. 8 no. 3 (1768); sin: *Carpinus duinensis* Scop.; *Carpinus macrocarpa* subsp. (Willk.) Browicz; - Romania, Caraș-Severin, Băile Herculane, 02.08.1874, leg. Simkovics L.

Gen *Ostrya* Scopoli, 1760

***Ostrya carpinifolia* Scop.** – (n. 4642) – ref.: Fl. Carn. ed. 2 2: 244 (1772); sin.: *Carpinus italica* Scop. ex Steud. ; *Carpinus ostrya* L.; *Ostrya carpinifolia* var. *genuina* Fliche; *Ostrya italica* Spach; *Ostrya italica* subsp. *carpinifolia* (Scop.) H.Winkl. ; *Ostrya ladelchii* Sanguin. ; *Ostrya virginiana* (Mill.) K.Koch subsp. *carpinifolia* (Scop.) Briq.; *Ostrya vulgaris* Willd. ; - France, Bois Rasien, May 1871, leg. Debeaux.

Subfam. *Coryloideae*

Gen *Corylus* L., 1753

***Corylus avellana* L.,** – (n. 4637/a) – ref.: Sp. Pl. ed. 1 998 (1753); sin. *Corylus avellana* var. *aurea* G. Kirchn.; *Corylus avellana* var. *fusco-rubra* ined.; *Corylus avellana* f. *fuscorubra* Dippel.; *Corylus avellana* var. *heterophylla* (Lodd. Ex Loudon) Loudon; *Corylus avellana* var. *pendula* H. Jaeger; - Romania, Bihor, Aleșd, Pădurea Neagră, 25.05.1876, leg. Simkovics L.

***Corylus colurna* L.** – (n. 4638) – ref.: Sp. Pl. ed. 1 999 (1753); sin.: *Corylus aevorum*; *Corylus arborescens*; *Corylus bizantina*; *Corylus colurna* var. *glandulifera*; - Romania, Caraș-Severin, The Straits (Cazane), April-May 1874, leg. Simkovics L.

***Corylus glandulosa* Schussler** – (n. 4637/b) – ref.: Sp. Pl. ed. 1 998 (1753); sin.: *Corylus cornuta* Marsh. var. *glandulosa* Boivin; *Corylus cornuta* forma *glandulosa* (Boivin) T.C. Brayshaw; *Corylus iberica* var. *glandulosa* Kem-Nath.; *Corylus mandshurica* Maxim, fo. *glandulosa* S.L. Tung.; - Romania, Bihor, Aleșd, Pădurea Neagră, 25.05.1876, leg. Simkovics L.

Ord. *Fagales* Engler, 1892  
Fam. *Fagaceae* Dumortier, 1829  
Subfam. *Castaneoideae*  
Gen *Castanea* P. Miller, 1754

***Castanea sativa* Mill.** - (n. 4631) - ref.: Gard. Dict. ed. 8 no. 1 (1768); sin.: *Castanea vulgaris* Lam.; - Hungary, Pest, Visegrad, Jun-July 1872, leg. Simkovics L.

Subfam. *Fagoideae*  
Gen *Fagus* L., 1753

***Fagus sylvatica* L.** - (n. 4630) - ref.: Sp. Pl. ed. 1 998 (1753); - Romania, 1). Săvârșin (Arad) și 2). Oradea (Bihor); 22.07.1872, leg. Simkovics L.

Subfam. *Quercoidaeae*  
Gen *Quercus* L., 1753

***Quercus cerris* L.** - (n. 4636) - ref.: Sp. Pl. ed. 1 997 (1753); sin.: *Cerris australis* Raf. ; *Cerris austriaca* (Willd.) Raf. ; *Cerris crinita* (Lam.) Raf. ; *Quercus aegilops* Scop. ; *Quercus ambroziana* Simonk. ; *Quercus asplenifolia* A.DC. ; *Quercus cana* Steud. ; - 1). Hungary, Heves, Gyongyos, May 1874, and 2). Romania, Bihor, Oradea, July 1877, leg. Simkovics L.

***Quercus petraea* (Matt.) Liebl.** - (n. 4632) - ref.: : Fl. Fuld. 403 (1784); sin: *Quercus sessiliflora* Salisb.; *Quercus dshorochensis* K.Koch; *Quercus sessilis* Ehrh.; *Quercus anglica* Gand. ; *Quercus petraea* forma *normalis* (O.Schwarz) C.Vicioso ; *Quercus petraea normalis* O.Schwarz; *Quercus robur* var. *petraea* Matt. ; *Quercus robur* var. *petraea* Matt. ; - Romania, Mehedinți, Șvinița (the forest near mt. Trescovat), 22.08.1873, leg. Borbas Vince. (Flora Banatica).

***Quercus pubescens* Willd.** - (n. 4634) - ref.: Berlin. Baumz. ed. 1 279 (1796); sin.: *Eriodrys lanata* Raf. ; *Quercus amplissima* Gand. ; *Quercus brevipedunculata* var. *pubescens* (Willd.) Cariot & St.-Lag. ; *Quercus isodes* Gand. ; *Quercus infectoria* Olivier; *Quercus megas* Gand. ; *Quercus apennina* auct.; *Quercus lanuginosa* Thuill.; *Quercus virgiliana* (Ten.) Ten.; *Quercus brachyphylla* Kotschy; *Quercus robur* var. *pubescens* (Willd.) Bonnier ; *Quercus sessiliflora* var. *pubescens* (Willd.) Loudon; *Quercus todaroi* Gand. ; *Quercus vinealis* Gand. ; - Romania, Bihor, Aleșd, on the hills, 05.10.1878, leg. Simkovics L

***Quercus pubescens* subsp. *pubescens*** - (n. 4635) – ref.: *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 8: 195. 1858.; sin.: *Quercus budayana* Haberle.; - Hungary, Pest, Budapest (Lipotmezo), 12.10.1873, leg. Simkovics L.

Obs.: V. Hohenbuehel-Heufler, R., O. Schmid, Solla, H. und M. Prihoda, .*Literaturberichte* in “Plant Systematics and Evolution”, Springer Wien, ISSN 0378-2697 (Print) 1615-6110 (Online), pg. 297-306.

***Quercus robur* L.** - (n. 4633) - ref.: Sp. Pl. ed. 1 996 (1753); sin.: *Quercus pedunculata* Ehrh.; *Quercus implicata* Gand.; *Quercus robur* subsp. *eurobur* A.Camus ; *Quercus robur* var. *typica* Beck; *Quercus robur* var. *vulgaris* A.DC.; *Quercus rostanii* Gand.; *Quercus tholeyrioniana* Gand.; - Hungary, Fejer, Nadep (forest), September 1867, leg. I.A. Tauscher.

**Subclasa *Rosidae* Takhtajan, 1967**

**Superord. *Saxifraganae* Reval, 1994**

Ord. *Saxifragales* Dumortier, 1829

Fam. *Crassulaceae* A.P. de Candolle, 1805

Subfam. *Sedoideae*

Trib *Sedeae*

Gen *Sempervivum* L., 1753

***Sempervivum arachnoideum* L.** – (n. 4186) – ref.: Sp. Pl. ed. 1 465 (1753); - Austria, Salzburg, Bad Gastein, endemical, 1860, leg. Lakuny Hotty.

***Sempervivum assimile* Schott.** – (n.4185) – ref.: Oestr. Bot. Wochenbl. 3 19., 1853; sin.: *Sempervivum marmoreum* Grisebach (1873); *S. tectorum* var. *itectorum* C. von Linneaeus sensu stricto (1753); - Hungary, Pest, the Botanical Gardens, October 1873, leg. Simkovics L.

Gen *Jovibarba* (DC) Opiz

***Jovibarba globifera* (L.) J.Parn. subsp. *globifera*** – (n. 4187) – Name verified on: 24-Jun-1996 by ARS Systematic Botanists. Last updated: 27-Oct-1998; sin.: *Sempervivum soboliferum* Sims; *Diopogon hirtus* (L.) H.P.Fuchs ex Hans Huber subsp. *borealis* Hans Huber.; *Jovibarba sobolifera* (Sims) Opiz; - Hungary, Pest, Pilishagy, 12.08.1875, leg. Simkovics L.

***Jovibarba heuffelii* (Schott) A.Löve & D.Löve** – (n. 4188) – ref.: Bot. Not. 114: 39 (1961); sin.: *Sempervivum patens* Griseb. & Schenk; *Sempervivum heuffelii* Schott; *Jovibarba velenovskyi* (Khesm.) Holub; *Sempervivum hirtum* auct., non L.; *Diopogon heuffelii* (Schott) Hans Huber; - Romania, Mehedinți, Plavisevița, the Straits (Cazane), 26.07.1874, leg. Simkovics L.

Fam. *Saxifragaceae* Durande, 1872, nom. cons.  
Gen *Parnassia* L., 1753

***Parnassia palustris* L.** - (n.4192) – ref.: Sp. Pl. ed. 1 273 (1753); - Hungary, Zala, Herend (damp places), 22.08.1873, leg. Simkovics L.

Gen *Saxifraga* L., 1753

***Saxifraga aizoon* Jacq** – (n. 4193) – ref.: *Florae Austriaceae* 5: 18-19, pl. 438. 1778.; sin.: *Saxifraga paniculata* Mill. [Gard. Dict. Ed. 8 no. 3 (1768)]; - Hungary, Nograd, Hasznos (Matrakevestes), Agasvar, 22.06.1873, leg. Simkovics L.

Ord. *Haloragales* Bromhead, 1838  
Fam. *Haloragaceae* R. Brown, 1814  
Gen *Myriophyllum* L., 1753

***Myriophyllum spicatum* L.** – (n. 4171) – ref.: Sp. Pl. ed. 1 992 (1753); sin.: *Myriophyllum montanum* Martini-Donos; - Hungary, Budapest (Buda), iulie 1875, leg. Simkovics L.

***Myriophyllum verticillatum* L.** – (n. 4170) – ref.: Sp. Pl. ed. 1 992 (1753); sin.: *Myriophyllum verticillatum* var. *intermedium* Koch; *Myriophyllum verticillatum* var. *pectinatum* Wallr.; *Myriophyllum verticillatum* var. *pinnatifidum* Wallr.; - Romania, Bihor, Oradea, Oșorhei (in the vineyards), July – October. 1876, leg. Simkovics L.

### Superord. *Rosanae* Takhtajan, 1967

Ord. *Rosales* Perleb, 1826  
Fam. *Rosaceae* Adans., 1763, nom. cons.  
Subfam. *Pyroideae*  
Trib *Crataegeae*  
Gen *Crataegus* L., 1753

***Crataegus monogyna* Jacq.** – (n. 4148) – ref.: Fl. Austr. 3: 50 (1775); sin.: *Crataegus oxyacantha* L., nom. ambig.; - Hungary, Pest, Tokol ( Csepel island), May – August. 1875, leg. Simkovics L.

Subfam. *Ruboidae*  
Gen *Rubus* L., 1753

***Rubus fruticosus* L.** – (n. 4149) – ref.: Abh. Naturwiss. Vereine Bremen 4:183. 1874 ; - Romania, Bihor, Oradea, 20.06.1877, leg. Simkovics L.

***Rubus caesius* L.** – (n. 4150) – ref.: Sp. Pl. ed. 1 493 (1753); - Romania, Bihor, Oradea (at the kerb of the road), 24.06.1877, leg. Simkovics L.

Subfam. *Rosoideae*  
Gen *Rosa* L., 1753

***Rosa canina* L.** – (n. 4151) – ref.: Sp. Pl. ed. 1 491 (1753); sin.: *Rosa canina* var. *dumetorum* Baker; *Rosa heterostyla* Chrshan.; *R. canina* L. subsp. *dumalis* (Bechst.) Arcang. pro parte; *R. willibaldii* Chrshan.; *R. sarmentacea* J.Woods pro parte; *R. dumalis* Bechst.; *R. prutensis* Chrshan.; *R. canina* L. subsp. *vulgaris* (Mert. & W.D.J.Koch) Gams; *R. communis* Rouy subsp. *canina* (L.) Rouy; *Rosa platyphylla* A.Rau ; - Romania, Bihor, Oradea , 02.07.1879, leg. Simkovics L.

***Rosa dumetorum* subsp. *platyphylla* (A. Rau) Arcang** – (n. 4152) – ref.: 1882, Comp. Fl. Ital. : 228; *Rosa ×urbica* Léman [1818, *Bull. Sci. Soc. Philom. Paris*, 1818 : 93] = *R. ×dumetorum*; sin.: *Rosa urbica platyphylla*; *Rosa x dumetorum* Thuill. subsp. *platyphylla* (A. Rau) Arcang; *Rosa platyphylla* Rau [1816, Enum. Ros. Wirceb. : 82] = *R. corymbifera* ; - Romania, Bihor, Oradea (the Bihor pass), 02.07.1879, leg. Simkovics L.

Subfam. *Spiraeoideae*  
Trib *Spiraeae*  
Gen *Spiraea* L., 1753

***Spiraea chamaedryfolia* L. pro parte** – (n. 4153) – ref.: Sp. Pl. ed. 1 489 (1753); sin.; *Spiraea ulmifolia* Scop.; *Spiraea media* Schmidt; - Romania, Bihor, Vadul Crişului (in the straits), 11.07.1878, leg. Simkovics L.

Subfam. *Potentilloideae*  
Trib *Geeae*  
Gen *Waldsteinia* Willdenow, 1799

***Waldsteinia geoides* Willd.** – (n. 4154) – ref.: Ges. Naturf. Freunde Berlin Neue Schr. 2: 106 (1799); - Hungary, Pest Pilisszanto, (mt. Pilis), endemical, 03.05.1874, leg. Simkovics L.

Trib *Potentilleae* Focke  
Gen *Potentilla* L., 1753

***Potentilla chrysantha* Trevir.** – (n. 5157) – ref.: Ind. Sem. Horto Wratisl. 5 (1818); sin.: *Potentilla parviflora* Gaudin, non Desf.; *Potentilla orbiculata* Th.Wolf; *Potentilla leiocarpa* Vis. ex Panc. Kic.; Serbia, Voievodina, Virset (Vrsec), (swampy place), 18.05.1874, leg. Simkovics L.

***Potentilla cinerea* Chaix ex Vill.** – (n. 4155) – ref.: Oekon. Fl. Wattereau 2: 248. 1800; sin.: *Potentilla arenaria* Borkh.[ Prosp. Pl. Dauph. 46 (1779)]; *P. velutina* Lehm.; *P. glaucescens* Willd.; *P. incana* P.Gaertn., B.Mey. & Scherb.; *P. tommasiniana* F.W.Schultz; *P. subacaulis* L.; - Romania, Bihor, Oradea (on sunny hills), 05.05.1877, leg. Simkovics L.



***Potentilla heptaphylla* L.** – (n. 4156) – ref.: Cent. Pl. 1: 13 (1755); sin.: *Potentilla opaca* W.K. (Fl. Siles. 2(1): 171. 1790;); *Potentilla rubens* (Crantz) Zimmeter, non Vill.; - Hungary, Heves, Gyongyos, endemical, 10.05.1874, leg. Simkovics L.

**Superord. *Fabanae* R. Dahlgren ex Reval, 1993**

Ord. Fabales Bromhead, 1838

Fam. *Fabaceae* Lindley, 1836

Subfam. *Faboideae*

Trib *Genisteae*

Gen *Genista* L., 1753

***Genista tinctoria* L.** – (n.: 4136) – ref.: Sp. Pl. ed. 1 710 (1753); sin.: *Genista mayeri* Janka; *G. alpestris* Bertol.; *G. tetragona* Besser; *G. marginata* Besser; *G. ovata* Waldst. & Kit.; *G. hungarica* A.Kern.; *G. elata* Wender.; *G. mantica* Pollini; *G. perreymondii* Loisel.; *G. friwaldskyi* Boiss.; *G. tanaitica* P.A.Smirn.; *G. humilis* Ten.; *G. borysthena* Kotov; *G. tinctoria* L. subsp. *littoralis* (Corb.) Rothm.; *G. anxantica* Ten.; *G. cskii* Kümmerle & Jáv.; *G. patula* M.Bieb.; *G. oligosperma* Simonk.; *G. depressa* M.Bieb.; *G. tenuifolia* Loisel.; *G. ptilophylla* Spach; *G. campestris* Janka; *G. donetzica* Kotov; *G. lasiocarpa* Spach; *G. elatior* W.D.J.Koch; *G. virgata* Willd.; - Romania, Bihor, Oradea (forest), 07.06.1879, leg. Simkovics L.

Trib *Trifoileae*

Gen *Medicago* L., 1753

***Medicago sativa* subsp. *varia* (Martyn)Arcang.** – (n. 4137) - ref.: Fl. Rust. 3:87. 1793;; sin.: *Medicago hemicycla* Grossh.; *Medicago lavrenkoi* Vassilcz. ; *Medicago media* Pers. ; *Medicago media* L. nothosubsp. *varia* (Martyn) Arcang.; *Medicago sativa* L. nothosubsp. *varia* (Martyn) Arcang; *Medicago sativa* subsp.x *varia*; *Medicago falcata* x *M. sativa*; *Medicago sativa* subsp. *sativa* x *Medicago sativa* subsp. *falcata* ;*Medicago sativa* ssp. *varia* (Martyn)O.Bolos & Vigo; *Medicago sylvestris* Fr.; *Medicago tianschanica* Vassilcz. ; *Medicago varia* Martyn; *Medicago* x *varia* Martyn; - Hungary, Pest, Budapest (mt. Gellert), 21.07.1874, leg. Simkovics L.

***Medicago monspeliaca* (L.) Trautv.** – (n. 4138) – ref.: Bull. Sci. Acad. Imp. Sci. Saint-Pétersbourg 8:272. 1841; sin.: *Trigonella monspeliaca* L. [ Sp. Pl. ed. 1 777 (1753)]; *Trigonella monspeliaca* subsp. *subacaulis* Feinbrun; - Romania, Bihor, (by the Şomleu hills) (Foth mellett a Somlyobeyen ?), 27.05.1875, leg. Simkovics L.

Gen *Melilotus* P. Miller, 1754

***Melilotus dentatus* (Waldst. & Kit.) Pers.** – (n.: 4139) – ref. : Syn. Pl. 2: 348 (1807); sin.: *Melilotus brachystachya* Bunge; *Melilotus dentata* (Waldst. & Kit.)

Pers. ; *Melilotus dentatus* var. *sibiricus* O.E.Schulz ; *Trifolium dentatum* Waldst. & Kit. ; - Hungary, Pest, Budapest, 23.07.1874, leg. Simkovics L.

Gen *Trifolium* L., 1753

***Trifolium pannonicum* Jacq.** – (n. 4140) – : ref.: Obs. Bot. 2: 21 (1767); sin.: *Trifolium armenium* Willd; *Trifolium elongatum* Willd; - Romania, Bihor, Oradea (in the forest), endemical, 12.07.1878, leg. Simkovics L.

***Trifolium striatum* L.** – (n. 4141) – ref.: Sp. Pl. ed. 1 770 (1753); sin.: *Trifolium striatum* var. *brevius* Lange; *Trifolium striatum* var. *spinescens* Lange; *Trifolium incanum* C. Presl ; *Trifolium tenuiflorum* Ten. ; - Hungary, Fejer, Ercsi (.Szt. Peter), 10.06.1876, leg. I.A. Tauscher.

***Trifolium strictum* L.** – (n. 4142) – ref.: Cent. Pl. 1: 24 (1755); sin.: *Trifolium laevigatum* Poir.; *Trifolium strictum* W.K.; - Romania, Mehedinți, Șvinița (the Triculei hills), 27.06.1874, leg. Simkovics L.

Trib *Galegeae*

Gen *Oxytropis* A.P. de Candolle, 1802, nom. cons.

***Oxytropis pilosa* (L.) DC.** – (n. 4143) – ref.: Astrag. 91 (1802); sin.: *Astragalus pilosus* L.; - Hungary, Pest, Budapest (Farkasvolgy valley), 20.06.1874, leg. Simkovics L.

Gen *Astragalus* L., 1753

Subgen *Astragalus* L., 1753

***Astragalus onobrychis* L.** – (n. 4144) – ref.: Sp. Pl. ed. 1 760 (1753); sin.: *Astragalus linearifolius* Pers.; *Astragalus skorpii* Velen.; *A. chlorocarpus* Griseb.; *A. borysthenicus* Klokov; *A. circassicus* Grossh.; *A. panicii* Heuff.; *A. dacicus* Heuff.; *A. bungeanus* auct., non Boiss.; *A. rochelianus* Heuff.; *A. sofianus* Velen.; *A. murrii* Huter ex Murr; *A. pseudohirsutus* Nyár.; - Hungary, Fejer, Adony, 27.06.1876, leg. I.A. Tauscher.

***Astragalus monspessulanus* subsp. *monspessulanus* (Baumg.) A. et G.** – (n. 4145) – ref.: Enum. Stirp. Transs., 2 : 262]; sin.: *Astragalus praecox* Baumg. ; *A. atticus* Hauskn; *A. chaubardii* Bunge; *A. declinatus* Salisb.; *A. kindii* Formanek; *A. macedonicus* Heldr. & Charrel; *A. monspessulanus* var. *atticus* Heldr. & Charrel; *A. monspessulanus* var. *macedonicus* (Hedr. & Char.) Hayek; *A. monspessulanus* var. *polygala* (Pall.) DC; *A. monspessulanus* var. *praecox* (baumg.) Asch. & Grabn.; *A. pseudocicer* Opiz.; *A. vandesii* Vele.; *A. wulfenii* susp. *atticus* Nyman; - Romania, Cluj, Cluj-Napoca ("Tekinto Domb"), 01.06.1878, leg. Simkovics L.

Trib *Vicieae*

Gen *Lathyrus* L., 1753

***Lathyrus pallescens* (M.Bieb.) K.Koch** – (n. 4146) – ref.: Linnaea 15: 723

(1841); sin.: *Orbis angustifolius* L.; *Orobis pallescens* M.Bieb.; - Romania, Cluj, Cluj-Napoca (Tekinto Valley), 01.06.1878, leg. Simkovics L.

Subfam. *Mimosoideae*  
Trib *Acacieae*  
Gen *Acacia* P. Miller, 1754

***Acacia longifolia* (Andrews) Willd.** – (n. 4147) – ref.: Sp. Pl. 4: 1052 (1806); sin.: *Acacia latifolia* hort.; *Acacia longifolia* (Andrews) Willd. var. *typical* Benth.; *Mimosa longifolia* Andrews; *Mimosa macrostachhya* Poir, *Phyllodoce longifolia* (Andrews) Link.; *Racosperma longifolium* (Andrews) C. Mart.; - Hungary, Pest, Budapest (the Botanical Gardens), Mart 1873, leg. Simkovics L.

**Superord. *Myrtanae* Takhtajan, 1967**  
Ord. *Myrtales* Reichenbach, 1828  
Subord. *Lythrinae*  
Fam. *Lythraceae* Jaume Saint-Hilaire, 1805  
Trib *Lythreae*  
Gen *Lythrum* L., 1753

***Lythrum hyssopifolia* L.** – (n. 4177) – ref.: Sp. Pl. ed. 1 447 (1753); sin.: *Lythrum adsurgens* Greene; - Romania, Bihor, Oradea, 12.07.1877, leg. Simkovics L.

***Lythrum portula* (L.) D.A.Webb** – (n. 4179) – ref.: Feddes Repert. 74: 13 (1967) *Peplis portula* L.; - Romania, Bihor, Oradea (damp places), June – July 1878, leg. Simkovics L.

***Lythrum salicaria* L. f. *brevistyla*** – (n. 4175) – ref.: Sp. Pl. ed. 1 446 (1753); sin.: *Lythrum intermedium* Ledeb. ex Colla; - between Torda (Serbia, Voievodina) and Bakonszeg (Hungary, Hajdu-Bihar), 04.08.1877, leg. Simkovics L.

***Lythrum x scabrum* Simkovics (*salicaria x virgatum*)** – (n.4178) – ref.: Taxon no. 12588 – BDNFF. V4. 02; sin.: *Lythrum scabrum* Simk; - Hungary, Hajdu-Bihar, Bakonszeg, 04.08.1877, leg. Simkovics L.

***Lythrum virgatum* L.** – (n. 4176) – ref.: Sp. Pl. ed. 1 447 (1753); - Romania, Bihor, Oradea (Fatanos forest), 28.06.1877, leg. Simkovics L.

Subord. *Onagrineae*  
Fam. *Onagraceae* Adans., 1763  
Trib *Epilobieae*  
Gen *Epilobium* L., 1753

***Epilobium alpestre* (Jacq.) Krock.** - (n. 4165) – ref.: Fl. Siles. 1: 605 (1787); sin.: *Epilobium trigonum* Schrank; - Romania, Bihor, Pietroasa (Padiş), July 1879, leg. Simkovics L.

***Epilobium alsinifolium* Vill.** - (n. 4166) – ref.: Prosp. Pl. Dauph. 45 (1779); sin.: *Epilobium origanifolium* Lam.; - Romania, Bihor, Pietroasa (Cornul Muntelui), iulie 1879, leg. Simkovics L.

***Epilobium angustifolium* L.** – (n. 4158) – ref.: Sp. Pl. ed. 1 347 (1753); sin.: *Chamaenerion angustifolium* (L.) Scop.; *Epilobium spicatum* Lam.; - Hungary, Nagrad, Losancz, 30.06.1877, leg. Kunszt Janos.

***Epilobium collinum* C.C.Gmel.** - (n. 4161) – ref.: Fl. Bad. 4: 265 (1826); sin.: *Epilobium carpetanum* Willk.; - Hungary, Pecs, Budapest, 20.07.1874, leg. Simkovics L.

***Epilobium dodonaei* Vill.** – (n. 4167) – ref.: Prosp. Pl. Dauph. 45 (1779); sin.: *Epilobium rosmarinifolium* Haenke; *Chamaenerion dodonaei* (Vill.) Schur; *C. palustre* auct. mult., non (L.) Scop.; *C. rosmarinifolium* (Haenke) Moench; *C. argustissimum* (Weber) Sosn.; - Romania, Hunedoara, Hațeg (the mountain region), 12.08.1874, leg. Simkovics L.

***Epilobium lanceolatum* Sebast. & Mauri** – (n. 4159) – ref.: Fl. Rom. 138 (1818); - Romania, Mehedinți, Șvinița, 27.06.1874, leg. Simkovics L.

***Epilobium montanum* L.** – (n. 4160) – ref.: Sp. Pl. ed. 1 348 (1753); sin.: *Epilobium hypericifolium* Tausch; - Romania, Bihor, Sânmartin, Rontău (the skirt of the forest), 07.06.1879, leg. Simkovics L.

***Epilobium tetragonum* L.** – (n. 4163) – ref.: Sp. Pl. ed. 1 348 (1753); - Romania, Caraș-Severin, Băile Herculane, 02.08.1874, leg. Simkovics L.

***Epilobium tetragonum* L. subsp. *lamyi* (F.W.Schultz) Nyman** - (n. 4164) – ref.: Consp. 247 (1879); sin.: *Epilobium lamyi* F.W.Schultz; - Romania, Bihor, Sânmartin (on the bank of the Pețea rivulet), June – July 1877, leg. Simkovics L.

***Epilobium tetragonum* L. subsp. *tetragonum*** – (n. 4162) – ref.: Sp. Pl. ed. 1 348 (1753); sin.: *Epilobium adnatum* Griseb.; - Hungary, Pesta, Erd, August 1874, leg. I.A. Tauscher.

Trib *Circaeae*  
Gen *Circaea* L., 1753

***Circaea lutetiana* L.** – (n. 4168) – ref.: Sp. Pl. ed. 1 9 (1753); - Hungary, Szabolcs, Dombrad (forest), August 1871, leg. Simkovics L.

Trib *Jussiaeae*  
Gen *Ludwigia* L., 1753

***Ludwigia palustris* (L.) Elliott** – (n. 4169) - ref.: Sketch Bot. South-Carol. Georgia 1: 211 (1817); sin.: *Isnardia palustris* L.; *Ludwigia apetala* Walter; - Germany, Renania de Nord-Westfalia (Koln), Aachen, August 1873, leg. A. Wigener.

**Superord. *Rhamnanae* Takhtajan ex Reveal, 1992**Ord. *Elaegnales* Bromheard, 1838Fam. *Elaeagnaceae* Adans., 1763, nom.cons.Gen *Elaeagnus* L., 1753

***Elaeagnus angustifolia* L.** – (n. 4619) – ref.: Sp. Pl. ed. 1 121 (1753); sin.: *Eleagnus hortensis* M. Bieb.; *Eleagnus moorcroftii* Wall. Ex Schltdl.; *Eleagnus orientalis* L. (= *E. angustifolia* var. *orientalis*); - Hungary, Pest, Budapest (the Botanical Gardens), June 1871, leg. Simkovics L.

Obs.: Englert, J. M. et al. 1999–. USDA-NRCS Improved conservation plant materials released by NRCS and cooperators. (NRCS Cons PI Mat)

Ord. *Rhamnales* Dumortier, 1829Fam. *Rhamnaceae* Durande, 1782, nom. cons.Gen *Frangula* Mill.

***Frangula alnus* Mill.** – (n.4134) – ref.: Gard. Dict. ed. 8 no. 1 (1768); sin.: *Rhamnus frangula* L.; *Frangula nigra* Samp.; *Rhamnus frangula* subsp. *columnaris* hort.; *Rhamnus frangula* var. *angustifolia* Loud.; - Romania, Bihor, Oradea (forest), 05.05.1875, leg. Simkovics L.

Trib *Rhamneae*Gen *Rhamnus* L., 1753

***Rhamnus catharticus* L.** – (n. 4131) – ref.: Sp. Pl. ed. 1 193 (1753); - Hungary, Baranya, Mecsek, 04.06.1873, leg. Simkovics L.

***Rhamnus saxatilis* Jacq.** – (n. 4133) – ref.: Stirp. Vindob. 39 & 212 (1762); sin.: *Rhamnus infectoria* L.; - Romania, Cluj, Cluj-Napoca (Hoia forest), 12.07.1878, leg. Simkovics L.

***Rhamnus saxatilis* Jacq. subsp. *tinctorius* (Waldst. & Kit.) Nyman** – (n. 4132) – ref.: Consp. 146 (1878); sin.: *Rhamnus tinctoria* Waldst. & Kit.; - Romania, Cluj, Cluj-Napoca (Hoia forest), 03.05.1878, leg. Simkovics L.

Trib *Zizipheae*Gen *Paliurus* P. Mill. 1754

***Paliurus spina-christi* Mill.** – (n. 4135) – ref.: Gard. Dict. ed. 8 (1768); sin.: *Paliurus australis* Gaertn.; *P. aculeatus* Lam.; *Rhamnus paliurus* L.; - Hungary, Pest, Budapest, the Botanical gardens, May – June 1872, leg. Simkovics L.

**Superord. *Geranianae* (Dumortier, 1829) Takhtajan, 1997**Ord. *Oxalidales* Heintze, 1927Fam. *Oxialidaceae* R. Brown, 1818

Gen *Oxalis* L., 1753

***Oxalis corniculata* L.** – (n. 4127) – ref.: Sp. Pl. ed. 1 435 (1753); sin.: *Acetosella corniculata* (L.) Kuntze; - Italy, Brixiensis (the Benac lake), 14.05.1870, leg. Porta.

Ord. *Geraniae* Dumortier, 1829

Fam. *Geraniaceae* Adans, 1763, nom. cons.

Gen *Geranium* L., 1753

***Geranium brutium* Gasp.** – (n. 4116) - ref.: Rendic. Accad. Sci. Fis. Mat. (Napoli) 1: 49 (1842); sin.: *Geranium villosum* Rehb.; *Geranium villosum* Ten., non Mill.; *Geranium pyrenaicum* Burm.f. subsp. *villosum* Nyman; -Hungary, Baranya, Kisasszonyfa, June – July 1876, leg. Simkovics L.

***Geranium dissectum* L.** – (n. 4117) – ref.: Cent. Pl. 1: 21 (1755); sin.: *Geranium laxum* Hanks.; - Romania, Bihor, Sânmartin (on the bank of the Pețea rivulet), 25 May – June 1877, leg. Simkovics L.

***Geranium divaricatum* Ehrh.** – (n.:4119) – ref.: Beitr. Naturk. 7: 164 (1792); sin.: *Geranium subdivaricatum*; *Geranium novum*; *Geranium winterlii*; - Romania, Hunedoara, 12.08.1874, leg. Simkovics L.

***Geranium lucidum* L.** – (n. 4120) – ref. Sp. Pl. ed. 1 682 (1753); - Hungary, Pest, Boros Jenő, May – June. 1873, leg. Simkovics L.

***Geranium macrorrhizum* L.** - (n. 4112) – ref.: Sp. Pl. ed. 1 680 (1753); sin.: *Geranium balkanum* N. Taylor; *G. lugubre* Salib; *Robertium macrorrhizum* (L.) Picard; - Romania, Caraș-Severin, Băile Herculane, May – July 1874, leg. Simkovics L.

***Geranium palustre* L.** – (n. 4114) – ref.: Cent. Pl. 2: 25 (1756); sin.: *Geranium duplicatum* Kanitz.; *Geranium purpureum* Gilib.; *Geranium furcatum* Kanitz; - Romania, Bihor, Oradea, Seleuș (on the bank of Petea), 12.07.1879, leg. Simkovics L.

***Geranium pyrenaicum* Burm.f.** - (n. 4115) - ref.: Spec. Bot. Geran. 27 (1759); sin.: *Geranium bifidum*; *Geranium depilatum*; *Geranium elbursense*; *Geranium minae*; *Geranium perene*; *Geranium rhaeticum*; *Geranium umbrosum*; - Hungary, Pest, Budapest, (Buda - dealul Zugliget), 28.06.1873, leg. Simkovics L.

***Geranium robertianum* L.** - (n. 4121) – ref.: Reference: Sp. Pl. ed. 1 681 (1753); sin.: *Geranium briceanum*; *Geranium mosquense*, *Geranium graveolens*; *Geranium rubellum*, *Geranium foetidum*; *Geranium inodorum*; *Geranium eriophorum*; *Robertianum nostrum*; *Robertium vulgare*; *Robertiella robertianum*; - Romania, Bihor, Oradea (the Seleușului forest), 10.05.1877, leg. Simkovics L.

***Geranium rotundifolium* L.** – (n. 4118) – ref.: Sp. Pl. ed. 1 683 (1753); sin.: *Geranium caeruleum*; *Geranium malvaceum*; *Geranium malvifolium*; *Geranium semiorbiculare*; *Geranium subrotundum*; *Geranium viscidulum*; *Geranium viscosum*; *Geranium propinquum*, *Geranium potentiloides*; - Romania, Bihor, Sânmartin, Betfia (Șomleu hills), 07.07.1877, leg. Simkovics L.



***Geranium sylvaticum* L. subsp. *sylvaticum*** – (n. 4113) – ref.: Species Plantarum 2: 681. 1753.; sin.: *Geranium alpestre* Schur. (*Enumeratio Plantarum Transsilvaniae* 135. 1866.); - Romania, Hunedoara, Hațeg (in the mountains), 13.08.1874, leg. Simkovics L.

Gen *Erodium* L'Herit

***Erodium ciconium* (L.) L'Hér.** – (n. 4123) – ref.: Hort. Kew. ed. 1 2: 415 (1789); - Hungary, Pest, Budapest (Gellert hills), mai 1872, leg. Simkovics L.

***Erodium cicutarium* (L.) L'Hér.** – (n.4122) – ref.: Hort. Kew. ed. 1 2: 414 (1789); sin.: *Erodium viscosum* sensu Samp., vix (Mill.) Steud.; - Hungary, Pest, Budapest, (Pesta, Rakos), sept. 1873, leg. Simkovics L.

***Erodium hoefftianum* C.A.Mey.** – (n. 4124) – ref.: Mém. Acad. Sci. Pétersb. (Sci. phys. math.) ser. 6 7 (Bot.): 3 (1855); sin.: *Erodium neilreichii* Janka; - Hungary, Heves, Hatvan (the Brindza lake), 21.06.1873, leg. Simkovics L.

***Erodium petraeum* (Gouan) Willd. subsp. *glandulosum* (Cav.) Bonnier** – (n. 4125) - ref.: Fl. Compl. Fr. 2: 88 (1913); sin.: *Erodium macradenum* L'Hér.; - France, Heutes-Pyrenees, Gedre, endemical, July 1873, leg. Bordere.

Ord. *Balsaminales* Lindley, 1833

Fam. *Balsaminaceae* A. Richard, 1822

Gen *Impatiens* L., 1753

***Impatiens noli-tangere* L.** – (n. 4126) – ref.: Sp. Pl. ed. 1 938 (1753); sin.: *Impatiens comarovii* Pobed.; *Impatiens noli* subsp. *tangere* L.; *Impatiens occidentalis* Rydb.; - Hungary, Fejer, Ercsi (forest), 06.08.1873, leg. I.A. Tauscher.

Ord. *Linales* Baskerville, 1839

Fam. *Linaceae* A.P. de Candolle ex S.F. Gray, 1821

Trib *Lineae*

Gen *Linum* L., 1753

***Linum flavum* L.** – (n.4090) – ref.: Sp. Pl. ed. 1 279 (1753); sin.: *Linum hungaricum* Podp.; - Romania, Bihor, Oradea (in the vineyards), June – September 1877, leg. Simkovics L.

***Linum nervosum* Waldst. & Kit.** – (n. 4091) – ref.: Pl. Rar. Hung. 2: 109 (1802-1803); sin.: *Linum aucheri* Planch.; *L. jailicola* Juz.; - Romania, Cluj, Cluj-Napoca, 30 May – July 1878, leg. Simkovics L.

***Linum usitatissimum* L.** – (n. 4092) – ref.: Sp. Pl. ed. 1 277 (1753); sin.: *Linum humile* Mill.; *L. crepitans* (Boenn.) Dumort.; - Romania, Cluj, Cluj-Napoca, July 1878, leg. Simkovics L.

***Linum austriacum* L.** – (n. 4093) – ref.: Sp. Pl. ed. 1 278 (1753); sin.: *Adenolimon*

*tommasinii* Rchb. [= *Linum austriacum* subsp. *tommasinii*]; *Linum alpinum* var. *glaucescens* Boiss. [= *Linum austriacum* subsp. *glaucescens*]; *Linum austriacum* var. *collinum* Boiss. [= *Linum austriacum* subsp. *collinum*]; *Linum euxinus* Juz. [= *Linum austriacum* subsp. *euxinum*]; *Linum marschallianum* Juz. [= *Linum austriacum* subsp. *marschallianum*]; *Linum mauritanicum* Polmel [= *Linum austriacum* subsp. *mauritanicum*]; *Linum perenne* subsp. *austriacum* (L.) O. Bolos & Vigo; *Linum squamulosum* J. Rudolph.; - Hungary, Pest, Budapest (Szt. Gellert), June – July 1893, leg. Simkovics L.

***Linum tenuifolium* L.** – (n. 4094) – ref.: Sp. Pl. ed. 1 278 (1753); - Hungary, Pest, Budapest (Sashegy), 23.05.1872, leg. Simkovics L.

***Linum catharticum* L.** – (n. 4095) – ref.: Sp. Pl. ed. 1 281 (1753); sin.: *Cathartolinum catharticum* (L.) Small; - Hungary, Pest, Budapest (Rakos), June – July 1871, leg. Simkovics L.

***Linum hirsutum* L. subsp. *glabrescens* (Rochel) Soó** - (n. 4096) – ref.: Magyar Biol. Int. Munkái 6: 132 (1933); Magyar Növény. Kezik. 457. 1951; sin.: *Linum pannonicum* A.Kern.. – Hungary, Pest, Budapest, Soraksar and the Csepel island, 04.06. – 17.08.1875, leg. Simkovics L.

Ord. *Polygales* Dumortier, 1829  
Fam. *Polygalaceae* R. Brown, 1814  
Subfam. *Polygaloideae*  
Gen *Polygala* L., 1753

***Polygala amara* L.** - (n. 4016) – ref.: Syst. Nat. ed. 10 2: 1154 (1759); - Hungary, Pest, Pilis (Tolna megye), Kovacs, (Szt. Iános), 04.06.1875, leg. Simkovics L.

***Polygala comosa* Schkuhr** – (n. 4015) – ref.: Handb. ed. 1 2: 324 (1796); sin.: *Polygala wolfgangiana* Besser ex Szafer, Kulcz. & Pawl.; *P. vulgaris* L. subsp. *pedemontana* (E.P.Perrier & B.Verl.) Rouy & Foucaud; *P. pedemontana* E.P.Perrier & B.Verl.; *P. podolica* DC.; *P. vulgaris* L. subsp. *provincialis* (Legrand) Rouy & Foucaud; *P. vulgaris* L. subsp. *comosa* (Schkuhr) Chodat; - Hungary, Budapest, Rakos, May 1871, leg. Simkovics L.

Subclas. *Rosidae* Takhtajan, 1967  
Superord. *Santalanae* Thome ex Reveal, 1992  
Ord. *Santalales* Dumortier, 1829  
Fam. *Loranthaceae* A.L. de Jussieu, 1808  
Trib *Loranthaeae*  
Gen *Loranthus* N.J. Jaquin, 1762, nom. cons.

***Loranthus europaeus* Jacq.** - (n. 4207) – ref.: Enum. Stirp. Vindob. 55 (1762); - Romania, Bihor, Oradea, May – July 1879, leg. Simkovics L.

Fam. *Viscaceae* Batsch, 1802

Trib *Visceae*

Gen *Viscum* L., 1753

***Viscum album* L.** – (n. 4206) – ref.: Sp. Pl. ed. 1 1023 (1753); - Romania, Bihor, Oradea (on *Pyrus communis*), 27.03.1878, leg. Simkovics L.

**Superord. *Celastranae* Takhtajan, 1967**

Ord. *Celestrales* Baskerville, 1839

Fam. *Celestraceae* R. Brown, 1814

Subfam. *Celestroideae*

Trib *Euonymaeae*

Gen *Euonymus* L., 1753

***Euonymus latifolius* (L.) Mill.** – (n. 4130) – ref.: Gard. Dict. ed. 8 no. 2 (1768); sin.: Gard. Dict. ed. 8 no. 2 (1768); - France, Alpes Maritimes, Environs des Cannes, leg. Heilmann.

***Euonymus verrucosus* Scop.** – (n. 4129) - Fl. Carn. ed. 2 1: 166 (1772); - Hungary, Fejer, Kutyavar, (forest), 29.06.1876, leg. I.A. Tauscher.

Ord. *Ilacinales* van Tieghem ex Reveal, 1993

Fam. *Aquifoliaceae* Bartling, 1830, nom. cons.

Gen *Ilex* L., 1753

***Ilex aquifolium* L.** – (n. 4128) - ref.: Sp. Pl. ed. 1 125 (1753); sin.: *Ilex perado* auct. Iber., non Aiton; - Austria and Switzerland, April – May 1873, leg. Brandmayer.

**Subclas. *Dilleniidae* Takhtajan, 1967**

**Superord. *Euphorbianae* Takhtajan ex Reveal, 1992**

Ord. *Euphorbiales* Lindley, 1833

Fam. *Euphorbiaceae* J.F. Gmelin, 1777, nom. cons.

Subfam. *Euphorbioideae*

Trib *Euphorbieae*

Gen *Euphorbia* L., 1753

***Euphorbia angulata* Jacq.** - (n.4621) – ref.: Collect. Bot. 2: 309 (1789); sin.: *Euphorbia dulcis* ssp. *angulata* (Jacq.) Rouy; *Euphorbia angulatus* (Jacq.) Raf.; *Euphorbia angulosa* Boiss.; *Euphorbia dulcis* var. *chloradenia* Boiss.; *Euphorbia lanuginosa* Lam.; *Euphorbia nemoralis* Kit.; - Romania, Bihor, Oradea, endemical, 18.05.1878, leg. Simkovics L.

***Euphorbia epithymoides* L.** - (n.4622) – ref.: Sp. Pl. ed. 2 656 (1762); sin.: *Euphorbia polychroma* A.Kern.; *Euphorbia polychroma* A.Kern. var. *mehadiensis*

Kit.; *Tithymalus epithymoides* (L.) Klotzsch et Garcke ; - Romania, Caraş-Severin, Băile Herculane (forest), 30.05.1874, leg. Simkovics I.

***Euphorbia falcata* L. subsp. *falcata* var. *falcata* L.** - (n.4623) – ref.: Sp. Pl. 456 (1753) ; sin.: *Euphorbia obscura* Lois. ; *Euphorbia falcata* f. *rubra* (Cav.) Knoche; *Euphorbia falcata* subsp. *rubra* (Cav.) Sennen & Mauricio; *Euphorbia falcata* var. *laxa* Albert; *Euphorbia falcata* var. *minor* W.D.J. Koch; *Euphorbia falcata* var. *mucronata* (Lam.) Fiori; *Euphorbia falcata acuminata* (Lam.) Simonk., *Euphorbia arvensis* Kit.; *Euphorbia rubra* auct. iber., non Cav.; *Euphorbia galilea* Boiss.; *Esula falcata* (L.) Haw.; *Esula obscura* Fourr.; *Tithymalus falcatus* (L.) Klotzsch.& Garcke; *Tithymalus falcatus acuminatus* (Lam.) Sojak.; *Tithymalus acuminatus* (Lam.) Prokh.; *Tithymalus mucronatus* Bubani; - Romania, Cluj, Turda, 21.07.1878, leg. Simkovics L.

Ord. *Thymelaeales* Willkomm, 1854

Fam. *Thymelaeaceae* Adans, 1763

Subfam. *Thymelaeoideae*

Trib *Thymelaceae*

Gen *Passerina* L., 1753

***Passerina nivalis* Ram.** – (n. 4613) – ref.: Bull. Sci. Soc.Philom. Paris, 3 : 131, tab.9 (b), 1800; Prodr. 14: 555 (1857); sin.: *Thymelaea nivalis* (Ramond) Mesn. [Prodr. 14: 555 (1857)]; . *Thymelaea tinctoria* (Pourr.) Endl. subsp. *nivalis* (Ramond) Nyman (nom.accepted); - France, Hautes-Pyrenees, Gavarnie, 14.06.1873, leg. Bordere

Gen *Thymelaea* p. Miller, 1754, nom. cons.

***Thymelaea hirsuta* (L.) Endl.** – (n. 4614) – ref.: Gen. Pl. Suppl. 4: 65 (1847); sin.: *Passerina hirsuta* L.; *Daphne hirsuta* (L.) Samp.; - Italy, Puglia (Apulia), 28.09.1875, leg. Porta et Rigo.

Gen *Daphne* L., 1753

***Daphne alpina* L.** – (n. 4616) – ref.: Sp. Pl. ed. 1 356 (1753); - Switzerland, Solothurner Jura, St. Wolfgang, 13.06.1870, leg. H. Siegfried (Aargau, Zofingen)

***Daphne laureola* L.** – (n. 4617) – ref.: Sp. Pl. ed. 1 357 (1753); -Austria, Hundskogel (hintere Bruhl), May 1873, leg. E. Brandmayer (Flora Austriaca).

***Daphne mezereum* L.** – (n. 4615) – ref.: Sp. Pl. ed. 1 356 (1753); sin.: *Mezerum officinal* CAM; *Thymelaea mezerum* Scop.; *Thymelaea praecox* Gilib; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Daphne striata* Tratt.** - (n. 4618) – ref.: Arch. Gewächsk. 1: 120 (1814); sin.: *Daphne autaretica* Gand.; *Daphne cneorum* L. ssp. *striata* (Tratt.) Arcang.; - Austria, Tirol, Mte. Cristallo, 28.07.1872, leg. Freyn.

**Superord. *Malvanae* Takhtajan, 1967**Ord. *Malvales* Dumortier, 1829Fam. *Malvaceae* Adans, 1763Trib. *Malveae*Gen *Malva* L., 1753

***Malva alcea* L.** – (n. 4097) – ref.: Reference: Sp. Pl. ed. 1 689 (1753); sin.: *Malva fastigiata* Cav.' M. *italica* Pollini; M. *bismalva* Bernh. ex Lej.; M. *lagascae* Lázaro Ibiza & Tubilla; M. *morenii* Pollini; - Hungary, Baranya, Sellye, 05.08.1873, leg. Simkovics L.

***Malva pusilla* Sm.** – (n.4098) – ref.: Engl. Bot. ed. 1 4: t. 241 (1795); sin.: *Malva borealis* Wallr.; M. *rotundifolia* L.; - Hungary, Veszprem, Hidegkut, 29.06.1873, leg. Simkovics L.

Gen *Althaea* L., 1753

***Althaea cannabina* L.** – (n. 4100) ref.: Sp. Pl. ed. 1 686 (1753); sin.: *Althaea kotschyi* Boiss.; - Hungary, Hajdu-Bihar, Gyaparos (Tolcsva), 26.07.1877, leg. Simkovics L.

***Althaea hirsuta* L.** – (n. 4101) – ref.: Reference: Sp. Pl. ed. 1 687 (1753); - Hungary, Pest, the Csepel island, Csep, July 1872, leg. I.A. Tauscher.

***Althaea officinalis* L.** – (n. 4099) – ref.: Sp. Pl. ed. 1 686 (1753); sin.: *Althaea taurinensis* DC.; A. *kragujevacensis* Panc.; - Romania, Bihor, Oradea, 12.07.1879. leg. Simkovics L.

Gen *Alcea* L., 1753

***Alcea pallida* (Willd.) Waldst. & Kit. subsp. *pallida*** – (n. 4102) – ref.: Pl. Rar. Hung. 1: 46 (1801); sin.: *Althaea pallida* Willd.; - Hungary, Fejer, Kutyavar, August 1869 leg. I.A. Tauscher

Gen *Lavatera* L., 1753

***Lavatera punctata* All.** – (n. 4103) – ref.: Auct. Fl. Pedem. 26 (1789); sin.; *Lavatera biennis* M.Bieb.; - Italy, Toscana, Casciani Spas, 14.07.1871, leg. S. Sommer.

Trib *Hibisceae*Gen *Hybiscus* L., 1753

***Hibiscus ternatus* Cav.** – (n. 4104) – ref.: Diss. 3 : 172, tab.4, fig. 3 (1787) sin.; - Romania, Caraş-Severin (Banat), Armenis, August 1874, Simkovics L.

Trib *Malopeae*Gen *Kitaibela* Willdenow, 1799

***Kitaibela vitifolia* Willd.** – (n. 4105) – ref.: Ges. Naturf. Freunde Berlin Neue Schr. 2: 107 (1799); - Serbia, Ruma, Syrmia, endemical, 1854, leg. Neudkovich Vilmos.

Ord. *Cistales* H.G.L. Reichenbach, 1828

Subord. *Cistineae*

Fam. *Cistaceae* Adans, 1763, nom. cons.

Trib. *Cisteae*

Gen *Fumana* (Dunal) Spach, 1836

***Fumana laevipes* (L.) Spach** – (n. 4003) – ref. Ann. Sci. Nat. ser. 2 (Bot.) 6: 359 (1836); sin.: *Helianthemum laevipes* (L.) Pers.; - France, Var, Toulon, April. 1867, leg. Huet.

***Fumana procumbens* (Dunal) Gren. & Godr.** – (n. 4001) – ref. : Fl. Fr. 1: 173 (1847); sin.: *Helianthemum fumana* (L.) Mill.; *H. procumbens* Dunal; *Cistus fumana* L.; *Fumana nudifolia* Janch.; *F. vulgaris* Spach; - Hungary, Pest, Budapest, June 1871, leg. Simkovics L.

Gen *Helianthemum* P. Miller, 1754

***Helianthemum canum* (L.) Baumg.** – (n. 4004) – ref. Enum. Stirp. Transs. 2: 85 (1816); sin.: *Helianthemum vineale* (Willd.) Pers.; - Hungary, Budapest, Sashegy, May 1871, leg. Simkovics L.

***Helianthemum nummularium* (L.) Mill. subsp. *obscurum* (Celak.) Holub.** – (n. 4005) – ref. Acta Horti Bot. Prag. 1963: 53 (1964); sin.: *Helianthemum obscurum* Pers.; *H. ovatum* (Viv.) Dunal; *H. vulgare* Gaertn. var. *genuinum* Willk. pro parte; *H. hirsutum* (Thuill.) Mérat; *H. nummularium* (L.) Mill. subsp. *ovatum* (Viv.) Schinz & Thell.; *H. ovatum* (Viv.) Dunal subsp. *ovatum*; *H. ovatum* (Viv.) Dunal subsp. *hirsutum* Hayek; *H. chamaecistus* Mill.; *H. chamaecistus* subsp. *obscurum* Celak. (basionym); - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Helianthemum nummularium* (L.) Mill. subsp. *tomentosum* (Scop.) Schinz** – (n.4002) – ref. Fl. Schweiz ed. 3 2: 249 (1914); sin.: *Helianthemum tomentosum* (Scop.) Gray; - Romania, Bihor, Pocola, Pietrani, 15.07.1879, leg. Simkovics L.

***Helianthemum salicifolium* (L.) Mill.** – (n. 4006) – ref.: Gard. Dict. ed. 8 no. 21 (1768); sin.: *Helianthemum intermedium* (Pers.) Thibaud ex Dunal; - Switzerland, Valais, Brason, 15.05.1876, leg. F. O. Wolf.

Gen *Cistus* L., 1753

***Cistus monspeliensis* L.** – (n. 4007) – ref. : Sp. Pl. ed. 1 524 (1753); - Italy, Apulia (Puglia), 14.07.1874, leg. Simkovics L.

***Cistus halimifolius* L.** – (n. 4008) – ref. Sp. Pl. 524 (1753); sin.: *Halimum*



*halimifolium* subsp. *halimifolium* nom. ileg.; *Helianthemum halimifolium* (L.) Pers. subsp. *halimifolium*; *Halimium lepidotum* Spach.; - France, Alpes Maritimes, Cannes, 24.05.1875, leg. J. Heilmann.

**Superord. Urticanae Takhtajan ex Reval, 1992**

Ord. *Urticales* Dumortier, 1829

Fam. *Cannabaceae* Endlicher, 1829

Gen *Humulus* L., 1753

***Humulus lupulus* L.** - (n.4624) – ref.: Sp. Pl. ed. 1 1028 (1753); - Romania, Bihor, Oradea, August – September 1878, leg. Simkovics L.

Fam. *Ulmaceae* Mirbel, 1815

Subfam. *Celtoidae*

Gen *Celtis* L., 1753

***Celtis tournefortii* Lam.** - (n. 4628) - ref.: Encycl. Méth. Bot. 4: 138 (1797); sin.: *Celtis aetnensis* Strobl; *Celtis aspera* (Ledeb.) Steven; - Romania, Bihor, Oradea, (in the vineyards), June-October 1876, leg. Simkovics L.

Subfam. *Ulmoideae*

Gen *Ulmus* L., 1753

***Ulmus laevis* Pall.** - (n. 4629) - ref.: Fl. Ross. 1(1): 75 (1784); sin.: *Ulmus pedunculata* Foug.; *Ulmus effusa* Willd.; - Hungary, Hajdu-Bihar, Berekboszormeny, on the bank of the Crişul Repede river, 07.04.1878, leg. Simkovics L.

Fam. *Urticaceae* Durande, 1782

Trib *Parietarieae*

Gen *Parietaria* L., 1753

***Parietaria serbica* Panc.** - (n. 4627) – ref.: Fl. Princ. Serb. :620. 1879.; sin.: *Freirea chersonensis* (Lang & Szov.) Jarm.; *Freirea serbica* (Panc.) Jarm.; *Parietaria chersonensis* (Lang & Szov.) Dorfl.; *Parietaria lusitanica* Ball; *Parietaria lusitanica* subsp. *chersonensis* (Lange & Szov.) Chrtek; *Parietaria lusitanica* var. *chersonensis* Szov et Lang; *Parietaria lusitanica* subsp. *serbica* (Panc.) P.W. Ball.; - Romania, Mehedinţi, Plavisevita, the Straits (Cazane), May-July 1874, leg. Simkovics L.

Trib *Urticeae*

Gen *Urtica* L., 1753

***Urtica radicans* Bolla** - (n. 4625) – ref.: Verh. Ver. Naturk. Pressburg, i. (1856) Abh. 9; Sitzb. 24; (Notes: = *dioica*) sin.: *Urtica radicans* L.; - Slovakia, Distr.

Bratislava, Bratislava (Pozsony, Presporok, Pressburg), Szt. Gyorgy, swampy place, 15.09.1873, leg. Simkovics L.

Obs.: Heinrich Sabransky "Über *Urtica radicans* Bolla, eine neue Pflanze der Flora Niederosterreichs", in Plant Systematics and Evolution, Springer Wien, ISSN 0378-2697 (Print) 1615-6110, pg. 319-320.

**Superord. *Theanae* Thome ex Reveal, 1993**

Ord. *Elatinales* Nakai, 1949

Fam. *Elatinaceae* Dumortier, 1829

Gen *Elatine* L., 1753

***Elatine triandra* Schkuhr** – (n. 4655) – ref.: Handb. ed.1 1: 345 (1791); sin.: *Elatine callitrichoides* (Nyl.) Kauffm.; - Romania, Bihor, Oradea, 12.07.1878, leg. Simkovics L.

Ord. *Hypericales* Dumortier, 1829

Fam. *Hypericaceae* Durande, 1782, nom. cons.

Trib *Hypericeae*

Gen *Hypericum* L., 1753

***Hypericum androsaemum* L.** – (n. 4111) – ref.: Sp. Pl. ed. 1 784 (1753); sin.: *Androsaemum officinale* All.; - Hungary, Zala, Keszthely, 06.08.1873, leg. Simkovics L.

***Hypericum hirsutum* L.** – (n. 4110) – ref.: Sp. Pl. ed. 1 786 (1753); - Hungary, Pest, Budapest (the Johannis hills), July 1871, leg. Simkovics L.

***Hypericum maculatum* Crantz subsp. *maculatum*** – (n. 4107) – ref.: Stirp. Austr. ed. 1 2: 64 (1763); sin.: *Hypericum commutatum* Nolte; - Romania, Cluj, Cluj-Napoca (Valea Morii), July 1878, leg. Simkovics L.

***Hypericum perforatum* L.** – (n. 4106) – ref.: Sp. Pl. ed. 1 785 (1753); sin.: *Hypericum veronense* Schrank; *Hypericum noeanum* Boiss.; *Hypericum perforatum* L. var. *veronense* (Schrank) Nyman 1878, non P. Fourn; *Hypericum perforatum* subsp. *veronense* (Schrank) Froehl.; - Hungary, Fejer, Kutyavar, 14.08.1864, leg. A.I. Tauscher.

***Hypericum richeri* Vill. subsp. *richeri*** - (n. 4109) – ref.: Prosp. Pl. Dauph. 44 (1779); Pl. Rar. Banat. 49. t. 12.f. 27.; sin.: *Hypericum alpinum* Vill.; *H. fimbriatum* Lam.; *H. maculatum* auct., non Crantz; *Hypericum richeri* Vill. subsp. *richeri*; - Romania, Bihor (the Bihor mountains), Cornul Muntelui, 17.07.1879, leg. Simkovics L.

***Hypericum tetrapterum* Fr.** – (n. 4108) – ref.: Nov. Fl. Suec. ed. 1 94 (1823); sin.: *Hypericum quadrangulum* L., nom. ambig.; *H. quadrangulum* L., nom. ambig. subsp. *quadrangulum*; *H. acutum* Moench; *H. acutum* Moench subsp. *acutum*; *H. corsicum* Steud.; - Romania, Banat, Poiana Ruscă, 24.07.1872, leg. Simkovics L.

**Superord. *Violanae* R. Dahlgren ex Reveal, 1992**Ord. *Capparales* J. Hutchinson, 1924Subord. *Capparineae*Fam. *Brassicaceae* Bumett, 1835, nom. cons.Trib *Arabideae*Gen *Arabis* L., 1753

***Arabis pumila* Jacq.** – (n. 3954) – ref.: Fl. Austr. 3: 44 (1775); - Austria, Tirol, (1680 m. altitude, on dolomith), 30.07. 1872, leg. J. Freyn.

Gen *Cardamine* L., 1753

***Cardamine bulbifera* (L.) Crantz** – (n.3966) – ref.: Class. Crucif. 127 (1769), sin.: *Dentaria bulbifera* L.; - Hungary, Csongrad, Eperjes (the Csemete hills), May 1870, leg. Simkovics L.

***Cardamine enneaphyllos* (L.) Crantz** - (n. 3965) - ref.: Class. Crucif. 127 (1769), sin.: *Dentaria enneaphyllos* L.; - Hungary, Baranya, Mecsek, endemic, 06.04.1873, leg. Simkovics L.

***Cardamine flexuosa* With.** – (n. 3959) – ref.: Arr. Brit. Pl. ed. 3 3: 578 (1796) – sin.: *Cardamine hirsuta* L. subsp. *silvatica* (Link) Rouy & Foucaud; *Cardamine hirsuta* ssp. *flexuosa* (With.) Forbes & Hemsl., *Cardamine konaensis* St. John ; *Cardamine sylvatica* Link (*Phytographische Blätter* 1: 50. 1803.); - Romania, Bihor, Aleșd, Pădurea Neagră, 25.05.1878, leg. Simkovics L.

***Cardamine glanduligera* O.Schwarz** – (n. 3964) - ref. : Feddes Repert. 46: 188 (1939), sin.. *Dentaria glandulosa* Waldst. & Kit.; - Hungary, Csongrad, Eperjes , 1868, leg. Simkovics L.

***Cardamine graeca* L.** – (n. 3963) – ref.: Sp. Pl. ed. 1 655 (1753) – Romania, Mehedinți, Orșova, 06.04.1874, leg. Simkovics L.

***Cardamine heptaphylla* (Vill.) O.E.Schulz** – (n.3967) – ref.: Feddes Repert. 46: 116 (1939); sin.: *Dentaria pinnata* Lam.; *Cardamine baldensis* Fritsch: *Cardamine pinnata* (Lam.) R.Br.: - Switzerland, Alpes de Montreny, May 1872, leg. Favrat.

***Cardamine hirsuta* L.** – (n. 3960) – ref.: Sp. Pl. ed. 1 655 (1753) – sin.: *Cardamine multicaulis* Hoppe; *Cardamine umbrosa* DC., non Lej.; - Romania, Mehedinți, Orșova, 05.05.1874, leg. Simkovics L.

***Cardamine impatiens* L.** – (n. 3958) – ref. : Sp. Pl. ed. 1 655 (1753) – Hungary, Vișegrad, Feketehegy, 20.05.1871, leg. Simkovics.

***Cardamine matthioli* Moretti** – (n. 3962) – ref.: Fl. Comense 5: 157 (1847); sin.: *Cardamine pratensis* L. subsp. *matthioli* (Moretti) Arcang.; *Cardamine hayneana* Welw.; - Hungary, Balkany, Korishagy, April – May 1873, leg. Sikovics L.

***Cardamine parviflora* L.** – (n. 3956) – ref.. Syst. Nat. ed. 10 2: 1131 (1759) – Franta, Rohne-Alpes, Savoia, Saint Jeane de Maurienne, apr. – mai 1875, leg. Didier.

***Cardamine parviflora* L.** – (n. 3957) – ref.: Syst. Nat. ed. 10 2: 1131 (1759) ; – label missing, the location, date and author are unidentified.

***Cardamine pentaphyllos* (L.) Crantz** – (n. 3969) – ref.: Class. Crucif. 127 (1769); sin.: *Dentaria pentaphyllos* L.; *Dentaria digitata* Lam.; - France, Haut-Rhin, Thann, Elfuss, 04.04.1874, leg. Rottenbachthal.

***Cardamine pratensis* L.** – (n. 3961) – ref.: Sp. Pl. ed. 1 656 (1753) – Romania, Bihor, Cheri, Uileac (near Oradea), 09 – 28. 04. 1876, leg. Simkovics L.

***Cardamine resedifolia* L.** – (n. 3955) – ref.: Sp. Pl. ed. 1 656 (1753); - sin.: *Cardamine gelida* Schott; - Switzerland, Valais, Col du Simplon, June 1872, leg. Favrat.

Gen *Dentaria* L., 1753

***Dentaria intermedia* Sand.** - (n.3968) – ref.: Flora 38: 129. 1855; sin.: (*Dentaria digitata* x *pinnata*); - Switzerland, May 1872, leg. Favrat.

Gen *Draba* L., 1753

***Draba lasiocarpa* Rochel** – (n. 3981) – ref.: Sched. Pl. Hung. Exsicc. (1810); sin.: *Draba elongata* Host; *D. aizoon* Wahlenb.; *D. compacta* Schott, Nyman & Kotschy; - Romania, Caraş-Severin, Băile Herculane, Goris, April – May (28) - 1874, leg. Simkovics L.

***Draba stellata* Jacq.** – (n. 3982) – ref.: Enum. Stirp. Vindob. 113 (1762); sin.: *Draba austriaca* Crantz; - Austria, Stiria, no date, leg. Graf.

***Draba muralis* L.** – (n. 3983) – ref.: Sp. Pl. ed. 1 642 (1753); - Romania, Caraş-Severin, Băile Herculane, 27.05.1874, leg. Simkovics L.

Gen *Erophila* A.P. de Candolle, 1821, nom. cons.

***Erophila verna* (L.) Chevall.** – (n. 3984) – ref.: Fl. Gén. Env. Paris ed. 1 2: 898 (1827); sin.: *Draba verna* L.; *Erophila stenocarpa* Jord.; *Draba verna* L. subsp. *verna*; *Erophila vulgaris* DC.; - Hungary , Szabolc-Satmar-Bereg, Nyíregyháza, April 1877, leg. Simkovics L.

***Erophila verna* (L.) Chevall. subsp. *verna*** – (n. 3985) – ref.: Fl. Gén. Env. Paris ed. 1 2: 898 (1827); sin.: *Erophila krockeri* Andr.; *E. verna* (L.) Chevall. subsp. *krockeri* (Andr.) Janch.; *E. verna* (L.) Chevall. subsp. *obconica* (de Bary) Janch.; *E. majuscula* Jord.; *E. stenocarpa* Jord.; *Erophila verna* (L.) Chevall. subsp. *majuscula* (Jord.) Janch.; *E. cuneifolia* Jord.; *Draba verna* L. subsp. *obconica* (de Bary) Degen; *D. verna* L. subsp. *lanceolata* (Neilr.) Rouy & Foucaud; *D. obconica* (de Bary) Hayek; *D. verna* L. subsp. *majuscula* (Jord.) Rouy & Foucaud; *D. verna* L. subsp. *vulgaris* (DC.) Rouy & Foucaud; *D. majuscula* (Jord.) Hayek & Wibiral; *D. krockeri* (Andr.) Hayek; - Hungary, Veszprém, Herend, 21.04.1873, leg. Simkovics L.

***Erophila verna* (L.) Chevall. subsp. *praecox* (Steven) Walters** – (n. 3986) – ref.: Feddes Repert. 69: 57 (1964); sin.: *Erophila praecox* (Steven) DC. subsp. *praecox*; *Erophila adriatica* Degen; *Erophila verna* (L.) Chevall. subsp. *oblongata* (Jord.) Janch.; *Erophila praecox* (Steven) DC. subsp. *glabrescens* (Jord.) Janch.; *Erophila praecox* (Steven) DC. subsp. *subnitens* (Jord.) Janch.; *Erophila praecox* (Steven) DC.; *Erophila verna* (L.) Chevall. subsp. *stenocarpa* (Jord.) Janch.; *Draba verna* L. subsp. *praecox* (Steven) Rouy & Foucaud; *Draba praecox* Steven; *Draba glabrescens* (Jord.) Hayek & Wibiral; *Draba verna* L. subsp. *hirtella* (Jord.) Rouy & Foucaud pro parte; *Draba stenocarpa* (Jord.) Hayek & Wibiral; - Hungary, Baranya, Harsany, 03.04. 1873, leg. Simkovics L.

Trib *Hesperideae*  
Gen *Erysimum* L., 1753

***Erysimum cheiri* (L.) Crantz.** – (n. 3950) - ref.: Class. Crucif. 116 (1769); sin.: *Cheiranthus cheiri* L. (- Ref. Sp. Pl. ed. 1 661 (1753); - Switzerland, Vallei, April – May 1876, leg. Wolf.

***Erysimum cuspidatum* (M.Bieb.) DC.** – (n. 3977) – ref.: Reg. Veg. Syst. Nat. 2: 493 (1821); sin: *Erysimum tetovense* Rohlena; *E. goniocaulon* auct.; *E. pulchellum* auct. turc.; *Syrenia cuspidata* (M.Bieb.) Rchb.; - Romania, Caraș-Severin, Drencova, și Mehedinți, Șvinița, June – July 1874, leg. Simkovics L.

***Erysimum diffusum* Ehrh.** – (n. 3975) – ref.: Beitr. Naturk. 7: 157 (1792); sin.: *Erysimum canescens* Roth; *Erysimum australe* auct. balcan.; Serbia, Voievodina (South Banat), Grebenat, Duplai, May-June 1974, leg. Simkovics L.

***Erysimum odoratum* Ehrh.** - (n. 3972) – ref. : Beitr. Naturk. 7: 157 (1792), sin.: *Erysimum pannonicum* Crantz var. *pannonicum*; *Erysimum pannonicum* Crantz; *E. pallescens* Herbach; *E. aureum* auct. roman., non M.Bieb.; *E. erysimoides* (L.) Fritsch ex Janch., non (Kar. & Kir.) Kuntze; - Romania, Caraș-Severin (Banat), Baziaș, May – June 1874, leg. Simkovics L.

***Erysimum odoratum* Ehrh.** - (n. 3973) – ref. : Beitr. Naturk. 7: 157 (1792), sin.: *Erysimum pannonicum* Crantz var. *pannonicum*; *Erysimum pannonicum* Crantz; *E. pallescens* Herbach; *E. aureum* auct. roman., non M.Bieb.; *E. erysimoides* (L.) Fritsch ex Janch., non (Kar. & Kir.) Kuntze; - Romania, Caraș-Severin (Banat), Baziaș, May – June 1874, leg. Simkovics L.

***Erysimum repandum* L.** - (n. 3974) – ref.: Demonstr. Pl. 17 (1753); sin.: *Erysimum patens* Loscos; - Romania, Bihor, Oradea, 27. 04. 1878, leg. Simkovics L.

***Erysimum rhaeticum* (Schleich. ex Hornem.) DC.** – (n. 3976) – ref.: Reg. Veg. Syst. Nat. 2: 503 (1821); sin.: *Erysimum helveticum* auct., non (Jacq.) DC.; *Erysimum lanceolatum* auct. ital.; - Romania, Mehedinți, Plavisevita, 23.05. 1874, leg. Simkovics L.

Gen *Malcomia* R. Brown in W. Aiton & W.T. Aiton, 1812

***Malcomia africana* (L.) R. Br.** – (n. 3953) – ref. Hort. Kew. Ed. 2. 4 : 121 (1812); sin.: *Cheiranthus taraxocifolius* Balb.; *Fedtschenkoa africana* (L.) Dvorak.; *Hesperis africana* L.; *Wilckia africana* (L.) F. Muell. ; - Hungary, Pest, Csepel (the Csepel island), 20.05. 1871, leg. A.I. Tauscher.

***Malcomia littorea* R. Br.** – (n. 3951) – ref.: Hort. Kew. Ed. 2 4 : 121 (1812); sin.: *Cheiranthus littoreus* L. (*Species Plantarum* 2: 925. 1763. ); *Wilckia littorea* (L.) Druce (*List Brit. Pl.* p. 6, No. 179 (1908) ; – France, Herault, Agde, June 1872, leg. Beziers. (Herb. Treveneau).

Gen *Matthiola* R. Brown, in W. Aiton & W.T. Aiton, 1812, nom. cons.

***Matthiola incana* (L.) R. Br.** – (n. 3952) – ref.: Hort. Kew. Ed. 2. 4 : 121 (1812); sin.: *Matthiola incana* (L.) Ait. f. ; - Hungary, Szatmar-Szabolcs-Bereg, Nyiregyhaza, (in culture), 1868. leg. Simkovics L.

Gen *Hesperis* L., 1753

***Hesperis inodora* L.** – (n. 3970) – ref.: Sp. Pl. ed. 2 927 (1763); sin.: *Hesperis subsinuata* Borbás; - Romania, Bihor, Oradea (the Fațanoș forest), endemical, 28.06.1877, leg. Simkovics L.

Trib *Sisymbrieae*

Gen *Alliaria* Heister ex Fabricius, 1759

***Alliaria petiolata* (Bieb.) Cavara & Grande** - (n. 3971) – ref.: Bull. Ort. Bot.. Napoli, iii. 418 (1913); TSN – 184481; sin.: *Alliaria alliaria* (L.) Britt.; *Alliaria officinalis* Andrz.; *Erysimum alliaria* L.; *Sisymbrium alliaria* (L.) Scop.; - Hungary, Csongrad, Eperjes, (the Kalvaria hills), 1868, leg. Sikovics L.

Gen *Bunias* L., 1753

***Bunias erucago* L.** – (n. 3998) – ref. Sp. Pl. ed. 1 670 (1753); sin.: *Bunias tricornis* Lange; - Hungary, Feher, Battofaen, May – June 1870, leg. Tauscher.

***Bunias orientalis* L.** – ( n. 3999) – ref. Sp. Pl. ed. 1 670 (1753); - Rmania, Bihor, Sânmartin (the Petea rivulet), 07.06.1879, leg. Simkovics L.

***Bunias orientalis* L.** – (n. 4000) – ref. Sp. Pl. ed. 1 670 (1753); - location, date and author not mentioned (possible to belong to sheet n.3999)



Trib *Brassicaceae*  
Gen *Eruca* P. Miller, 1754

***Eruca vesicaria* (L.) Cav.** – (n. 3978) – ref.: Descr. Pl. ed. 1 426 (1802); sin.: *Brassica eruca* L.; *Brassica vesicaria* L.; *Eruca sativa* Mill.; - Switzerland, Valley, 15.06. 1873, leg. Favrat.

Trib *Lepidieae*  
Gen *Iberis* L., 1753

***Iberis amara* L. subsp. *forestieri* (Jord.) Heywood** – (n. 3993) – ref. Feddes Repert. 69: 61 (1964); sin.: *Iberis forestieri* Jord.; - France, Heutes Pyrenneis, Sede, August 1870, leg. Bordere. (Herbier Oscar de Dieudonne – Louvain - )

Gen *Thlaspi* L., 1753

***Thlaspi arvense* L.** – (n. 3987) – ref.: Sp. Pl. ed. 1 646 (1753); - Serbia, Voivodina, Vârșeț (Versec ;Vrsac), 18.05.1874, leg. Simkovivs L.

***Thlaspi perfoliatum* L.** - (n. 3988) – ref.: Sp. Pl. ed. 1 646 (1753); sin.: *Thlaspi rotundifolium* Tineo; *Thlaspi tinei* Nyman; - Romania, Caraș-Severin, Băile Herculane, 29.04.1874, leg. Simkovics L.

***Thlaspi cochleariforme* DC.** – (n. 3989) – ref.: Reg. Veg. Syst. Nat. 2: 381 (1821); - Romania, Cluj, Cluj-Napoca, 01.06.1878, leg. Simkovics L.

***Thlaspi jankae* A.Kern.** – (n. 3990) – ref. Österr. Bot. Zeitschr. 17: 35 (1867); sin.: *Thlaspi hungaricum* Dvor&Káková; - Hungary, Pest, Budapesta, 28.04.1874, leg. Simkvics L.

***Thlaspi dacicum* Heuff.** – (n. 3991) – ref.: Österr. Bot. Zeitschr. 8: 26 (1858); sin.: *Thlaspi korongianum* Czetz; - Romania, Caraș-Severin, Băile Herculane, Domogled, 28.05.1874, leg. Simkovics L.

***Thlaspi caerulescens* J.Presl & C.Presl subsp. *virens* (Jord.) Hook.f.** – (n.3992) – ref. Stud. Fl. Brit. Is. ed. 1 38 (1870); sin.: *Thlaspi virens* Jord.; - France, dep. Loire, Piene, endemical, May – June 1873, leg. A. Liegard - (Flora Ligerensis subalpi).

Gen *Lepidium* L., 1753

***Lepidium campestre* (L.) R.Br.** – (n. 3994) – ref. Hort. Kew. ed. 2 4: 88 (1812); sin.: *Lepidium campestre* (L.) Ait. f. ; *Neolepia campestris* (L.) W.A. Weber; *Thlaspi campestre* L. ; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Lepidium latifolium* L.** – (n. 3996) – ref. : Sp. Pl. ed. 1 644 (1753); sin.: *Cardaria latifolia* (L.) Spach.; - Italy, Cernigal, 05.07.1875, leg. Porta et Rigo

***Lepidium perfoliatum* L.** – (n. 3995) – ref. Sp. Pl. ed. 1 643 (1753); - Hungary, Baranya, Harsany, 03.04.1873, leg. Simkovics L.

Gen *Biscutella* L., 1753

***Biscutella lyrata* L.** – (n. 3997) – ref. Mantissa Alt. 254 (1771); sin.: *Biscutella microcarpa* DC.; *Biscutella scutulata* Boiss. & Reut.; - Italy, Apulia, Gorgano, leg. Porta et Rigo.

Ord. *Salicales* Lindley, 1833Fam. *Salicaceae* Mirbel, 1815Gen *Salix* L., 1753

***Salix x rubens* Schrank** – (n. 4649) – ref.: Baier. Fl. 1:226. 1789; Comment: = *S. alba* × *S. fragilis*; sin.: *Salix fragilis* x *alba* ; *Salix decipiens* Ehrh.; *Salix excelsior* Host; *Salix fragilis* Sm., non L.; *Salix fragilis* var. *basfordiana* (Scaling ex J. Salter) Bean; *Salix russeliana* Sm.; *Salix neotricha* Goerz; *Salix x viridis* Fr.; - Romania, Bihor, Oradea (on the bank of the Cris river), 02.04.1876, leg. Simkovics L.

***Salix triandra* L.** – (n. 4650) – ref.: Sp. Pl. ed. 1 1016 (1753); sin.: *Salix amygdalina* L.; - Hungary, Baranya, Lasko, August 1873, leg. Simkovics L.

***Salix cinerea* L.** – (n. 4651) – ref.: Sp. Pl. ed. 1 1021 (1753); sin.: *Salix aurita* L. var. *cinerea* (L.) Fiori; - Hungary, Pest, Budapest, May 1874 and Tokaji, July 1877, leg. Simkovics L.

***Salix caprea* L.** – (n. 4652) – ref.: Sp. Pl. ed. 1 1020 (1753); sin.: *Salix coaetanea* (Hartm.) Flod.; - Hungary, Pest, Budapest, Mart-May 1874, leg. Simkovics L.

Gen *Populus* L., 1753

***Populus alba* L.** – (n. 4653) – ref.: Sp. Pl. ed. 1 1034 (1753); sin.: *Populus bolleana* Lauche; *Populus nivea* Wesm.; - Romania, Caraş-Severin, Baziaş, 31.05.1874, leg. Simkovics L.

***Populus canescens* (Aiton) Sm.** – (n. 4654) – ref.: Fl. Brit. 3: 1080 (1804); sin.: *Populus alba-tremula* E.H.L.Krause; - Romania, Caraş-Severin, Duplai (on the bank of the Caras river), May 1874, leg. Simkovics L.

Ord. *Cucurbitales* Dumortier, 1829Fam. *Cucurbitaceae* Durande, 1782Subfam. *Cucurbitoideae*Trib *Benincaseae*Gen *Bryonia* L., 1753

***Bryonia alba* L.** – (n. 4180) – ref.: Sp. Pl. ed. 1 1012 (1753); - Romania, Bihor, Oradea, 14.07.1877, leg. Simkovics L.

Gen *Ecballium* A. Richard, in Bory de St.-Vincent, 1824, nom. cons.

***Ecballium elaterium* (L.) A.Rich.** – (n. 4181) – ref.: Dict. Class. Hist. Nat. 6: 19 (1824); sin.: *Momordica elaterium* L.; - the Botanical gardeners, 08.10.1872, leg. Simkovics L.

Gen *Lagenaria* Seringe, 1825

***Lagenaria siceraria* (Molina) Standl.** – (n. 4184) – ref.: Publ. Field Mus. Bot. (Chicago) 3: 435 (1930); sin.: *Lagenaria vulgaris* Ser.; - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza, August 1872, leg. Simkovics L.

Trib *Melothrieae*  
Gen *Cucumis* L., 1753

***Cucumis sativus* L.** – (n. 4182) – ref.: Sp. Pl. ed. 1 1012 (1753); - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza, September 1870, leg. Simkovics L.

Trib *Cucurbiteae*  
Gen *Cucurbita* L., 1753

***Cucurbita pepo* L.** – (n. 4183) – ref.: Sp. Pl. ed. 1 1010 (1753); sin.: *Cucurbita melopepo* L.; *C. verrucosa* L.; - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza, 14.08.1872, leg. Simkovics L.

### Superord. *Violanae* R. Dahlgren ex Reveal, 1992

Ord. *Violales* Perleb, 1826  
Fam. *Violaceae* Batsch, 1862  
Sbfam. *Violioideae*  
Trib *Violeae*  
Gen *Viola* L., 1753

***Viola odorata* L.** – (n. 4010) – ref.: Sp. Pl. ed. 1 934 (1753); sin. *Viola stolonifera* Rodr.; - România, Bihor, on the Cris River, 20.04.1878, leg. Simkovics L.

***Viola arvensis* var. *pseudolutea* Schur** – (n. 4014) – ref. Prodr. Stirp. Gotting. 73 (1770); sin.: *Viola pseudolutea* Schur.; - Romania, Cluj, Turda, 21.07.1878, leg. Simkovics L.

***Viola canina* L.** – (n. 4013) - ref.: Sp. Pl. ed. 1 935 (1753); - Hungary, Heves, Gyongyos, 10.05.1874, leg. Simkovics L.

***Viola hirta* L.** – (n. 4009) – ref.: Sp. Pl. ed. 1 934 (1753); sin.: *Viola calcarea* (Bab.) Greg.; - Romania, Cluj, Cluj-Napoca, 18.04. – 12.06. 1878, leg. Simkovics L.

***Viola odorata* L.** – (n. 4011) – ref.: Sp. Pl. ed. 1 934 (1753); sin. *Viola stolonifera* Rodr.; Obs.: - label missing (possible to be a variant of sheet n. 4010)

***Viola reichenbachiana* Jord. ex Boreau** – (n. 4012) – ref.: Fl. Centre Fr. ed. 3 2: 78 (1857); sin.: *Viola silvestris* auct.; *Viola sylvatica* (???) Fr. ex Hartm.; *Viola silvestris* Lam. pro parte; - Hungary, Budapesta, Pest (Pilis-Szantho), 02.05.1874, leg. Simkovics L.

**Superord. *Primulanae* R. Dahlgren ex Reveal, 1996**

Ord. *Styracales* Bumett, 1835

Subord. *Ebenineae*

Fam. *Ebenaceae* Gurke, 1891

Gen *Diospyros* L., 1753

***Diospyros lotus* L.** – (n. 4620) – ref.: Sp. Pl. ed. 1 1057 (1753); - cultivated in the dendrological garden, 16.08.1873, no location and signature (the label handwriting is Simkovics L.)

Ord. *Primulales*

Fam. *Primulaceae* Ventenat, 1799

Trib *Lysimachieae*

Gen *Lysimachia* L., 1753

***Lysimachia vulgaris* L.** – (n. 4564) – ref.: Sp. Pl. ed. 1 146 (1753); - Romania, Bihor, Oradea, (in the meadows) , 10.07.1876, leg. Simkovics L.

Trib *Androsaceae*

Gen *Androsace* L., 1753

***Androsace maxima* L.** - (n. 4565) – ref.: Sp. Pl. ed. 1 141 (1753); sin.: *Androsace turczaninowii* Freyn, - Hungary, Pest, Budapesta (mt. St.Gellert), 18-19.04.1874, leg. Simkovics L.

Gen *Hottonia* L., 1753

***Hottonia palustris* L.**– (n. 4567) - ref.: Sp. Pl. ed. 1 145 (1753); - Romania, Bihor, Girisu de Cris (Koros-Taryan, Korostarjan), May 1877, leg. Simkovics L.

**Superord. *Nepenthanae* Takhtajan ex Reveal, 1996**

Ord. *Droserales* Grisebach, 1854

Fam. *Droseraceae* R.A. Salisbury, 1808

Gen *Aldrovanda* L., 1753

***Aldrovanda vesiculosa* L.** – (n. 4189) – ref.: Sp. Pl. ed. 1 281 (1753); - Hungary, Baranya, Gordisa (on the bank of the Drava river), 18.07.1873, leg Simkovics L.

Gen *Drosera* L., 1753

***Drosera rotundifolia* L.** – (n. 4190) – ref.: Sp. Pl. ed. 1 281 (1753); - Hungary, Matra, Baktai, July 1870, leg. Vrabelyi.

***Drosera intermedia* Hayne** – (n. 4191) – ref.: Bot. Bilderb. 3: t. 3, fig. B (1798); sin.: *Drosera longifolia* auct., non L.; - Germany, Schleswig-Holstein, July 1870, leg. Vrabelyi.

**Subclass. *Lamiidae* Takhtajan ex Reveal, 1992**

**Superord. *Gentiananae* Thome ex reveal, 1992**

Ord. *Gentianales* Lindley, 1833

Fam. *Gentianaceae* Durande, 1782, nom. cons.

Trib *Gentianeae*

Gen. *Blackstonia* Hudson, 1762

***Blackstonia perfoliata* (L.) Huds. subsp. *serotina* (W.D.J.Koch ex Rchb.) Vollm.** – (n. 4440) – ref.: Fl. Bayern 594 (1914); sin.: *Chlora serotina* W.D.J.Koch ex Rchb.; *Blackstonia acuminata* (W.D.J.Koch & Ziz) Domin; *B. serotina* (W.D.J.Koch ex Rchb.) Beck; *B. perfoliata* (L.) Huds. subsp. *acuminata* (W.D.J.Koch & Ziz) Dostál; - Hungary, Pest, Budapest, July - September 1875, leg. Simkovics L.

Gen *Swertia* L., 1753

***Swertia perennis* L.** – (n. 4441) – ref.: Sp. Pl. ed. 1 226 (1753); - Romania, Cluj, Cluj-Napoca (Mill Valley), 16 – 23.06.1878, leg. Simkovics L.

Gen *Gentiana* L., 1753

***Gentiana cruciata* L.** – (n. 4442) – ref.: Sp. Pl. ed. 1 231 (1753); - Romania, Cluj, Cluj-Napoca (Mill Valley), July 1878, leg. Simkovics L.

***Gentiana pneumonanthe* L.** – (n. 4443) – ref.: Sp. Pl. ed. 1 228 (1753); - Hungary, Szabolcs-Satmar-Bereg, Nyiregyhaza, September 1871, leg. Simkovics L.

Gen *Gentianella* Moebch, 1794

***Gentianella aspera* (Hegetschw. & Heer) Dostál ex Skalicky\$A, Chrtek & J.Gill** – (n. 4444) – ref.: Preslia 38: 92 (1966); sin.: *Gentiana obtusifolia* Willd. pro parte; *G. sturmiana* A.Kern. & Jos.Kern.; *G. norica* A.Kern. & Jos.Kern.; *G. amarella* L. subsp. *chlorifolia* (Nees) Arcang.; *G. aspera* Hegetschw. & Heer subsp. *norica* (A.Kern. & Jos.Kern.) Vollm.; *G. aspera* Hegetschw. & Heer subsp. *aspera*; *G. amarella* L. subsp. *obtusifolia* (Willd.) Arcang.; *G. germanica* Willd. subsp. *obtusifolia* (Willd.) Rouy; *G. aspera* Hegetschw. & Heer; *G. spathulata* Bartl. ex Rchb. pro parte; *G. aspera* Hegetschw. & Heer subsp. *sturmiana* (A.Kern. & Jos.Kern.) Vollm.; *G. polymorpha* Wettst. subsp. *polymorpha* Wettst. pro parte; *G. polymorpha* Wettst. subsp. *aspera* (Hegetschw. & Heer) Dostál; - Romania, Hunedoara, Hațeg, 19.08.1874, leg. Simkovics L.

***Gentianella germanica* (Willd.) E.F.Warb.** – (n. 4445) – ref.: Fl. Brit. Is. ed. 1 824 (1952); sin.: *Gentiana germanica* Willd.; *Gentiana polymorpha* Wettst. subsp.

*germanica* (Willd.) Dostál; *Gentiana germanica* Willd. subsp. *semleri* Vollm.; *Gentiana rhaetica* A.Kern. & Jos.Kern. subsp. *rhaetica*; *Gentiana campestris* L. subsp. *germanica* (Willd.) Murb.; *Gentianella pilosa* (Wettst.) A\$A.Löve & D.Löve; *Gentiana germanica* Willd. subsp. *germanica*; *Gentiana germanica* Willd. subsp. *solstitialis* (Wettst.) Vollm.; *Gentiana rhaetica* A.Kern. & Jos.Kern.; *Gentiana obtusifolia* Willd. pro parte; *Gentiana rhaetica* A.Kern. & Jos.Kern. subsp. *kernerii* Wettst.; *Gentiana germanica* Willd. subsp. *kernerii* (Dörf. & Wettst.) Schinz & Thell.; *Gentiana solstitialis* Wettst.; *Gentiana polymorpha* Wettst. subsp. *polymorpha* Wettst. pro parte; *Gentiana wettsteinii* Murb.; - Austria, Stiria (Steiermark), Murzzuschlag, 12.09.1873, leg. Simkovics L.

Gen *Centaurium* J. Hill, 1756

***Centaurium erythraea* Rafn.** – (n. 4446) – ref.: Danm. Holst. Fl. 2: 75 (1800); sin.: *Erythraea centaurium* (L.) Pers. subsp. *centaurium*; *Centaurium minus* auct.; *Centaurium minus* auct. subsp. *minus*; - Romania, Bihor, Oradea, July-August 1878, leg. Simkovics L.

***Centaurium pulchellum* (Sw.) Druce** – (n. 4447) – ref.: Fl. Berks. 342 (1898); sin.: *Erythraea pulchella* (Sw.) Fr.; *Erythraea ramosissima* (Vill.) Pers.; *Erythraea pulchella* (Sw.) Fr. subsp. *pulchella*; *Erythraea ramosissima* (Vill.) Pers. subsp. *ramosissima*; *Centaurium meyeri* (Bunge) Druce; - Hungary, Fejer, Ercsi, August 1876, leg. I.A. Tauscher.

***Centaurium maritimum* (L.) Fritsch** - (n. 4448) – ref.: Mitt. Naturw. Ver. Wien 5: 97 (1907); sin.: *Erythraea maritima* (L.) Pers.; ; *Erythraea maritima* (L.) Pers. subsp. *maritima*; *Erythraea occidentalis* (DC.) Roem. & Schult.; *Erythraea discolor* Gand.; *Erythraea bianoris* Sennen; *Erythraea lutea* (Bertol.) Roem. & Schult.; *Centaurium discolor* (Gand.) Ronniger; - Italy, Apulia, 09.06.1874, Porta et Rigo.

***Centaurium spicatum* (L.) Fritsch** - (n. 4449) – ref.: Mitt. Naturw. Ver. Wien 5: 97 (1907); sin.: *Erythraea spicata* (L.) Pers.; - Italy, Abruzzo, Pescara (clay soil), 19.06.1875, leg. Porta et Rigo.

Ord. *Apocynales* Bromhead, 1838  
Fam. *Apocynaceae* A.I. de Jussieu, 1789  
Subfam. *Plumerioideae*  
Trib *Plumerieae*  
Gen *Vinca* L., 1753

***Vinca herbacea* Waldst. & Kit.** – (n. 4436) – ref. : Pl. Rar. Hung. 1: 8 (1799); sin.: *Vinca pumila* E.D.Clarke; *Vinca mixta* Velen.; - Hungary, Pest, Budapest (Sashegy), 28.04.1871, leg. Simkovecs L.

***Vinca major* L.** – (n. 4437) – ref.: Sp. Pl. ed. 1 209 (1753); sin.: *Vinca major* var. *variegata* Loud.; - France, Luc., April 1869, leg. Huet.



Ord. *Rubiales* Dumortier, 1829  
 Fam. *Rubiaceae* A.L. de Jussieu, 1789  
 Subfam. *Rubioideae*  
 Gen *Asperula* L., 1753

***Asperula taurina* L.** - (n. 4216) – ref.: Sp. Pl. ed. 1 103 (1753); sin.: *Asperula propinqua* Pobed.; *A. caucasica* Pobed.; *A. leucanthera* Beck; - Romania, Caras-Severin, Baile Herculane (in the forest), 30.05. 1874, leg. Simkovics L.

Gen *Galium* L., 1753

***Galium mollugo* L.** - (n. 4217) – ref.: Sp. Pl. ed. 1 107 (1753); sin.: *Galium mollugo* L. subsp. *insubricum* (Gaudin) Arcang.; *G. mollugo* L. subsp. *elatum* (Thuill.) Syme; *G. insubricum* Gaudin; *G. mollugo* L. subsp. *tyrolense* (Willd.) Hayek; *G. elatum* Thuill.; *G. kerneranum* Klokov; *G. tyrolense* Willd.; - Hungary, Fejer, Kutyavar, endemic, 15.07.1877, leg. I.A. Tauscher.

***Galium scabrum* auct. non L.** - (n. 4218) – ref.: Sp. Pl. ed. 1 108 (1753); sin.: *Galium rotundifolium* L.; - Romania, Bihor, Oradea – Săldăbagiu (in the forest), 20.07.1879, leg. Simkovics L.

***Galium sylvaticum* L.** - (n. 4219) – ref.: Sp. Pl. ed. 2 155 (1762); - sin.: *Galium capillipes* Rchb.; *Galium inflatum* Gilib.; *Galium intermedium* Eichw.; *Galium linifolium* Rochel; - Romania, Bihor, Oradea (in the forest), June – September 1877, leg. Simkovics L.

**Superord. *Oleaneae* (Lindley, 1833) Takhtajan, 1997**

Fam. *Oleaceae* Hoffmannseg & Link, 1813 – 1820

Subfam. *Jasminoideae*

Trib *Forsythieae*

Gen *Forsythia* Vahl. 1804, nom. cons.

***Forsythia incana* R. Br.** – (n. 3979) – ref. gen.: Enum. Pl. 1: 39 (1804); - Hungary, Csongrad, Eperjes, May 1868, leg. Simkovics L.

Trib *Jasmineae*  
 Gen *Jasminum* L., 1753

***Jasminum fruticans* L.** – (n. 3980) – ref.: Sp. Pl. ed. 1 7 (1753); – Hungary, Pest, Budapest (Botanical garden), 1873, leg. Simkovics L.

Subfam. *Oleoideae*  
 Trib *Oleeae*  
 Gen *Ligustrum* L., 1753

***Ligustrum vulgare* L.** – (n. 4432) – ref.: Sp. Pl. ed. 1 7 (1753); sin.: *Ligustrum insulare* Decne; *Ligustrum insulense* Decne; - Romania, Bihor, Oradea, 07.06.1879, leg. Simkovics L.

Gen *Olea* L., 1753

***Olea europaea* L.** – (n. 4434) – ref.: Sp. Pl. ed. 1 8 (1753); - Italia, Veneția , (the hillock spot Berac), May – August 1873, leg. Rigo.

Gen *Syringa* L., 1753

***Syringa vulgaris* L.** – (n. 4433) – ref.: Sp. Pl. ed. 1 9 (1753); sin.: *Syringa rhodopea* Velen.; - Romania, Cluj, Cluj-Napoca (in gardens), endemic, April-July 1878, leg. Simkovics L.

Trib *Fraxineae*

Gen *Fraxinus* L., 1753

***Fraxinus excelsior* L.** – (n. 4435) – ref.: Sp. Pl. ed. 1 1057 (1753); - Hungary, Pest, Budapest, 9 – 5 Mart-May 1887, leg. Simkovics L.

### Superord. *Solananae* R. Dahlgren ex Reveal, 1992

Ord. *Convolvulales* Dumortier, 1829

Fam. *Convolvulaceae* A.L. de Jussieu, 1789

Subfam. *Convolvuloideae*

Trib *Convolvueae*

Gen *Calystegia* R. Brown, 1810, nom. cons.

***Calystegia sepium* (L.) R.Br.** – (n. 4450) – ref.; sin.: Prodr. Fl. Nov. Holl. ed. 1 483 (1810); sin.: *Convolvulus sepium* L.; *Volvulus sepium* (L.) Junger; - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza, August 1868, leg. Simkovics L.

***Calystegia silvatica* (Kit.) Griseb.** – (n. 4451) – ref.; Spicil. Fl. Rumel. 2: 74 (1844); sin.: *Convolvulus silvaticus* Kit.; *Calystegia sepium* (L.) R.Br. subsp. *silvatica* (Kit.) Batt.; *Convolvulus silvaticus* Kit.; *Volvulus sylvestris* (Waldst. & Kit. ex Willd.) Degen; *Convolvulus sylvestris* Waldst. & Kit. ex Willd.; *Calystegia sylvestris* (Waldst. & Kit. ex Willd.) Roem. & Schult.; *Calystegia sylvestris* (Waldst. & Kit. ex Willd.) Roem. & Schult. forma *sylvestris*; - Romania, Mehedinți, Trescovat, Șvinița, 26.06.1874, leg. Simkovics L.

Gen *Convolvulus* L., 1753

***Convolvulus arvensis* L.** – (n. 4452) – ref.: Sp. Pl. ed. 1 153 (1753); - Hungary, Csongrad, Eperjes, 1867, leg. Simkovics L.

Fam. *Cuscutaceae* (Dumortier) Dumortier, 1829

Gen *Cuscuta* L., 1753

***Cuscuta europaea* L.** – (n. 4453) – ref.; Sp. Pl. ed. 1 124 (1753), sin.: *Cuscuta laxiflora* Azn., non Benth.; *Cuscuta viciae* W.D.J.Koch, Schnizl. & Schönh.; *Cuscuta halophyta* Fr.; *Cuscuta major* DC.; - Hungary, Fejer, Sukoro, July 1870, leg. I.A. Tauscher.

***Cuscuta lupuliformis* Krock.** – (n. 4454) – ref.: Fl. Siles. 1: 261 (1787); - Romania, Caraș-Severin, Vârciorova, 28.07.1874, leg. Simkovics L.

***Cuscuta obtusiflora* Kunth** – (n. 4455) – ref *Nova Genera et Species Plantarum* (quarto ed.) 3: 122. 1818[1819].; sin.; *Cuscuta glandulosa* (Engelm.) Small.; *Cuscuta stuckertii* Yunck.; - Hungary, Pest, Pilis – Alberti, 08.08.1875, leg. Simkovics L.

Ord. *Boraginales* Dumortier, 1829

Fam. *Boraginaceae* Adans., 1763, nom. cons.

Subfam. *Heliotropioideae*

Gen *Heliotropium* L., 1753

***Heliotropium europaeum* L.** – (n. 4456) – ref.: Sp. Pl. ed. 1 130 (1753); sin.: *Heliotropium europaeum* L. subsp. *europaeum* var. *tenuiflorum* Guss.; *Heliotropium europaeum* L. subsp. *tenuiflorum* (Guss.) Nyman; *Heliotropium stevenianum* Andrz.; - Serbia, Voievodina, Glozsan (in historical Hungary, Bacs- Bodrog), August 1875, leg. A. Sztehlo. (Flora Hungarica).

***Heliotropium supinum* L.** – (n. 4457) – ref.: Sp. Pl. ed. 1 139 (1753); sin.: *Piptoclaina supine* (L.) G. Don. fil.; - Romania, Caraș-Severin, Baziaș, no date, leg. Dr. Feuhntinger.

Subfam. *Boraginoideae*

Trib *Boragineae*

Gen *Anchusa* L., 1753

***Anchusa arvensis* (L.) M.Bieb.** – (n. 4472) – ref.: Fl. Taur.-Cauc. 1: 123 (1808); sin.; *Lycopsis arvensis* L. subsp. *arvensis*; *Lycopsis arvensis* L.; -, Hungary, Heves, Hatvan, 1873, leg. Simkovics L.

***Anchusa azurea* Mill.** – (n. 4468) – ref.: Gard. Dict. ed. 8 no. 9 (1768); sin.: *Anchusa italica* Retz.; *Anchusa biceps* Vest; - Hungary, Uszogh ad Qunqueaclesias, 31.05.1873, leg. Simkovics L.

***Anchusa barrelieri* (All.) Vitman** – (n. 4470) – ref.: Summa Pl. 1: 388 (1789); sin.: *Buglossum barrelieri* All.; - Serbia, Voievodina, Vrsac (Varset, Versec, Verschetz), 18.05.1874, leg. Simkovics L.

***Anchusa barrelieri* (All.) Vitman** – (n. 4471) – ref.: Summa Pl. 1: 388 (1789); sin.: *Buglossum barrelieri* All.; - Hungary, Qunqueaclesias, 1873, leg. Simkovics L.

***Anchusa ochroleuca* M.Bieb.** – (n. 4469) – ref.: Fl. Taur.-Cauc. 1: 125, 421 (1808); sin.: *Anchusa pseudochroleuca* Roussine; - Hungary, Szabolcs-Szatmar-Bereg, between Tura and Bogdany, 30.07.1877, leg. Simkovics L.

***Anchusa officinalis* L.** – (n. 4467) – ref.: Sp. Pl. ed. 1 133 (1753); sin.: *Anchusa angustifolia* L.; *Anchusa procera* Besser ex Link; *Anchusa microcalyx* Vis.; *Anchusa osmanica* Velen.; *Anchusa ochroleuca* M.Bieb. subsp. *procera* (Besser

ex Link) Nyman; - Hungary, Pest, Budapest (on the kerb of the road), 12.06.1873, leg. Simkovics L.

***Anchusa undulata* L. subsp. *hybrida* (Ten.) Cout.** – (n. 4473) – ref.: Fl. Port. ed. 1 495 (1913); sin.: *Anchusa hybrida* Ten.; *Anchusa parnassica* Boiss. & Orph.; *Anchusa hybrida* Ten. subsp. *hybrida*; *Anchusa macrocalyx* Hausskn.; - Italy, Puglia (Apulia), circ. S. Severs, limy soil, 06.06.1875, leg. Porta et Rigo.

Gen *Pulmonaria* L., 1753

***Pulmonaria angustifolia* L.** – (n. 4491) - ref.: Sp. Pl. ed. 1 135 (1753); - Germania – Polonia, Schleisen ( historical region Silezia), Lonblovic (?!), 02.05.1872, leg. M. Firlé (Flora von Schleisen).

***Pulmonaria obscura* Dumort.** – (n. 4493) - ref.: Bull. Soc. Bot. Belg. 4: 341 (1865); sin.: *Pulmonaria officinalis* L. subsp. *obscura* (Dumort.) Murb.; - Romania, Cluj, Cluj-Napoca (Hoia and Făget), April 1878 (Hoia) and 13.07.1878 (Făget), leg. Simkovics L.

***Pulmonaria rubra* Schott** – (n. 4492) - ref.: Bot. Zeit. 9: 395 (1851); - Romania, Bihor, Padiş (Bihor mountains), 18.07.1879, leg. Simkovics L.

Gen *Symphytum* L., 1753

***Symphytum cordatum* Waldst. & Kit. ex Willd.** – (n. 4476) – ref.: Ges. Naturf. Freunde Berlin Neue Schr. 2: 121 (1799); - Romania, Bihor, Aleşd, endemic, 09. – 10.04.1876, leg. Simkovics L.

***Symphytum cordatum* Waldst. & Kit. ex Willd.** – (n. 4477) – ref.: Ges. Naturf. Freunde Berlin Neue Schr. 2: 121 (1799); - Romania, Bihor, Aleşd, on the bank of the river, endemic, 25.05.1878, leg. Simkovics L.

***Symphytum officinale* L.** – (n. 4474) – ref.: Sp. Pl. ed. 1 136 (1753); - Hungary, Pest, Budapest (Rakos), on the bank of the waters, 10.06.1874, leg. Simkovics L.

***Symphytum officinale* L. subsp. *uliginosum* (A.Kern.) Nyman** – (n. 4479) – ref.: Consp. 509 (1881); sin.: *Symphytum uliginosum* A.Kern.; - Hungary, Borsod-Abaúj-Zemplén, Kis Tokaji, endemic, 21.07.1877, leg. Simkovics L.

***Symphytum tuberosum* L.** – (n. 4475) – ref.: Sp. Pl. ed. 1 136 (1753); sin.: *Symphytum mediterraneum* W.D.J.Koch; - Romania, Bihor, Oradea, 05.05.1877, leg. Simkovics L.

***Symphytum tuberosum* L. subsp. *nodosum* (Schur) Soó** – (n. 4478) – ref.: Acta Geobot. Hung. 4: 192 (1941); sin.: *Symphytum angustifolium* Kern; *Symphytum tuberosum* L. subsp. *angustifolium* (A.Kern.) Nyman; *Symphytum leonhardtianum* Pugsley; *Symphytum nodosum* Schur; *Symphytum popovii* Dobroc.; - Hungary, Heves, Gyongyos, Saashegy, 10.05.1874, leg. Simkovics L.

Gen *Nonea* Medikus, 1789

***Nonea pulla* (L.) DC.** – (n. 4458) – ref.: Fl. Fr. ed. 3 3: 626 (1805); sin.: *Nonea taurica* (Ledeb.) Ledeb.; *Nonea rossica* Steven; - Hungary, Pest, Budapest, 15.04.1871 and Ujpest, 12.06.1873, leg. Simkovics L.

***Nonea ventricosa* (Sibth. & Sm.) Griseb.** – (n. 4459) – ref.: Spicil. Fl. Rumel. 2: 93 (1844); sin.: *Nonea alba* DC.; - France, Pyrenees orientales, Perpignan, 06.06.1873, leg. Debeaux.

Trib *Eritricheae*Gen *Asperugo* L., 1753

***Asperugo procumbens* L.** – (n. 4460) – ref.: Sp. Pl. ed. 1 138 (1753); - Romania, Bihor, Sânmartin (on the bank of the Petea rivulet), 07.06.1879, leg. Simkovics L.

Gen *Lappula* Gilib.

***Lappula squarrosa* (Retz.) Dumort. subsp. *squarrosa*** – (n. 4461) – ref.: Methodus 417. 1794.; sin.: *Echinosperrum lappula* (L.) Lehm.; *Lappula echinata* Fritsch; *Lappula consanguinea* (Fisch. & C.A.Mey.) Gürke; *Lappula myosotis* Moench; - Hungary, Pest, Pilis-Szantho, 12.08.1875, leg. Simkovics L.

Trib *Cynoglosseae*Gen *Omphalodes* p. Miller, 1754

***Omphalodes scorpioides* (Haenke) Schrank** – (n. 4462) – ref.: Denkschr. Akad. Wiss. München 3: 222 (1812); - Hungary, Pest, mt. Pilis, June 1872, leg. Simkovics L.

Gen *Cynoglossum* L., 1753

***Cynoglossum cheirifolium* L.** – (n. 4466) – ref.: Sp. Pl. ed. 1 134 (1753); sin.: *Cynoglossum arundanum* Coss.; *Cynoglossum heterocarpum* (Kunze) Willk.; - France, Provence-Alpes-Cote d'Azur, Avignon, ( uncultivated field), Aprilie 1878, leg. O. Ebof. (Herbier du Pensionnat des Freres , Avignon)

***Cynoglossum creticum* Mill.** – (n. 4464) – ref.: Gard. Dict. ed. 8 no. 3 (1768); sin.: *Cynoglossum pictum* Aiton; - Hungary, Quinqueclusias, 1873, leg. Simkovics L.

***Cynoglossum hungaricum* Simonk.** – (n. 4465) – ref.: Term. Füz. 2: 151 (1878); - Hungary, Pest, Budapesta (Sashagy), 20.06.1875, leg. Simkovics L.

***Cynoglossum officinale* L.** – (n. 4463) – ref.: Sp. Pl. ed. 1 134 (1753); - Hungary, Baranya, Harsany, 1873, leg. Simkovics L.

Trib *Lithospermeae*Gen *Cerinthe* L., 1753

***Cerinthe glabra* Mill.** – (n. 4485) - ref.: Gard. Dict. ed. 8 no. 2 (1768); sin.: *Cerinthe aspera* Roth; *C. maculata* L. pro parte; - France, Toulon, damp antropic field, April 1869, leg. Maty (?)

***Cerinth glabra* Mill. subsp. *glabra*** – (n. 4486) – ref.: accepted status, sin.: *Cerinth alpina* Kit.; *Cerinth glabra* Mill. subsp. *tatrica* Hadac.; - France, Jura, the alpine zona, 18.06.1872, leg. Edmond Mouillefarine.

***Cerinth minor* L.** – (n. 4484) – ref.: Sp. Pl. ed. 1 137 (1753); sin.: *Cerinth maculata* L. pro parte; *Cerinth longiflora* Viv. subsp. *longiflora*; *Cerinth longiflora* Viv.; - Hungary, Nograd, 14.06.1877, leg. Kunszt Iános et. Lasonczén.

#### Gen *Onosma* L., 1753

***Onosma arenaria* Waldst. & Kit.** – (n. 4480) – ref.: Pl. Rar. Hung. 3: 308 (1812); sin.: *Onosma subtinctoria* Klokov pro parte; *O. tanaitica* Klokov pro parte; *O. pseudotinctoria* Klokov pro parte; *O. borysthenica* Klokov pro parte; *O. lipskyi* Klokov pro parte; *O. graniticola* Klokov; - Romania, Cluj, Cluj-Napoca (Hoia forest), 12.07.1878, leg. Simkovichs L.

***Onosma echioides* L.** – (n. 4481) – ref.: Sp. Pl. ed. 2 196 (1762); sin.: *Onosma javorkae* Simonk.; *Onosma aucherana* auct., non DC. subsp. *javorkae* (Simonk.) Hayek; *Onosma taurica* Pall. ex Willd. subsp. *dalmatica* (Scheele) Braun-Blanq.; *Onosma stellulata* Waldst. & Kit. subsp. *montana* sensu Arcang.; *Onosma stellulata* auct. pro parte, non Waldst. & Kit.; *Onosma dalmatica* Scheele; - Hungary, Pest, Budapest (mt. Matias), endemic, June 1873, leg. Simkovichs L.

***Onosma setosa* Ledeb.** – (n. 4483) – ref.: Beitr. Naturk. (Dorpat) 1: 70 (1820); - Hungary, Pest, Budapest (Sashegy), June 1871, leg. Simkovichs L.

***Onosma stellulata* Waldst. & Kit.** – (n. 4482) – ref.: Pl. Rar. Hung. 2: 189 (1804); - Romania, Caraş-Severin, Baziaş, sunny hills, rocky places, endemic, 31.05 – 06. 1874, leg. Simkovichs L.

#### Gen *Echium* L., 1753

***Echium italicum* L.** – (n. 4489) – ref.: Sp. Pl. ed. 1 139 (1753); sin.: *Echium altissimum* Jacq *Echium italicum* L. subsp. *altissimum* (Jacq.) Arcang.; - Hungary, Pest, Budapest (Allatkerthagy), 23.06.1872, leg. Simkovichs L.

***Echium russicum* J.F.Gmel.** – (n. 4490) – ref.: Syst. Nat. ed. 13 2: 323 (1791); sin.: *Echium rubrum* Jacq., non Forssk.; - Hungary, Pest, Budapest, (Rakos), 29.05.1875, leg. Simkovichs L.

***Echium wierzbichii* Hab.** – (n. 4488) – ref.: Globally unique identifier – urn:lsid:ipni.org:names: 115954-1; - Romania, Caraş-Severin, Băile Herculane, 01. 08. 1874, leg. Simkovichs L.

#### Trib *Myosotideae*

#### Gen *Myosotis* L., 1753

***Myosotis arvensis* (L.) Hill** – (n. 4497) – ref.: Veg. Syst. 7: 55 (1764); sin.: *Myosotis intermedia* Link; - Romania, Bihor, Oradea (along the railway), 09.06.1877, leg. Simkovichs L.



***Myosotis discolor* Pers.** – (n. 4499) - ref.: Syst. Veg. ed. 15 190 (1797); sin.: *Myosotis versicolor* (Pers.) Sm.; *Myosotis versicolor* (Pers.) Sm. subsp. *versicolor*; *Myosotis collina* Hoffm. subsp. *collina*; *Myosotis collina* Hoffm.; - Romania, Caraș-Severin, Topleț (Toplecz), 26.05.1874, leg. Simkovics L.

***Myosotis laxa* Lehm.** – (n. 4495) - ref.: Pl. Asperif. 83 (1818); sin.: *Myosotis lingulata* Lehm.; - Hungary, Borsod-Abaúj-Zemplén, Kis Tokaj, 21.07.1877, leg. Simkovics L.

***Myosotis scorpioides* L.** – (n. 4494) - ref.: Sp. Pl. ed. 1 131 (1753); sin.: *Myosotis palustris* (L.) Hill; *Myosotis laxiflora* Rchb.; *Myosotis palustris* (L.) Hill subsp. *palustris*; *Myosotis praecox* Hülph.; *Myosotis scorpioides* L. subsp. *palustris* (L.) F.Herm.; - Romania, Bihor, Oradea, May – June 1877, leg. Simkovics L.

***Myosotis stricta* Link ex Roem. & Schult.** – (n. 4498) - ref.: Syst. Veg. ed. nov. (15) 4: 104 (1819); sin.: *Myosotis vestita* Velen.; *Myosotis micrantha* auct., non Pall. ex Lehm.; - Romania, Bihor, Oradea (the forest), 05.05.1877, leg. Simkovics L.

***Myosotis sylvatica* Hoffm.** – (n. 4496) - ref.: Deutschl. Fl. ed. 1 61 (1791); sin.: *Myosotis silvatica* auct.; *Myosotis myriantha* Domin; *Myosotis popovii* Dobroc.; - Romania, Bihor, Aleșd (Pădurea Neagră), April – May 1878, leg. Simkovics L.

#### Superord. *Lamianae* Takhtajan, 1967

Ord. *Lamiales* Bromhead, 1838

Fam *Lamiaceae* Lindley, 1836, nom. cons.

Gen *Glechoma* L., 1753

***Glechoma hirsuta* Waldst. & Kit.** – (n. 4543) - ref.: Pl. Rar. Hung. 2: 124 (1802-1803); sin.: *Glechoma nova* Winterl; *Glechoma hederacea* L. subsp. *hirsuta* (Waldst. & Kit.) F.Herm.; - Hungary, Heves, Gyongyos, Saashegy, 09.05.1874, leg. Simkovics L.

***Glechoma intermedia* Schrad.** – (n. 4544) – ref.: Globally unique identifier-urn:lsid:ipini.org:names: 447348; urn:lsid:ubio.org:namebank: 10685991; - Romania, Bihor, Oradea (Facanos), 29.04.1878, leg. Simkovics L.

Subfam. *Lamioideae*

Trib *Lamieae*

Gen *Phlomis* L., 1753

***Phlomis herba-venti* L.** - (n. 4626) – ref.: Sp. Pl. ed. 1 586 (1753); - France, Pyrenes-Orientales, Perpignan, 16.06.1876, leg. O. Debeaux.

Gen *Galeopsis* L., 1753

***Galeopsis angustifolia* Ehrh. ex Hoffm.** – (n. 4545) - ref.: Deutschl. Fl. ed. 2 2: 8 (1804); sin.: *Galeopsis orophila* Timb.-Lagr.; *Galeopsis ladanum* L. subsp. *ladanum* var. *angustifolia* (Ehrh. ex Hoffm.) Wallr.; *Galeopsis balatonensis* (Borbás) Degen;

*Galeopsis glabra* Des Étangs; *Galeopsis canescens* Schult.; *Galeopsis calcarea* Schönh. ex Steud.; *Ladanum angustifolium* (Ehrh. ex Hoffm.) Slavíková; *Galeopsis ladanum* L. subsp. *angustifolia* Gaudin; *Galeopsis ladanum* sensu H.J.Coste, non L.; - Romania, Cluj, Cluj-Napoca, 15.07.1878, leg. Simkovics L.

***Galeopsis ladanum* L.** – (n. 4546) - ref.: Sp. Pl. ed. 1 579 (1753); sin.: *Ladanum intermedium* (Vill.) Slavíková; *Galeopsis carpetana* Willk.; *Galeopsis flantica* Borbás; *Galeopsis sallentii* Cadevall & Pau; *Galeopsis intermedia* Vill.; *Galeopsis filholiana* Timb.-Lagr.; *Galeopsis parviflora* Lam.; - Romania, Bihor, Oradea, Săldăbagiu; 02.09.1877, leg. Simkovics L.

***Galeopsis speciosa* Mill.** – (n. 4547) - ref.: Gard. Dict. ed. 8 no. 3 (1768); sin.: *Galeopsis versicolor* Curtis; *Galeopsis tetrahit* L. subsp. *tetrahit* var. *grandiflora* Benth.; *Galeopsis speciosa* Mill. subsp. *sulphurea* (Jord.) Briq.; *Galeopsis walterana* Schtdl.; *Galeopsis sulfurea* Jord.; *Galeopsis tetrahit* L. subsp. *tetrahit* var. *cannabina* L.; - Romania, Bihor, Oradea (Facsanos), September – October 1876, leg. Simkovics L.

***Galeopsis pubescens* Besser** – (n. 4548) - ref.: Prim. Fl. Galic. 2: 27 (1809); sin.: *Galeopsis tetrahit* L. subsp. *tetrahit* var. *pubescens* (Besser) Benth.; - Romania, Arad, Radna, 21.07.1872, leg. Simkovics L.

#### Gen *Stachys* L., 1753

***Stachys sylvatica* L.** – (n. 4549) – ref.: Sp. Pl. ed. 1 580 (1753); - Romania, Bihor, Oradea, 09.06. – 26.07.1877, leg. Simkovics L.

***Stachys palustris* L.** – (n. 4550) - ref.: Sp. Pl. ed. 1 580 (1753); - Hungary, Nograd, Zelene (mt. Ipoly), 30.06.1877, leg. Kunset Ianos, Lasanocz.

***Stachys recta* L.** – (n. 4551) - ref.: Mantissa 82 (1767); sin.: *Stachys czernjajevii* Roussine; *Stachys fragilis* Vis.; *Stachys arenariiformis* Rouy; *Stachys transsilvanica* Schur; *Stachys acanthodonta* Klokov; *Stachys karstiana* (Borbás) Hand.-Mazz.; *Stachys krynkensis* Kotov; *Stachys stenophylla* Spreng.; *Stachys patula* Griseb. var. *patula*; *Stachys patula* Griseb.; *Stachys nitens* Janka; *Stachys goulimyi* Rech.f.; - Hungary, Fejer, Adony (on the field), 21.06.1876, leg. I.A. Tauscher.

***Stachys ramosissima* Roch.** – (n. 4552) – ref.: Pl. Banat. Rar. 26, nomen, et Bot. Reise Bannat, 82 (Globally unique identifier-urn:isid:lpni.org:names: 459898-1); sin.: *Stachys ramosissima* Montbr. & Auch. ex Benth.; - Romania, Bihor, Oradea, 09.06.1877, leg. Simkovics L.

#### Trib *Marrubieae*

#### Gen *Marrubium* L., 1753

***Marrubium x paniculatum* Desr.** – (n. 4554) - ref.: Encycl. Méth. Bot. 3: 716 (1792); sin.: *Marrubium remotum* Kit.; - Hungary, Hajdu-Bihar, Bakonszeg, 04.08.1877, leg. Simkovics L.

***Marrubium peregrinum* L.** – (n. 4555) – ref.: Sp. Pl. ed. 1 582 (1753); sin.: *Marrubium creticum* Mill.; *Marrubium cive* Klokov; - Hungary, Hajdu-Bihar, Bihar, 02.07.1879, leg. Simkovics L.

***Marrubium vulgare* L.** – (n. 4553) – ref.: Sp. Pl. ed. 1 583 (1753); - Hungary, Pest, Veresvar, 06.06.1875, leg. Simkovics L.

Subfam. *Nepetoideae*

Trib *Mentheae*

Gen *Prunella* L., 1753

***Prunella intermedia* Rchb.** – (n. 4557) – ref.: Bull. Jard. Bot. Princ. URSS, XXVI, 527 (1927), hybr.; sin.: *Prunella x intermedia* Link (*Species Plantarum* 2: 600-601. 1753); *Prunella intermedia* Bratera; *Prunella intermedia* Stankov; *Prunella x hybrida* Knaf; - Hungary, Pest, Budapest (Tiliar hills), 06.06.1872, leg. Simkovics L.

***Prunella vulgaris* L.** – (n. 4556) – ref.: Sp. Pl. ed. 1 600 (1753); sin.: *Prunella caroliniana* P. Mill.; - Hungary, Pest, Budapest (Rakos), 08.07.1874, leg. Simkovics L.

Gen *Mentha* L., 1753

***Mentha arvensis* L.** – (n. 4524) – ref.: Sp. Pl. ed. 1 577 (1753); sin.: *Mentha canadensis* L.; *Mentha palustris* auct., non Mill.; *Mentha agrestis* Sole; - Romania, Bihor, Oradea, 20.08.1877, leg. Simkovics L.

***Mentha aquatica* L.** – (n. 4522) – ref.: Sp. Pl. ed. 1 576 (1753); sin.: *Mentha litoralis* (Hartm.) Neuman; *M. hirsuta* Huds.; *M. braunii* Oborny.; - Hungary, Pest, Csepel isld, Ujfalú, 03.08.1869, leg. I.A. Tauscher.

***Mentha longifolia* (L.) Huds.** – (n. 4520) – ref.: Fl. Angl. ed. 1 221 (1762); sin.: *Mentha sylvestris* L.; *M. incana* Willd.; *M. sylvestris* L.; *M. mollissima* Borkh.; - Romania, Bihor, Aleșd, 05.10.1878, leg. Simkovics L.

***Mentha piperita* L.** – (n. 4521) – ref.: Sp. Pl. ed. 1 576 (1753); sin.: *Mentha aquatica* L. var. *crispa* auct.; *M. nigricans* Mill.; *M. crispa* auct.; *M. langii* sensu Briq., ? an Geiger; *M. dumetorum*; *Mentha x piperata* L.; - Germany, Uckermark, Branderburg, Prezlau (and in Bavaria, Graben), septembrie 1874, leg. Grantrov.

***Mentha pulegium* L.** – (n. 4525) – ref.: Sp. Pl. ed. 1 577 (1753); sin.: *Pulegium vulgare* Mill.; *Pulegium parviflorum* (Req.) Samp. pro parte; - Serbia, Voievodina (in the historical Hungary, Bacs Bodrog), Glozsan, August 1875, leg. Simkovics L.

***Mentha x verticillata* L.** – (n. 4523) – ref.: Syst. Nat. ed. 10 2: 1099 (1759); sin.: *Mentha sativa* L.; *M. sativa* L. var. *sativa*; *Mentha verticillata* L.; *Mentha x verticillata* var. *peduncularis* (Boreau) Rouy (pro nm.) - Romania, Bihor, Oradea, August 1877, leg. Simkovics L.

Gen *Lycopus* L., 1753

***Lycopus europaeus* L.** – (n. 4526) – ref.: Sp. Pl. ed. 1 21 (1753); sin.: *Lycopus mollis* A. Kern.; *Lycopus menthifolia* Mabilie; - Romania, Bihor, Oradea, 25.08.1877, leg. Simkovics L.

***Lycopus exaltatus* L.f.** – (n. 4527) – ref.: Suppl. 87 (1781); - Hungary, Pest, Csepel Island, 17.08.1875, leg. Simkovics L.

Gen *Origanum* L., 1753

***Origanum vulgare* L.** – (n. 4534) – ref.: Sp. Pl. ed. 1 590 (1753); sin.: *Origanum vulgare* L. subsp. *viride* (Boiss.) Hayek; *O. puberulum* (Beck) Klokov; *O. virens* Hoffmanns. & Link subsp. *siculum* Nyman; *O. viride* (Boiss.) Halácsy; *O. dilatatum* Klokov; - Romania, Mehedinți, Băile Herculane, Domogled, 30.07.1874, leg. Simkovics L.

Gen *Thymus* L., 1753

***Thymus pannonicus* All.** – (n. 4535) – ref.: Auct. Syn. Stirp. Horti Taur. 6 (1773); sin.: *Thymus lanuginosus* sensu Fritsch, non Mill.; *T. collinus* sensu Fritsch, non M.Bieb.; *T. auctus* (Lyka) Borza; *T. platyphyllus* Klokov; *T. stepposus* Klokov & Roussine; *T. podolicus* Klokov & Roussine; *T. serpyllum* L. subsp. *brachyphyllus* Opiz ex Lyka; *T. brachyphyllus* Opiz; *T. marschallianus* Willd.; *T. herbaceus* Klokov pro parte; *T. serpyllum* L. subsp. *serpyllum* var. *marschallianus* sensu Boiss. pro parte; *T. serpyllum* L. subsp. *marschallianus* (Willd.) Nyman; *T. serpyllum* L. subsp. *acutus* Lyka; *T. lanuginosus* sensu Fritsch, non Mill.; *T. kosteleckyanus* Opiz; *T. euxinus* Ronniger; *T. serpyllum* L. subsp. *lanuginosus* auct. pro parte; *T. latifolius* (Besser) Andr.; *T. dzevanovskyi* Klokov & Roussine; - Romania, Bihor, Oradea, 07.06.1879, leg. Simkovics L.

***Thymus pulegioides* L.** – (n. 4536) - ref.: Sp. Pl. ed. 1 592 (1753); sin.: *Thymus pulegioides* L. subsp. *effusus* (Host) Ronniger; *T. alpestris* auct., non Tausch ex A.Kern.; *T. serpyllum* L. subsp. *effusus* (Host) Lyka; *T. ucrainicus* Klokov & Roussine; *T. serpyllum* L. subsp. *carniolicus* (Borbás) Lyka; *T. serpyllum* L. subsp. *alpestris* Briq. pro parte; *T. carniolicus* Borbás; *T. chamaedrys* Fr.; *T. ovatus* Mill.; *T. serpyllum* L. subsp. *chamaedrys* (Fr.) Vollm.; *Thymus glaber* Mill.; *T. serpyllum* L. subsp. *montanus* (Waldst. & Kit.) Lyka; *T. froelichianus* Opiz; *T. montanus* Waldst. & Kit., non Crantz; *T. serpyllum* L. subsp. *montanus* Arcang.; *T. enervius* Klokov; *T. serpyllum* L. subsp. *ovatus* (Mill.) Rouy; *T. serpyllum* L. subsp. *parviflorus* (Opiz ex Heinr.Braun) Lyka; *T. effusus* Host; *T. serpyllum* L. subsp. *subcitratus* (Schreb.) Briq.; *T. serpyllum* L. subsp. *serpyllum* var. *latifolius* Boiss.; *T. chamaedrys* Fr. subsp. *chamaedrys*; - Romania, Cluj, Turda and Bihor, Vadul Crișului, 21.07.1878, leg. Simkovics L.

***Thymus montanus* Waldst. & Kit., non Crantz** – (n. 4537) - ref.: [1801-1802, Pl. Rar. Hung., 1 : 72, pl. 71], non Crantz [1769] (s.r.) ° *T. pulegioides* subsp. *montanus* 2 ; *Thymus pulegioides* L. [Sp. Pl. ed. 1 592 (1753)] ; *Thymus clandestinus* Schur [ *Species Plantarum* 2: 590-592. 1753.]; sin.: *Thymus enervius* Klokov; *Thymus pulegioides* L. subsp. *effusus* (Host) Ronniger; *Thymus pulegioides* L. subsp. *montanus* (Arcang.) Ronn.; *Thymus serpyllum* L. subsp. *montanus* Arcang.; *Thymus clandestinus* Schur ; - Romania, Arad, Săvârșin, 22.07.1872, leg. Simkovics L.

Gen *Melissa* L., 1753

***Melissa patavina* Benth.** – (n. 4538) – ref.: Labiat. Gen. Spec. 389; ( Globally unique indentifier-urn:lsid:ipni.org:names:450088-1); - a synonym mentioned by the author: *Calamintha patavina* Pers.; - Romania, Cluj, Turda, 21.07.1878, leg. Simkovics L.

Gen *Acinos* P. Miller, 1754

***Acinos arvensis* (Lam.) Dandy** – (n. 4539) – ref.: J. Ecol. 33:326. 1946; sin.: *Acinos arvensis* (Lam.) Dandy (Jour. Ecol. 33: 326 (1946));; *Calamintha acinos* (L.) Clairv.; *Calamintha arvensis* Lam.; *Clinopodium acinos* (L.) Kuntze; *Acinos thymoides* Moench; *Satureja acinos* (L.) Scheele; - Romania, Cluj, Turda, 20.07.1878, leg. Simkovics L.

Trib *Salvieae*Gen *Salvia* L., 1753

***Salvia glutinosa* L.** – (n. 4528) – ref.: Sp. Pl. ed. 1 26 (1753); - Romania, Arad, Săvârșin, the forest, 22.07.1872, leg. Simkovics L.

***Salvia kanitziana* Simk.** – (n. 4531) – sin.: *Salvia nutans* x *superfila* Derink.; - Romania, Cluj, Cluj-Napoca, 01.06.1878, leg. Simkovics L.

***Salvia transsylvanica* (Schur ex Griseb.) Schur** – (n. 4529) – ref.: Verh. Mitt. Siebenb. Ver. Naturw. 4(App.): 57 (1853); sin.; *Salvia baumgartenii* Heuff.; - Romania, Cluj, Cluj-Napoca, endemic, 15. – 18.07.1878, leg. Simkovics L.

***Salvia silvestris* L.** – (n. 4530) – ref.: Sp. Pl. ed. 1 24 (1753); sin.: *Salvia* x *sylvestris* L.; - Romania, Mehedinți, Șvinița, 27.06.1874, leg. Simkovics L.

Trib *Lavanduleae*Gen *Lavandula* L., 1753

***Lavandula angustifolia* Mill.** – (n. 4532) – ref.: Gard. Dict. ed. 8 no. 2 (1768); *Species Plantarum* 2: 572-573. 1753.; sin.: *Lavandula spica* L., nom. ambig.; *Lavandula vera* DC.; - Hungary, Pest, Budapest, 1870, leg. Simkovics L.

***Lavandula angustifolia* Mill. subsp. *angustifolia*** – (n. 4533) – ref.: Gard. Dict. ed. 8 no. 2 (1768); sin.: *Lavandula vera* DC.; *L. officinalis* Chaix; - France, 1874, leg. Debeaux.

Trib *Nepeteae*Gen *Nepeta* L., 1753

***Nepeta nuda* L. subsp. *nuda*** – (n. 4540) - ref.: *Species Plantarum* 2: 570-571. 1753.; sin.: *Nepeta pannonica* L.; *Nepeta nuda* L. subsp. *pannonica* (L.) Gams; - Hungary, Bosod-Abauj-Zemplen, Erdobeny, 24. 07.1877, leg. Simkovics L.

***Nepeta nuda* L.** – (n. 4541) - ref.: Sp. Pl. ed. 1 570 (1753); sin.: Sp. Pl. ed. 1 570 (1753); - Hungary, Szabols-Szatmar-Bereg, Nyiregyhaza, August 1871, leg. Simkovics L.

***Nepeta ucranica* L.** – (n. 4542) - ref.: Sp. Pl. ed. 1 570 (1753); - Romania, Cluj, Cluj-Napoca, 31.05.1878, leg. Simkovics L.

Subfam. *Ajugoideae*

Trib *Ajugeae*

Gen *Ajuga* L., 1753

***Ajuga genevensis* L.** – (n. 4559) - ref.: Sp. Pl. ed. 1 561 (1753); - Romania, Bihor, Oradea , 20.05.1877, leg. Simkovics L.

***Ajuga reptans* L.** – (n. 4558) - ref. : Sp. Pl. ed. 1 561 (1753); - Romania, Bihor, Oradea (the Saldabagiu forest), 05.05.1877, leg. Simkovics L.

Trib *Teuccrieae*

Gen *Teucrium* L., 1753

***Teucrium botrys* L.** – (n. 4560) - ref.: Sp. Pl. ed. 1 562 (1753); - Hungary, Baranya, Zengohegyes, 31.07.1873, leg. Simkovics.

***Teucrium montanum* L.** – (n. 4562) – ref.: Sp. Pl. ed. 1 565 (1753); sin.: *Teucrium pannonicum* A.Kern.; *T. praemontanum* Klokov; *T. helianthemoides* Adamovic; *T. jailae* Juz.; - Romania, Mehedinți (Banat), Porțile de Fier (Vaskapunul), June-July 1874, leg. Simkovics L.

***Teucrium scordium* L.** – (n. 4561) - ref.: Sp. Pl. ed. 1 565 (1753); - Serbia, Voievodina, Glozsan , August 1875, leg. Sztechlo.

Ord. *Callitriche* L., 1753

Fam. *Callitrichaceae* link, 1821, nom cons.

Gen *Callitriche* L., 1753

***Callitriche hamulata* Kütz. ex W.D.J.Koch** – (n. 4172) – ref.: Syn. Fl. Germ. ed. 1 246 (1835); sin.: *Callitriche intermedia* Hoffm. subsp. *intermedia*; *C. intermedia* Hoffm.; *C. intermedia* Hoffm. subsp. *hamulata* (Kütz. ex W.D.J.Koch) A.R.Clapham; *C. palustris* L. subsp. *hamulata* (Kütz. ex W.D.J.Koch) Schinz; - Romania, Bihor, Oradea (at the outskirts), April – June 1877, leg. Simkovics L

Ord. *Scrophulariales* Lindley, 1833

Fam. *Plantaginaveae* Durande, 1782, nom. cons.

Gen *Plantago* L., 1753

***Plantago arenaria* Waldst. & Kit.** – (n. 4578) – ref.: Pl. Rar. Hung. 1: 51 (1801); sin.: *Plantago stricta* Schousb.; *P. indica* L., nom. illegit.; *P. latifolia* E.D.Wissjul.,



non Salisb.; *P. psyllium* L., nom. ambig.; *P. ramosa* Asch.; - Ungaria, Szabolcs-Szatmar-Bereg, Nyiregyhaza, 26.08.1872, leg. Simkovics L.

***Plantago cornuti* Gouan** – (n. 4574) – ref.: Obs. Bot. 6 (1773); sin.: *Plantago asiatica* auct. eur. pro parte, non L.; - Romania, Cluj, Cluj-Napoca, 31.05 – 18.06. 1878, leg. Simkovics L.

***Plantago lanceolata* L.** – (n. 4576) – ref.: Sp. Pl. ed. 1 113 (1753) sin.: *Plantago glabriflora* Sakalo; *P. lanuginosa* Bastard; - Hungary, Quinsqueeclesiae, iunie 1873, leg. Simkovics L.

***Plantago major* L.** – (n. 4573) – ref.: Sp. Pl. ed. 1 112 (1753); sin.: *Plantago asiatica* auct. eur. pro parte, non L.; - Hungary, Pest, Budapest, July 1875, leg. Simkovics L.

***Plantago maritima* L.** – (n. 4577) – ref.: Sp. Pl. ed. 1 114 (1753); sin.: *Plantago salsa* Pall.; *P. schrenkii* K.Koch; *Plantago krascheninnikowii* Ye.V.Serg.; *P. juncoides* Lam.; - Hungary, Pest, Budapest (Rakos), August 1875, leg. Simkovics L.

***Plantago media* L.** – (n. 4575) – ref.: Sp. Pl. ed. 1 113 (1753); sin.: *Plantago brutia* Ten.; - Serbia, Glozsan (in historical Hungary, com. Bacs Bodrog), August 1875, leg. A. Sztehlo. (Flora Hungarica)

Fam. *Scrophulariaceae*  
Subfam. *Scrophularioideae*  
Trib *Antirrhineae*  
Gen *Linaria* P. Miller

***Linaria angustissima* (Loisel.) Borbás** – (n. 4505) – ref.: Balaton Növényföldr. 376 (1900); sin.: *Linaria italica* Trevir.; *Linaria maeotica* Klokov; *Linaria ruscinonensis* Rouy; *Linaria pallidiflora* Valdés; *Linaria italica* Trevir. subsp. *italica*; *Linaria vulgaris* Mill. subsp. *ruscinonensis* (Rouy) P.Fourn.; *Linaria vulgaris* Mill. subsp. *italica* (Trevir.) Arcang.; - Romania, Cluj, Turda, (sunny hills), 20 – 21.07.1878, leg. Simkovics L.

***Linaria biebersteinii* Besser** – (n. 4506) – ref.: Enum. Pl. Volhyn. 25 (1822); - Romania, cluj, Cluj-Napoca (hayfield), endemic, 15.07.1878, leg. Simkovics L.

Trib *Scrophularieae*  
Gen *Scrophularia* L., 1753

***Scrophularia heterophylla* Willd. subsp. *laciniata* (Waldst. & Kit.) Maire & Petitm.** – (n. 4503) – ref.: Bull. Soc. Sci. Nancy ser. 3 8: 178 (1907); sin.: *Scrophularia laciniata* Waldst. & Kit.; *Scrophularia variegata* auct., non M.Bieb.; *Scrophularia exilis* Popl.; - Romania, Bihor, Vadul Crişului (the strits Vadul Crişului); May – June 1878, leg. Simkovics L.

Trib *Verbasceae*  
Gen *Verbascum* L., 1753

***Verbascum lychnitis* L.** – (n.4500) – ref.: Sp. Pl. ed. 1 177 (1753); - Ungaria, Pest, Szt. Endre island, (forest), 25.07.1875, leg. Simkovics L.

***Verbascum lanatum* Schrad.** – (n.4501) – ref.: Monogr. Verbasci 2: 28 (1823); sin.: *Verbascum hinkei* Friv.; *V. nigrum* L. subsp. *hinkei* (Friv.) Nyman; *V. nigrum* L. subsp. *lanatum* (Schrad.) Arcang.; *V. wierzbickii* Heuff.; *V. thyrsiodeum* Host; *V. alpinum* Turra pro parte; - Romania, Mt. Tarcului (Cracul lupului – the Wolf's leg), endemic, 05.08.1874, leg. Simkovics L.

***Verbascum phoeniceum* L.** – (n. 4502) – ref.: Sp. Pl. ed. 1 178 (1753); sin.: *Celsia rechingeri* Murb.; - Romania, Bihor, Oradea (Facsanos), 18.05.1878, leg. Simkovics L.

Subfam. *Orobanchodeae*  
Gen *Orobanche* L., 1753

***Orobanche alba* Stephan ex Willd.** – (n. 4518) – ref.: Sp. Pl. 3: 350 (1800); sin.: *Orobanche epithymum* DC.; *O. alexandri* Tineo; *O. hellebori* Miégev.; *O. rubra* Sm.; *O. punctata* F.W.Schultz; - Hungary, Pest, Csepel island, Tokol, June 1871, leg. I.A. Tauscher.

***Orobanche caryophyllacea* Sm.** – (n. 4516) – ref.: Trans. Linn. Soc. London 4: 169 (1798); - Hungary, Fejer, Nadap, May 1871, leg. I.A. Tauscher

***Orobanche gracilis* Sm.** – (n. 4517) – ref.: Trans. Linn. Soc. London 4: 172 (1798); sin.: *O. grandiuscula* Moris; *O. spruneri* F.W.Schultz; *O. cruenta* Bertol.; - Hungary, Fejer, Ercsi, July 1870, leg. I.A. Tauscher.

***Orobanche lutea* Baumg.** – (n. 4515) – ref.: Enum. Stirp. Transs. 2: 215 (1816); sin.: *Orobanche rubens* Wallr.; *O. concreta* (Beck) Rouy; *O. fragrantissima* Bertol.; *O. hians* Steven; - Romania, Bihor, Oradea (Șomleu hills), 07.07.1879, leg. Simkovics L.

***Orobanche purpurea* Jacq.** – (n. 4514) – ref.: Enum. Stirp. Vindob. 108 & 252 (1762); sin.: *Kopsia caerulea* (Vill.) Dumort.; *Phelypaea caerulea* (Vill.) C.A.Mey.; *Orobanche laevis* L. pro parte; *Kopsia purpurea* (Jacq.) Bég.; *Phelypaea purpurea* (Jacq.) Asch.; - Romania, Bihor, Oradea, 28.06.1877, leg. Simkovics L.

Subfam. *Rhinanthoideae*  
Trib *Digitaleae*  
Gen *Digitalis* L., 1753

***Digitalis lanata* Ehrh.** – (n. 4504) – ref.: Beitr. Naturk. 7: 152 (1792); sin.: *Digitalis lamarckii* auct. balcan., non Ivanina; *Digitalis orientalis* auct. balcan., non Lam.; - Hungary, Negyer, Bekas, endemic, 12.06.1873, Leg. Simkovics L.

Trib *Veroniceae*  
Gen *Veronica* L., 1753

***Veronica austriaca* L. subsp. *austriaca*** – (n. 4507) – ref.: Syst. nat. ed. 10, 2:849. 1759; sin.: *Veronica biharensis* A. Kern.; *Veronica jacquinii* Baumg (Enum. stirp. Transsilv. 1:26. 1816); *Veronica jacquinii* Baumg. var. *bihariensis* (Kern) Simk.; *Veronica austriaca* L. subsp. *jacquinii* (Baumg.) Maly; *Veronica austriaca* L. subsp. *orbiculata* (A.Kern.) K.Maly; *Veronica teucrium* L. subsp. *austriaca* (L.) Arcang.; *Veronica multifida* auct. (p. p.) non L.; *Veronica sclerophylla* Dubovik; - Romania, Bihor, Beiuș, Pietrani, 15.07.1879, leg, Simkovics L.

***Veronica bachofenii* Heuff.** – (n. 4508) – ref.: Flora (Regensb.) 18: 253 (1835); sin.: *Veronica spuria* auct., non L. subsp. *bachofenii* (Heuff.) Stoj. & Stef.; *Veronica grandis* auct., vix Fisch.; - Romania, Bihor, Pietroasa ( Bulz Valley – Galbena), 18.07.1879, leg. Simkovics L.

***Veronica polita* Fr.** – (n. 4510) – ref.: Nov. Fl. Suec. ed. 1 63 (1819); sin.: *Veronica didyma* auct., vix Ten.; - Hungary, Pest, Budapest, May – June 1872, leg. Simkovics L.

***Veronica spicata* L.** – (n. 4509) – ref.: Sp. Pl. ed. 1 10 (1753); sin.: *Pseudolysimachium spicatum* (L.) Opiz; *Pseudolysimachium spicatum* (L.) Opiz subsp. *spicatum*; - Hungary, Pest, Budapest, July 1875, leg. Simkovics L.

Trib *Rhinantheae*  
Gen *Pedicularis* L., 1753

***Pedicularis comosa* L. subsp. *campestris* (Griseb. & Schenk) Soó** – (n. 4511) – ref.: Szék. Fl. Előmunk. 113 (1940); sin.: *Pedicularis campestris* Griseb. & Schenk; *Pedicularis campestris* Griseb. & Schenk subsp. *campestris*; - Romania, Cluj, Cluj-Napoca, 01.06.1878, leg. Simkovics L.

Gen *Rhinanthus* L., 1753

***Rhinanthus alectorolophus* (Scop.) Pollich** – (n. 4512) – ref.: Hist. Pl. Palat. 2: 177 (1777); sin.: *Alectorolophus patulus* Sterneck; *Alectorolophus ellipticus* (Hauskn.) Sterneck; *Alectorolophus modestus* (Chabert) Sterneck; *Alectorolophus buccalis* Wallr.; *Alectorolophus hirsutus* (Lam.) All.; *Alectorolophus kernerii* Sterneck; *Alectorolophus facchinii* (Chabert) Sterneck; *Rhinanthus patulus* (Sterneck) Schinz & Thell.; *Rhinanthus major* L., nom. ambig. subsp. *major* var. *major*; *Rhinanthus alectorolophus* (Scop.) Pollich var. *modestus* Chabert; *Rhinanthus ellipticus* (Hauskn.) Schinz & Thell.; *Rhinanthus buccalis* Wallr.; *Rhinanthus major* L., nom. ambig.; - Romania, Bihor, Oradea, endemic, 28.05.1877; leg. Simkovics L.

Gen *Euphrasia* L., 1753

***Euphrasia officinalis* L., nom. ambig.** – (n. 4513) – ref.: Bot. Jour. Linn. Soc. 63: 201 (1970); - Romania, Cluj, Cluj-Napoca (Mill Valley), 16 – 23.06.1878, leg. Simkovics L.

Gen *Lathraea* L., 1753

***Lathraea squamaria* L.** – (n. 4519) – ref.: Sp. Pl. ed. 1 606 (1753); - Hungary, Baranya, Harsany, si in Monte Masek (*Querqueeclesias* vs. *Bodoshus*), 04.-06.04.1873, leg. Simkovics L.

Fam. *Globulariaceae* A.P. de Candolle, 1805

Gen *Globularia* L., 1753

***Globularia alypum* L.** – (n. 4569) – ref.: Sp. Pl. ed. 1 95 (1753) – France, Provence-Alpes-Cote d’Azur, Toulon, 07.07.1877, leg. Huet.

***Globularia punctata* Lapeyr.** – (n. 4568) – ref.: Hist. Abr. Pyr. 57 (1813); sin.: *Globularia willkommii* Nyman; *Globularia elongata* Hegetschw.; *Globularia aphyllanthes* auct., non Crantz; *Globularia tenella* Lange; - Hungary, Pest, Budapest (Sashagy), May – June 1871, leg. Simkovics L.

Fam. *Lentibulariaceae* Richard, in Poiteau & Turpin, 1808, nom. cons.

Grn *Utricularia* L., 1753

***Utricularia breinii* Heer** - (4563) – ref.: Verz. Phan. Gew. Zürich 142 (1839); - Hungary, (Aquinqi pane molum pucleveris rara), in still waters, 23 – 27.07.1875, leg. Simkovics L.

Subclas. ***Cornidae* Frohne & Jensen ex Reveal, 1994**

Superord. ***Aralianae* Takhtajan, 1967**

Ord. *Araliales* Bumett, 1835

Fam. *Apiaceae* Lindley, 1836

Subfam. *Apioidae*

Trib *Apiae*

Gen *Oenanthe* L., 1753

***Oenanthe banatica* Heuff.** – (n. 4194) – ref.: Flora (Regensb.) 37: 291 (1854); - Romania, Bihor, Oradea (the outskirts), May – June 1878, leg. Simkovics L.

Gen *Seseli* L., 1753

***Seseli gracile* Waldst. & Kit.** - (n. 4195) – ref.: Pl. Rar. Hung. 2: t. 117 (1802); - Romania, Caraş-Severin, Băile Herculane, Domugled (on mountain pastures), 30.07.1874, leg. Simkovics L.

***Seseli peucedanoides* (M.Bieb.) Koso-Pol.** – (n. 4196) –ref.: Bull. Soc. Nat. Moscou nov. ser. 29: 184 (1916); sin.: *Silaum peucedanoides* (M.Bieb.) Nyár.; *Seseli elegans* Schischk.; *Foeniculum peucedanoides* (M.Bieb.) B.D.Jacks.; *Silaus peucedanoides* (M.Bieb.) Boiss.; *Gasparrinia peucedanoides* (M.Bieb.) Bertol.; *Silaus virescens* (Spreng.) Boiss.; - Romania, Cluj, Cluj-Napoca (the Hoia forest, pastures of clearings), 02.07.1878, leg. Simkovics L.

Trib *Caucalideae*  
Gen *Caucaulis* L., 1753

***Caucalis platycarpus* L.** – (n. 4199) – ref.: Sp. Pl. ed. 1 241 (1753); sin.: *Caucalis daucoides* L. (1767), non (1753); *Caucalis lappula* Grande; - Hungary, Pest, Budapest, 21.06.1874, leg. Simkovics L.

Trib *Peucedaneae*  
Gen *Ferulago* W.D.J. Koch , 1824

***Ferulago sylvatica* (Besser) Rchb.** – (n. 4197) - ref.: Pl. Crit. 4: 53 (1826); sin.: *Ferula sylvatica* Besser; *F. barrellieri* Ten.; *F. confusa* Velen.; *F. meoides* auct. eur., non (L.) Boiss.; *F. monticola* Boiss. & Heldr.; - Romania, Transilvania (undescifrabile location), 01.07.1873, leg. J. Barth.

Gen *Peucedanum* L., 1753

***Peucedanum officinale* L.** – (n. 4198) – ref.: Sp. Pl. ed. 1 245 (1753); - Romania, Bihor, Oradea (in the vineyards), endemic, 30.09. – 08.10.1876, leg. Simkovics L.

Trib *Scandiceae*  
Gen *Anthriscus* Persoon, 1805, nom.cons.

***Anthriscus nemorosa* (M.Bieb.) Spreng.** - (n. 4200) – ref.: Pl. Umb. Prodr. 27 (1813); - Serbia, Voievodina, Vrsac (Varset, Versec), in mountain forest, 18.05.1874, leg. Simkovics L.

***Anthriscus cerefolium* (L.) Hoffm.** - (n. 4201) – ref.: Gen. Umb. ed. 1 41 (1814); sin.: *Anthriscus trichosperma* (Schur) Spreng.; - Switzerland, Valais, Valere (near Sion), May 1877, leg. F.O. Wolf.

Gen *Physocaulis*

***Physocaulis nodosus* (L.) W.D.J.Koch** - (n. 4203) – ref.: Feddes Repert. 79: 65 (1968); sin.: *Physocaulis nodosus* (L.) W.D.J.Koch; *Chaerophyllum nodosum* (L.) Crantz; *Myrrhoides nodosa* (L.) Cannon; - Romania, Mehedinți, Șvinița (at the edge of the vineyards), 25.06.1874, leg. Simkovics L.

Trib *Coriandreae*  
Gen *Bifora* G.F. Hoffmann, 1816, nom. cons.

***Bifora radians* M.Bieb.** - (n. 4202) – ref.: Fl. Taur.-Cauc. 3: 233 (1819); - Romania, Cluj, Cluj-Napoca (Fanatale Clujului), 15 June – July 1878, leg. Simkovics L.

**Superord. *Cornanae* Thome ex Reveal, 1996**  
Ord. *Cornales* Dumortier, 1829  
Fam. *Cornaceae* (Dum. 1827) Dumortier, 1829

Gen *Cornus* L., 1753

***Cornus mas* L.** – (n. 4204) – ref.: Sp. Pl. ed. 1 117 (1753); - Hungary, Pest, Budapest (Svabhegy), 1871, leg. Simkovics L.

***Cornus sanguinea* L.** - (n. 4205) – ref.: Sp. Pl. ed. 1 117 (1753); - Hungary, Pest, Budapest (1 ex. stg.) si Csongrad, Eperjes (1 ex. dr.), April. – October 1873, leg. Simkovics L.

**Superord. *Dipsacanae* (Dumortier, 1829) Takhtajan, 1997**

Ord. *Adoxales* Nakai, 1949

Fam. *Sambucaceae* Batsch ex Borckhausen, 1797

Gen *Sambucus* L., 1753

***Sambucus nigra* L.** – (n. 4208) – ref.: Sp. Pl. ed. 1 269 (1753); - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Sambucus racemosa* L.** - (n. 4209) – ref.: Sp. Pl. ed. 1 270 (1753); - Croația, Istria, Monte Maggiore, 19.05.1875, leg. Staub.

Ord. *Viburnales* Dumortier, 1829

Fam. *Viburnaceae* Rafinesque, 1820

Gen *Viburnum* L., 1753

***Viburnum opulus* L.** - (n. 4210) – ref.: Sp. Pl. ed. 1 268 (1753); - Romania, Bihor, Sânmartin, Băile Felix, 24.05.1879, leg. Simkovics L.

Ord. *Dipsacales* Dumortier, 1829

Fam. *Caprifoliaceae* A.L. de Jussieu, 1789

Trib *Lonicereae*

Gen *Lonicera* L., 1753

***Lonicera caprifolium* L.** - (n. 4211) – ref.: Sp. Pl. ed. 1 173 (1753); sin.: *Lonicera pallida* Host; - Hungary, Baranya, Villanyi, 13.07.1873, leg. Simkovics L.

***Lonicera etrusca* Santi** - (n. 4215) – ref.: Viaggio Montam. 113 (1795); sin.: *Lonicera dimorpha* Tausch; *L. cyrenaica* Viv.; - Switzerland, Valais, 10.05.1876, leg. F.O. Wolf.

***Lonicera nigra* L.** - (n. 4214) – ref.: Sp. Pl. ed. 1 173 (1753); sin.: *Lonicera carpatica* Kit.; - Romania, Hunedoara, Mt. Retezat, endemic, August 1874, leg. Simkovics L.

***Lonicera xylosteum* L.** - (n. 4212) – ref.: Sp. Pl. ed. 1 174 (1753); sin.: *Lonicera ochroleuca* St.-Lag.; *L. leiophylla* A.Kern.; *L. luteiflora* Coustur. & Gand.; - Romania, Caraș-Severin, Băile Herculane, Jule 1874, leg. Simkovics L.

***Lonicera xylosteum* L.** – (n. 4213) – ref.: Sp. Pl. ed. 1 174 (1753) ; sin.: *Lonicera ochroleuca* St.-Lag.; *L. leiophylla* A.Kern.; *L. luteiflora* Coustur. & Gand.; *L.*



*segreziensis* Lavallée ex Dippel; - Romania, Bihor, Bihor Montains, Cornul Muntelui, 17.07.1879, leg. Simkovics L.

Fam. *Valerianaceae* batsch, 1802

Trib *Valerianeae*

Gen *Valerianella* P. Miller, 1724

***Valerianella coronata* (L.) DC.** - (n. 4222) – ref.: Fl. Fr. ed. 3 4: 241 (1805); sin.: *Valerianella hamata* Bastard ex DC.; *V. lasiocephala* Betcke; - Serbia, Voievodina, Vrsac (Verset, Versec), 18.05.1874, leg. Simkovics L.

***Valerianella dentata* (L.) Pollich** - (n. 4220) – ref.: Hist. Pl. Palat. 1: 30 (1776); sin.: *Valerianella morisonii* (Spreng.) DC.; *Valerianella mixta* auct., ? an (L.) Dufr.; *V. morisonii* (Spreng.) DC. subsp. *morisonii*; - Romania, Bihor, Oradea, 10.05.1879. leg. Simkovics L.

***Valerianella rimosa* Bastard** - (n. 4221) – ref.: Jour. Bot. Appl. 3: 20 (1814); sin.: *Valerianella auricula* DC.; *V. bessarabica* Lipsky; - Serbia, Voievodina, Vrsac (Verset, Versec), 28.05.1874, leg. Simkovics L.

Fam. *Dipsacaceae* Durande, 1782, nom. cons.

Gen *Dipsacus* L., 1753

***Dipsacus fullonum* L.** - (n. 4223) – ref.: Sp. Pl. ed. 1 97 (1753); sin.: *Dipsacus sylvestris* Huds.; - Hungary, Szt. Endre, 25.07.1875, leg. Simkovics L.

***Dipsacus laciniatus* L.** - (n. 4224) – ref.: Sp. Pl. ed. 1 97 (1753); - Romania, Bihor, Oradea (at the kerb of the road), August – September 1878, leg. Simkovics L.

***Dipsacus pilosus* L.** - (n. 4225) – ref.: Sp. Pl. ed. 1 97 (1753); sin.: *Cephalaria pilosa* (L.) Gren. ; *Virga pilosa* (L.) Hill; - Hungary, Baranya, Nadasd, 28.07.1873, leg. Simkovics L.

Gen *Cephalaria* H.A. Schrader ex J.J. Roemer & J.A. Schultes, 1818, nom. cons.

***Cephalaria laevigata* (Waldst. & Kit.) Schrad.** - (n. 4229) – ref.: Ind. Sem. Horti Gotting. 1821: [2] (1821); - Romania, Caraş-Severin, Băile Herculane, 06.08.1862, leg. Simkovics L.

***Cephalaria radiata* Griseb. & Schenk** - (n. 4227) – ref.: Arch. Naturgesch. (Berlin) 18(1): 351 (1852); - Romania, Cluj, Cluj-Napoca ( Hoia hills), 12.07.1878, leg. Simkovics L.

***Cephalaria transylvanica* (L.) Roem. & Schult.** - (n. 4226) – ref.: Syst. Veg. ed. nov. (15) 3: 45 (1818); sin.: *Cephalaria allionii* A.Kern. ex Strobl; - Romania, Bihor, Oradea, 02.09.1877, leg. Simkovics L.

***Cephalaria uralensis* (Murray) Roem. & Schult.** - (n. 4228) – ref.: Syst. Veg. ed.

nov. (15) 3: 50 (1818); sin.: *Cephalaria corniculata* Roem. & Schult.; *Cephalaria demetrii* Bobrov; - Romania, Cluj, Cluj-Napoca, 15.07.1878, leg. Simkovics L.

Gen *Knautia* L., 1753

***Knautia longifolia* (Waldst. & Kit.) W.D.J.Koch** - (n. 4230) – ref.: Syn. Fl. Germ. ed. 1 343 (1835); sin.: *Trichera longifolia* (W.D.J.Koch) Nyman; *Knautia csikii* Jáv. & Szabó; *K. arvensis* (L.) Coult. subsp. *kochii* (Brügger) Rouy; *K. lucidifolia* Sennen & Pau; *K. kochii* Brügger; *K. brachytrichia* Briq.; *K. javorkae* Szabó; - Switzerland, cant. Neuchatel, Bresine, endemic, 15.07.1875, leg. (F.T.) - F. Tripet. (Herbarium F. Tripet)

***Knautia dipsacifolia* Kreutzer** - (n. 4231) – ref.: Anthochron. Pl. Eur. Med. 223 (1840); sin.: *Knautia sylvatica* (L.) Duby, nom. ambig. var. *sylvatica*; *Trichera sylvatica* (L.) Schrad., nom. ambig. pro parte; *Knautia chabertii* Szabó; *K. sylvatica* (L.) Duby, nom. ambig.; *K. arvensis* (L.) Coult. subsp. *sylvatica* (L.) Bonnier & Layens; *Scabiosa dipsacifolia* Host; *S. dipsacifolia* Schrank; - Romania, Hunedoara, Hațeg, 20.08.1874, leg. Simkovics L.

***Knautia arvensis* (L.) Coult.** - (n. 4232) – ref.: : Mém. Dipsac. 41 (1823); sin.: *Trichera arvensis* (L.) Schrad.; *Knautia boderei* Szabó; *K. arvensis* (L.) Coult. subsp. *polymorpha* (F.W.Schmidt) Szabó; *K. arvensis* (L.) Coult. subsp. *pseudolongifolia* (Szabó) O.Schwarz; *K. cataunica* Sennen ex Szabó; *K. arvensis* (L.) Coult. subsp. *pratensis* Rouy; - Romania, Bihor, Oradea, 26.07.1879, leg. Simkovics L.

***Knautia arvensis* (L.) Coult.** - (n. 4233/a) – ref.: Mém. Dipsac. 41 (1823); sin.: *Scabiosa arvensis* L.; - Romania, Cluj, Cluj-Napoca (the Hoia forest), 12.07.1878, leg. Simkovics L.

***Knautia integrifolia* (L.) Bertol.** - (n. 4233/b) – ref.: Group - Dicot - Family - DIPSACACEAE - Teasel Family; *Species Plantarum* 1: 101. 1753.; - Romania, Cluj, Cluj-Napoca (the Hoia forest), 12.07.1878, leg. Simkovics L.

Gen *Succisa* Haller, 1768

***Succisa pratensis* Moench** - (n. 4234) – ref.: Meth. 489 (1794); sin.: *Succisa praemorsa* Asch.; *Scabiosa succisa* L.; - Romania, Caraș-Severin, Fenes (Fenyés), 05.08.1874, leg. Simkovics L.

Gen *Scabiosa* L., 1753

***Scabiosa succisa* L.** - (n. 4235) – ref.: *Species Plantarum* 98. 1753.; sin.: *Succisa kamerunensis* Engler ex Mildbraed; - Hungary, Veszprem, Herend, 21.08.1873, leg. Simkovics L.

***Scabiosa australis* Wulfen.** - (n. 4236) – ref.: Fl. Nieder-Österr. 2(2): 1145 (1893); *Archiv für die Botanik* 3(3): 316. 1803.; sin.: *Succisa australis* (Wulf.) Rchb.; *Succisella inflexa* (Kluk) Beck; - Romania, Bihor, Oradea, 20.08.1878, leg. Simkovics L.

***Scabiosa lucida* Vill.** - (n. 4239) – ref.: Prosp. Pl. Dauph. 18 (1779); sin.: *Scabiosa pubescens* Jord., non Waldst. & Kit. ex Willd.; - Romania, Hunedoara, Poiana Ruscă, Luncani (Tăul Ursului), endemic, 25.07.1872.

***Scabiosa silenifolia* Waldst. & Kit.** - (n. 4240) – ref.: Pl. Rar. Hung. 2: 170 (1803-1804); - Croatia, 16.08.1875, leg. Borbas.

***Scabiosa atropurpurea* L.** - (n. 4241) – ref.: Sp. Pl. ed. 1 100 (1753); sin.: *Scabiosa maritima* L.; *Scabiosa prolifera* Guss.; *Scabiosa grandiflora* Scop.; *Scabiosa ambigua* Ten.; *Scabiosa saviana* Rchb.; *Sixalis atropurpurea* subsp. *ayropurpurea* - Ungaria, Szabolcs-Satmar-Berg, Nyirgyhaza, August 1872, leg. Simkovics L.

***Scabiosa canescens* Waldst. & Kit.** - (n. 4242) – ref.: Pl. Rar. Hung. 1: 53 (1801); sin.: *Scabiosa suaveolens* Desf. ex DC.; - Hungary, Pest, Gubacs, endemic, 24.09.1873, leg. Simkovics L.

***Scabiosa argentea* L.** - (n. 4243) – ref.: Sp. Pl. ed. 1 100 (1753); sin.: *Scabiosa ucranica* L.; *S. taurica* Kotov; *S. eburnea* Sibth. & Sm.; *S. thracica* Velen.; *S. alba* Scop.; *S. wulfenii* Roem. & Schult.; *S. wulfenii* Kemer; *Lomelosia argentea* (L.) Greuter & Burdet; - Romania, Mehedinți, Orșova, 27.07.1874, Leg. Simkovics L.

***Scabiosa graminifolia* L.** - (n. 4245;) – ref.: Cent. Pl. 1: 6 (1755); sin.: *Asterocephalus graminifolius* (L.) Spreng; *Asterocephalus sericeus* Jord.&Four.; *Lomelosia graminifolia* (L.) Greuter & Burdet; *Scabiosa graminifolia* L. ssp. *glabra* Arcang.; *Succisa graminifolia* (L.) Moench.; *Trochcephalus graminifolius* (L.) Opiz; - France; Pyrenees, Gavarnie, Jule 1873, leg. Bordere.

***Scabiosa graminifolia* L.** - (n. 4244; 4246; 4247) – ref.: Cent. Pl. 1: 6 (1755); - label missing, location, date and author, cannot be established.

***Scabiosa garganica* Porta et Rigo (incl.)** - (n. 4248) – ref.: Biblioth. Bot. 27: 67. 1892; *Scabiosa garganica* Porta & Rigo ex Wettstein Italy : Puglia [Barcode: 31789]; sin.: *Scabiosa holosericea* Bertol.; *Scabiosa levieri* Huter. P. et R.; *Scabiosa magellensis* Parl. (incl.); *Scabiosa pyrenaica* Auct.fl.ital. p.max.p.; - Italy, Apulia (Puglia), Gargano (mt. St. Angelo, limy soil), 03.07.1875, leg. Porta et Rigo

#### Subclas. ***Asteridae*** Takhtajan, 1967

#### Superord. ***Campanulanae*** Takhtajan ex Reveal, 1992

Ord. *Campanulales* Reicherbach, 1828

Fam. *Campanulaceae* Adans, 1763, nom. cons.

Subfam. *Campanuloideae*

Trib *Campanuleae*

Gen *Campanula* L., 1753

***Campanula alpina* Jacq.** – (n. 4427) – ref.: Enum. Stirp. Vindob. 36 (1762); - Romania, Hunedoara, Hațeg (Pârgu), 12.08.1874, leg. Simkovics L.

***Campanula latifolia* L.** – (n. 4428) - ref.: Sp. Pl. ed. 1 165 (1753); - incert location (Sm. Lidzjo ?), 1873, leg. H.C.

***Campanula rhomboidalis* L.** – (n. 4430) – ref.: Sp. Pl. ed. 1 165 (1753); - France, Acsi, June 1877, leg. Fray.

***Campanula scheuchzeri* Vill.** – (n. 4431) – ref.: Prosp. Pl. Dauph. 22 (1779); sin.: *Campanula hegetschweileri* Bech.; *C. schleicheri* Hegetschw.; - Romania, Hunedoara, Hațeg (lacul Zănoaga); endemc, 30.07.1872, leg. Simkovics L.

***Campanula steveni* M.B.** – (n. 4429) – ref.: Fl. taur.-caucas. 3:138. 1820; sin.: *Campanula alberti* Trautv. (ssp.); *C. altaica* Ledeb. (ssp.); *C. wolgensis* P. A. Smim. (ssp.); - Romania, Bihor, Sarcău (Szarko havas legelocis), 06.08.1874, leg. Simkovics L.

Ord. *Menyanthales* (Endlicher, 1838) T. Yamazaki ex A. Takhtajan, 1997

Fam. *Menyanthaceae* Bercht. & J. Presl., 1823, nom. cons.

Gen *Menyanthes* L., 1753

***Menyanthes trifoliata* L.** – (n. 4438) – ref.: Sp. Pl. ed. 1 145 (1753); - Hungary, Szabolcs, Feketo, September 1871, leg. Simkovics L.

Gen *Villarsia* Ventenat, 1803, nom. cons.

***Villarsia nymphoides* (Willd.) Vent.** – (n. 4439) – ref.: Choix De Pl. T. 9. 1803; - Romania, Bihor, between Tărian and Vadul Crișului, 21.08.1878, leg. Simkovics L.

### Superord. *Asteraraneae* Takhtajan, 1967

Ord. *Asterales* Lindley, 1833

Fam. *Asteraceae* Dumortier, 1822

Gen *Dittrichia* L.

***Dittrichia graveolens* (L.) Greuter** – (n. 4280) – ref.: Exsicc. Genav. 4: 71 (1973); sin.: *Cupularia graveolens* (L.) Gren. & Godr.(Fl. France [Grenier] 2: 180. 1850); *Conyza minor* Bubani; *Erigeon gaveolens* L.; *Jacobaea graveolens* (L.) Merino; *Helenium graveolens* (L.) Kuntze; *Inula brahuica* Boiss; *Inula graveolens* (L.) Desf.; *Paniopsis gaveolens* Raf.; *Pulicaria graveolens* (L.) Nyman; *Solidago gaveolens* (L.) Lam.; - France, Provence-Alpes-Cote d'Azur, Var, Toulon, leg. Metz.

Subfam. *Asteroideae*

Gen *Pyrethrum*

***Pyrethrum rotundifolium* Waldst. & Kit.** - (n. 4290) – sin.: *Lencantherum rotundifolium* Bieb; *Chrysanthemum rotundifolium* Waldst. & Kit. ; - Romania, Hunedoara, Hațeg, Zănoaga, 13.08.11874, leg. Simkovics L.

Trib *Astereae*  
Gen *Aster* L., 1753

***Aster linosyris* (L.) Bernh.** – (n. 4249) – ref.: Syst. Verz. Erfurt 151 (1800); sin.: *Linosyris vulgaris* Cass. ex DC.; *Aster savii* Arcang.; - Hungary, Szabolcs-Satmar-Berg, Nyirgyhaza (forest), August 1871, leg. Simkovics L.

***Aster amellus* L.** – (n. 4250) – ref.: Sp. Pl. ed. 1 873 (1753); sin.: *Aster amelloides* Besser; *Aster bessarabicus* Bernh. ex Rchb.; - Romania, Bihor, Oradea, 23.07.1877, leg. Simkovics L.

***Aster salignus* Willd.** – (n.: 4251) – ref.: Sp. Pl. 3(3): 2040. 1803; sin.: *Aster salicifolius* Scholler.; *Aster x salicifolius* Scholler. *Aster x salignus* Willd.; - Germany, Saxonia-Anhalt, Magdeburg, 09.07.1874, leg. W. Reinache.

***Aster tripolium* L.** – (n. 4252) – ref.: Sp. Pl. ed. 1 872 (1753); sin.: *Tripolium vulgare* Nees; - Hungary, Pest, Budapest (Rakos), Jule-September 1875, leg. Simkovics L.

***Aster sedifolius* L. subsp. *sedifolius*** – ( n. 4253) – ref.: Sp. Pl. ed. 1 874 (1753); sin.: *Aster punctatus* Waldst. & Kit.; *Aster acris* L.; *Aster punctatus* Waldst. & Kit. subsp. *punctatus*; *Aster sedifolius* L. subsp. *acris* (L.) P.Fourn.; *Aster sedifolius* L. var. *angustifolius* Williams [1905, *J. Bot.* (London), 43 : 82 ]; *Galatella pastuchovii* (Kem.-Nath.) Tzvelev; *Galatella tatarica* (Less.) Novopokr.; *Galatella rossica* Novopokr.; *Galatella punctata* (Waldst. & Kit.) Nees; - Romania, Bihor, Oradea (in vineyards), 02.07. – 06.08.1877, leg. Simkovics L.

***Aster sedifolius* L. subsp. *sedifolius*** – ( n. 4254) – ref.: Sp. Pl. ed. 1 874 (1753); sin.: *Aster punctatus* Waldst. & Kit. subsp. *punctatus*; - Romania, Bihor, Oradea (in vineyards), 02.07.1877, leg. Simkovics L.

***Aster lanceolatus* Willd.** – (n. 4255) – ref.: C. Linnaeus, Sp. pl. ed. 5(“4”), 3:2050. 1803; sin.: *Aster lamarkianus* Nees. [ Sp. Pl. ed. 1 872 (1753)]; *Aster bellidiflorus* Willd.; *Aster eminens* Willd.; *Aster lanceolatus* Willd. subsp. *lanceolatus*; *Aster lanceolatus* Willd. subsp. *lanceolatus* var. *lanceolatus*; *Aster lanceolatus* Willd. subsp. *simplex* (Willd.) A.G. Jones; *Aster laxus* Willd.; *Aster paniculatus* Lam.; *Aster paniculatus* Lam. var. *bellidiflorus* (Willd.) E.S.Burgess; *Aster simplex* Willd.; *Aster simplex* Willd. var. *estuarinus* B.Boivin; *Aster simplex* Willd. var. *ramosissimus* (Torr. & A.Gray) Cronquist; *Aster tenuifolius* L. var. *bellidifolius* (Willd.) Torr. & A.Gray; *Aster tenuifolius* L. var. *ramosissimus* Torr. & A.Gray; *Symphyotrichum lanceolatum* (Willd.) G.L. Nesom; *Symphyotrichum lanceolatum* (Willd.) G.L. Nesom subsp. *lanceolatum* var. *lanceolatum*; *Symphyotrichum simplex* (Willd.) Å. & D.Löve; - Poland, (Great Poland - Wallstein), Posen (Posnan), 09.09.1874, leg. Materbach.

Gen *Bellis* L., 1753

***Bellis annua* L.** – (n.4258) – ref.: Sp. Pl. ed. 1 887 (1753); - France, Var (the region of Provence-Alpi-Cote d’Azur), Toulon, 1879, leg. Huet.

***Bellis perennis*** L. – (n. 4257) – ref.: Sp. Pl. ed. 1 886 (1753); - Hungary, Pest, Pilishagy, 03.05.1875, leg. Simkovics L.

Gen *Solidago* L., 1753

***Solidago canadensis*** L. – (n. 4259) – ref.: Sp. Pl. ed. 1 878 (1753); - Hungary, Pecs, Kishelyvalas, , 24.07.1873, leg. Simkovics L.

Trib *Heliantheae*

Gen *Xanthium* L., 1753

***Xanthium strumarium*** L. – (n. 4424) – ref.: Sp. Pl. ed. 1 987 (1753); sin.: *Xanthium americanum* Walter; *Xanthium chasei* Fernald; *Xanthium curvescens* Millsp. & Sherff.; *Xanthium cylindricum* Millsp. & Sherff.; *Xanthium orientale* L.; - Romania, Bihor, Oradea, 25.08.1878, leg. Simkovics L.

***Xanthium strumarium* subsp. *strumarium* x subsp. *italicum*** – (n. 4425) – ref.: Sp. pl. 2: 987. 1753 ; ITS-530874; sin.; *Xanthium macrocarpum* DC. (*Flore Françoise* 6: 356. 1815. ); *Xanthium riparium* Itzigs. & Hertsch; *Xanthium saccharatum* Wallr.; *Xanthium orientale* L.; *Xanthium albinum* (Widder) H.Scholz subsp. *riparium* (Celak.) Widder & Wagenitz; *Xanthium brasiliicum* Vell.;. *Xanthium albinum* (Widder) H.Scholz; - France, Midi-Pyrenees, Age – Garonne, date un mentioned, leg. E. de Pommaret (ex. herbaria J.C. Equit Pitt.)

Gen *Ambrosia* L., 1753

***Ambrosia maritima*** L. – (n. 4426) - ref.: Sp. Pl. ed. 1 988 (1753); - Hungary, Pest, cultivat în Grădina Botanică din Pesta, 25.09.1873, leg. –no signature. (Simkovics L.'s handwriting)

Trib *Inuleae* Cass.

Gen *Carpesium* L., 1753

***Carpesium cernuum*** L. – (n. 4282) – ref.: Sp. Pl. ed. 1 859 (1753); - Hungary, Baranya, Kakics (on the bank of the Drava river), 07.08.1873, leg. Simkovics L.

Gen *Nauplius* (Cassini) Cassini, 1822

***Nauplius aquaticus* (L.) Cass** – (n. 4256) – ref.: in Cuvier [1825, Dict. Sci. Nat., 34 : 273] ; sin.: *Asteriscus aquaticus* (L.) Less. [Syn. Gen. Comp. 210 (1832)]; *Asteriscus citriodorus* Heldr. & Halácsy; *Bubonium aquaticum* (L.) Hill; *Buphthalmum aquaticum* L.; *Odontospermum aquaticum* (L.) Sch.Bip.; - France, Alpes Maritims, Environs des Cannes, 15.05.1874, leg. J. Heilmann.

Gen *Inula* L., 1753

***Inula barthiana*** Schur. – (n. 4266) – ref.: Verh. Naturf. Ver. Brunn, xxxvi. 160; sin.: *Inula x stricta* var. *bartiana* Schur.; - Romania, Cluj, Cluj-Napoca (Coparsaie), Jule 1878, leg. Simkovics L.



***Inula bifrons* (L.) L** – (n. 4274) – ref.: Sp. Pl. ed. 2 1236 (1763); sin.: *Inula glabra* Besser; *Conyza bifrons* L.; - Romania, Cluj, Cluj-Napoca (“Hoia”), 12.07. 1875, leg. Simkovics L.

***Inula britannica* L.** – (n. 4272) – ref.: Sp. Pl. ed. 1 882 (1753); sin.: *Inula hispanica* Pau; - Hungary, (historical Comitat Bacs-Bodrog), Begecser Ada (ex.-left) si Germany, Baden (Weichwald) (ex.-right), August 1875, leg. A. Sztéhlo

***Inula conyzae* (Giesselich) Meikle** – (n. 4273) – ref.: Fl. Cyprus, 2: 890, 1897 (1985); sin.: *Conyza squarrosa* L.; *Inula conyza* DC. [Prodr. 5: 464 (1836)]; *Inula vulgaris* Trevis.; *Inula squarrosa* (L.) Benh.; *Jacobaea conzya* (DC.) Merino; *Inula suaveolens* Jacq.; - Hungary, Pilis Szent Kereszt, Szt. Endre – Nagy Kartalja, 01.08.1875, leg. Simkovics L.

***Inula ensifolia* L.** – (n. 4264) – ref.: Sp. Pl. ed. 1 883 (1753); - Hungary, Tokaj-Hegyalja, Tokay (“Kopasz”), 20.07.1877, leg. Simkovics L.

***Inula germanica* L.** – (n. 4261) – ref.: Sp. Pl. ed. 1 883 (1753); sin.: *Inula media* W.D.J.Koch; - Hungary, Pest, Budapest, 06.06. – 31.07.1875, leg. Simkovics L.

***Inula germanica* L.** – (n. 4262) – ref.: Sp. Pl. ed. 1 883 (1753); sin.: *Inula media* W.D.J.Koch; - Romania, Cluj, Cluj-Napoca (Fânețele), 15.07.1878, leg. Simkovics L.

***Inula helenium* L.** – (n. 4260) – ref.: Sp. Pl. ed. 1 881 (1753); - Hungary, Pecs, Kishelyvalas, 06.06. – 24.07.1873, leg. Simkovics L.

***Inula hirta* L.** – (n.4269) – ref.: Sp. Pl. ed. 1 883 (1753); sin.: *Jacobaea hirta* (L.) Merino; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Inula hybrida* Baung.** – (n. 4263) – ref.: Enum. Stirp. Transsilv. 3: 132. 1817; - Romania, Cluj, Cluj-Napoca (Fânețele), 15.07.1878, leg. Simkovics L.

***Inula montana* L.** – (n. 4270) – ref.: Sp. Pl. ed. 1 884 (1753); - France, Region Provence-Alpes-Cote d’Azur, Aude, Garrigues de Conque, June 1871, leg. Muillet.

***Inula oculus-christi* L.** – ( n. 4271) – ref.: Sp. Pl. ed. 1 881 (1753); - Czech Republic, Pilsen, Bataktava, 1874, leg. A. Rehmman.

***Inula salicina* L.** – (n. 4267) – ref.: Sp. Pl. ed. 1 882 (1753); - Hungary, (district of Aquiquum – Central Hungary), 23.07.1875, leg. Simkovics L.

***Inula semiamplexicaulis* Reut.** – (n. 4276) – ref: Mem. Soc. Phys. Genev. vii. (1836) 169 ; sin.: *Inula elvetica* x *salicina*.; *Inula* x *semidecurrens* St.-Lag. & Cariot; *Inula salicina* n-subsp. *semiamplexicaulis* (Reut.) Nyman; *Inula vaillantii* n-var. *semiamplexicaulis* (Reut.) Ces., Pass. & Gibelli.; - Switzerland, Geneva, 07.07.1877, leg. Schmidely

***Inula spiraeifolia* L.** – (n. 4268) – ref.: Syst. Nat. ed. 10 2: 1219 (1759); sin.: *Inula squarrosa* L.; - Romania, Bihor, Oradea, the forest of Săldăbagiu, 20.06.1877, leg. Simkovics L.

***Inula spiraeifolia* L.** – (n. 4275) – ref.: Syst. Nat. ed. 10 2: 1219 (1759); sin.: *Inula squarrosa* L.; - Hungary, Harsany, Dbogohagy, 16.07.1875, leg. Simkovics L.

***Inula vrabelyiana*** Kern. – (n. 4265) – ref.: Oeste. Bot. Z. 18: 297. 1868; sin.: *Inula x vrabelyana*; *Inula x stricta* var. *vrabelyana* Kern.; - Romania, Cluj, Cluj-Napoca (Fânețele), 15.07.1878, leg. Simkovics L.

Gen *Pulicaria* J. Gaertner, 1791

***Pulicaria dysenterica* (L.) Bernh.** – (n. 4278) – ref.: Syst. Verz. Erfurt 153 (1800); sin.: *Inula dysenterica* L.; *Pulicaria uliginosa* Steven ex DC., non Gray; - Romania, Bihor, Oradea (at the spreng Petea rivulet, Băile 1 Mai), 20.08.1877, leg. Simkovics L.

***Pulicaria odora* (L.) Rchb.** – (n. 4279) – ref.: Fl. Germ. Excurs. 239 (1831); - France, Corsica, Bastia, 20.06.1869, leg. O. Debeaux.

***Pulicaria vulgaris* Gaertn.** – (n. 4277) – ref.: Fruct. Sem. Pl. 2: 461 (1791); sin.: *Inula policaria* L; *Pulicaria prostrata* Asch.; - Hungary, Pest, Sziget Szt. Miklos, 17.08.1875, leg. Simkovics L.

Trib *Heliantheae*

Gen *Zinnia* L., 1759

***Zinnia elegans* Jacq.** – (n. 4281) – ref.: Collectanea 5. 1789; sin.: *Crassina elegans* (Jacq.) Kuntze; *Zinnia violacea* Cav.; - Hungary, Szabolcs- Szatmar-Bereg, Nyiregyhaza, August 1872, leg. Simkovics L.

Trib *Gnaphalieae*

Gen *Helichrysum* P. Miller, 1754, nom. cons.

***Helichrysum arenarium* (L.) Moench** – (n. 4283) – ref.: Meth. 575 (1794); sin.: *Gnaphalium arenarium* L.; *Gnaphalium aureum* Gilib.; *Gnaphalium elichrysum* Pall.; *Gnaphalium graveolens* Henning; - Hungary, Pest, Budapesta (Rakos), June-July 1875, leg. Simkovics L.

***Helichrysum italicum* (Roth) G.Don** – (n. 4284) – ref.: Hort. Brit. ed. 1 342 (1830); sin.: *Helichrysum angustifolium* (Lam.) DC.; - Croatia, Rjeka (Fiume), 05.09.1869, leg. Borbas Vince.

Trib *Anthemideae*

Gen *Chrysanthemum* ., 1753

***Chrysanthemum coronarium* L.** – (n. 4285) – ref.: Sp. Pl. ed. 1 890 (1753); sin.: *Pinardia coronaria* (L.) Less. (Syn. Gen. Compos. 255.); - Ungaria, Szabolcs-Szatmar-Bereg, Nyiregyhaza (in the vineyards), August 1872, leg. Simkovics L.

Gen *Tanaceatum* L., 1753

***Tanacetum achilleifolium* (M.Bieb.) Sch.Bip.** – (n. 4288) – ref.: Tanacet. 47

(1844); sin.: *Pyrethrum achilleifolium* M.Bieb.; *Pyrethrum achilleifolium* M.Bieb. subsp. *achilleifolium*; *Pyrethrum achilleifolium* M.Bieb. subsp. *wisockianum* Pacz.; *Chrysanthemum achilleifolium* (M.Bieb.) Prodán; - Italy, Florenta, 15.06.1874, leg. Groves.

***Tanacetum corymbosum* (L.) Sch.Bip. subsp. *corymbosum*** – (n. 4287) – ref.: Tanacet. 57 (1844); sin.: *Pyrethrum corymbosum* (L.) Scop.; *Leucanthemum corymbosum* (L.) Gren. & Godr.; *Chrysanthemum corymbosum* L. subsp. *corymbosum*; - Hungary, Fejer, Arany, St. Miklos, 27.06.1876, leg. I.A. Tauscher.

***Tanacetum macrophyllum* (Waldst. & Kit.) Sch.Bip.** – (n. 4286) – ref.: Tanacet. 53 (1844); sin.: *Pyrethrum macrophyllum* (Waldst. & Kit.) Willd.; *Chrysanthemum macrophyllum* Waldst. & Kit.; - Romania, Mehedinți, Șvinița, 26.06.1874, leg. Simkovics L.

Gen *Leucanthemum* P. Miller, 1754

***Leucanthemum vulgare* Lam.** - (n. 4289) – ref.: Fl. Fr. ed. 1 2: 137 (1779); ref.: *Chrysanthemum leucanthemum* L.; *C. leucanthemum* L. subsp. *triviale* Gaudin; *C. leucanthemum* L. subsp. *montanum* (All.) Gaudin; *Leucanthemum vulgare* Lam. subsp. *montanum* (All.) Briq. & Cavill.; *C. leucanthemum* L. subsp. *leucanthemum*; *C. leucanthemum* L. subsp. *lanceolatum* (Pers.) E.Mayer; *C. lacustre* Brot.; *Leucanthemum vulgare* Lam. subsp. *alpicola* (Gremli) A.Löve & D.Löve; *L. raciborskii* Popov & Krasch.; *L. vulgare* Lam. subsp. *incisum* (Bertol.) Arcang.; *L. coronopifolium* sensu Willk., non (Vill.) Gren. & Godr.; *L. subalpinum* (Simonk.) Tzvelev; - Romania, Bihor, Oradea, (the forest of Săldăbagiu), 20.06.1878, leg. Simkovics L.

Gen *Tripleurospermum* C.H. Schultz-Bip., 1844

***Tripleurospermum maritimum* (L.) W.D.J. Koch subsp. *inodorum* (L.) Appleq.** (n. 4291) – ref.: Nouv. Fl. Euv. Paris ed. 1 332 (1812); sin.: *Matricaria inodora* L.; *Matricaria perforata* Mérat; *Chamaemelum inodorum* (L.) Vis.; *Tripleurospermum inodorum* Sch. Bip.; - Hungary, Fejer, Ercsi, June 1867, leg. I.A. Tauscher.

Gen *Matricaria* L., 1753

***Matricaria recutita* L.** - (n. 4292) – ref.: Folia Geobot. Phytotax. (Praha) 9: 255 (1974); sin.: *Chamomilla recutita* (L.) Rauschert; *Matricaria chamomilla* L. pro parte; *Matricaria suaveolens* L.; *Matricaria recutita* L.; - Hungary, Csongrad, Eperjes, June 1867, leg. Simkovics L.

Gen *Anthemis* L., 1753

***Anthemis tinctoria* L.** – (n. 4293) – ref.: Sp. Pl. ed. 1 896 (1753); sin.: *Cota tinctoria* J. Gay; - Romania, Bihor, Oradea, Seleuș (on the skirt of the forest), 12.07.1877, leg. Simkovics L.

Gen *Achillea* L., 1753

***Achillea impatiens* L.** - (n. 4294) – ref.: Sp. Pl. ed. 1 898 (1753); sin.: *Achillea alpina* auct. plur., ?L.; *Ptarmica impatiens* (L.) DC.; *Ptarmica serrata* DC.; - Romania, Cluj, Cluj-Napoca (Mill Valey), 02.06.1878 si 01.08.1877, leg. Simkovics L. and Vatz L.

***Achillea millefolium* L. subsp. *sudetica* (Opiz) E.Weiss** – (n. 4295) – ref.: Syn. Deutsch. Fl. ed. 3 2: 1404 (1895); sin.: *Alchenilla haenkeana* L.; *A. sudetica* Opiz.; *A. millefolium* ssp. *sudetica*; - Romania, Bihor, Pietroasa (Cornul Muntelui), 17.07.1871. leg. Simkovics L.

***Achillea setacea* Waldst. & Kit.** – (n. 4296) – ref.: Descr. icon. pl. Hung. 1:68, t. 66. 1801; *Descriptiones et Icones Plantarum Rariorum Hungariae* 1: 82, pl. 80. 1802. ; sin.: *Achillea kummerleana* Prodán ; - Hungary, Fejer, Kutyavar (forest), 14.08.1867, leg. I.A. Tauscher.

***Achillea setacea* Waldst. & Kit.** – (n. 4297) – ref.: Pl. Rar. Hung. 1: 82 (1801-1802); sin.: *Achillea kummerleana* Prodán ; - Hungary, Pest, Budapesta (dry pasture), 27.05.1875, leg. Simkovics L.

***Achillea tomentosa* L.** - (n. 4298) – ref.: Sp. Pl. ed. 1 897 (1753); - Austria, South Tirolul (endemic), September 1873, leg. Iulius Gremlich

***Achillea distans* Waldst. & Kit. ex Willd. subsp. *distans*** – (n. 4299) – ref.: Sp. Pl. 3: 2207 (1803); sin.: *Achillea dentifera* DC.; *Achillea tanacetifolia* All., non Mill. subsp. *lanata* (Spreng.) Velen.; - Hungary, Pest, Piliscsaba, 23.06.1875, leg. Simkovics L.

***Achillea punctata* Ten.** – (n. 4300) – ref.: Fl. Nap. i.p.l. (1811); ii. 253; Atl. t.83.; - Romania, Bihor, Oradea–Săldăbagiu (on sunny hills), 20.06.1877, leg. Simkovics L.

***Achillea nobilis* L.** - (n. 4301) – ref.: Sp. Pl. ed. 1 899 (1753); sin.: *Achillea nobilis* subsp. *neilreichii*; *Achillea neilreichii* A. Kern; - Germany, Renania de nord-Westfalia, Rhein (Rin-Erft), Nassau, Lorlei, 1871, leg. Zichendrath.

***Achillea punctata* Ten.** – (n. 4302) – ref.: Fl. Nap. i.p.l. (1811); ii. 253; Atl. t.83.; - Romania, Bihor, Oradea (in the vineyards), 09.06.1877, leg. Simkovics L.

***Achillea nana* L.** - (n. 4303) – ref.: Sp. Pl. ed. 1 899 (1753); sin.: *Ptarmica nana* (L.) DC.; - Switzerland, Graubunden (the Canton of Grisons), Jule 1871, leg. Boneberger, det. Mayer.

***Achillea hybrida* Gand.** - (n. 4304) – ref.: Koch, Fl. Germ. Ed.2 409; - France, Provence-Alpi-Coasta de Azur, Alpes-Maritimes, Cannes, 25.08.1874, leg. J. Heilmann.

Trib *Helenieae*  
Gen *Arnica* L., 1753

***Arnica montana* L.** – (4305) – ref.: Sp. Pl. ed. 1 884 (1753); - Romania, Cluj, Cluj-Napoca (Mill Valey), 02.06.1878, leg. Simkovics L.

Trib *Senecioneae*Gen *Ligularia* Cassini, 1816, nom. cons.

***Ligularia sibirica* (L.) Cass.** – (n. 4325) – ref.: Dict. Sci. Nat. 26: 402 (1823); sin.: *Cineraria sibirica* (L.) L.; *Senecio cacaliifolius* Sch.Bip.; *Senecio ligularia* Hook.f.; *Senecio sibiricus* (L.) L.; - Romania, Cluj, Cluj-Napoca (the Faget forest), 23.07.1878, leg. Simkovics L.

Gen *Senecio* L., 1753

***Senecio abrotanifolius* L.** – (4311) – ref.: Sp. Pl. ed. 1 869 (1753); - Switzerland, Graubunden (the Canton of Grisons), St. Moritz, (endemic), 29.07.1873, leg. F. Tripet

***Senecio alpinus* Koch.** – (4310) – ref.: Flora (Regensb.) 17: 613 (1834); sin.: *Senecio alpinus* auct., non Scop.; *Cineraria alpina* L.; *Cineraria reisachii* Grembl.; *Senecio cordatus* W.D.J.Koch; *Senecio cordatus* W.D.J.Koch subsp. *auriculatus* (Jacq.) Arcang.; *Cineraria cordifolia* auct., non Clairv. subsp. *alpina* (L.) Nyman; *Jacobaea alpina* (L.) Moench; - Romania, Caraș-Severin, the Țarcului Mt. zone, the Goapa Bistrei Valley, 07.08.1874, leg. Simkovics L.

***Senecio aquaticus* Hill subsp. *barbareifolius* (Wimm. & Grab.) Walters** – (4315) – ref.: Jour. Linn. Soc. 71: 273 (1976); sin.: *Senecio barbareifolius* Krock.; *S. erraticus* Bertol.; *S. aquaticus* Hill subsp. *aquaticus* var. *barbareifolius* Wimm. & Grab.; *S. erraticus* Bertol. subsp. *erraticus*; *S. jacobaea* L. subsp. *erraticus* (Bertol.) Sudre; *S. erraticus* Bertol. subsp. *barbareifolius* (Wimm. & Grab.) Beger; *S. jacobaea* L. subsp. *aquaticus* (Hill) Bonnier & Layens; - Romania, Bihor, Oradea – Băile Felix and Băile 1 Mai (the Episcopal Spas), 09.07 – 20.08.1877, leg. Simkovics L.

***Senecio aquaticus* Hill subsp. *barbareifolius* (Wimm. & Grab.) Walters** – (4316) – ref.: Jour. Linn. Soc. 71: 273 (1976); sin.: *Senecio barbareifolius* Krock.; *S. erraticus* Bertol.; *S. aquaticus* Hill subsp. *aquaticus* var. *barbareifolius* Wimm. & Grab.; *S. erraticus* Bertol. subsp. *erraticus*; *S. jacobaea* L. subsp. *erraticus* (Bertol.) Sudre; *S. erraticus* Bertol. subsp. *barbareifolius* (Wimm. & Grab.) Beger; *S. jacobaea* L. subsp. *aquaticus* (Hill) Bonnier & Layens; - Romania, Bihor, Oradea – Băile Felix și Băile 1 Mai (the Episcopal Spas), 20.08.1877, leg. Simkovics L.

***Senecio aureus* L.** – (4320) – ref.: *Species Plantarum* 2: 870. 1753.); sin.: *Packera aurea* (L.) A.&D. Love (*Botaniska Notiser* 128(4): 520. 1975 [1976].); *Senecio aureus* L. var. *aquiloni* Fernald; *Senecio aureus* var. *gracilis* (Pursh) Hook; *Senecio aureus* var. *intercurus* Fernald; *Senecio gracilis* Pursh; - Hungary, Borsod-Abauj-Zemplen, Tokaj, 21.07.1877, leg. Simkovics L.

***Senecio bicolor* (Willd.) Tod. subsp. *cineraria* (DC.) Chater** – (4324) – ref.: Bot. Jour. Linn. Soc. 68: 273 (1974); sin.: *Senecio cineraria* DC.; *Cineraria maritima* L.; *Cineraria maritima* L. subsp. *maritime*; - France, Marljens – Boiher des bords (aproximative deciphering), leg. Alph. Autheman.

***Senecio daria* L.** – (4318 ) – ref.: Syst. Nat. ed. 10 2: 1215 (1759); - Ungaria, Szabolcs-Szatmar-Bereg, Nyíregyháza (lacul “Sasto”), Jule 1869, leg. Simkovics L.

***Senecio erucifolius* L.** – (4312 ) – ref.: Sp. Pl. ed. 1 [1231] (1753); sin.: *Senecio tenuifolius* Jacq., non Burm.f.; - Hungary, Baranya, Sellye (on the bank of the river Drava), 07.08.1873, leg. Simkovics L.

***Senecio halleri* Dandy** – (4322 ) – ref.: Taxon 19: 625 (1970); sin.: *Senecio uniflorus* (All.) All., non Retz.; - Elvetia, Wallis, Saasthal, Distelalp, (dry soil – alt.2300 m.), 13.08.1876, leg. P. Morthier.

***Senecio incanus* L.** – (4317 ) – ref.: Sp. Pl. ed. 1 869 (1753); - France, Alpes maritims, Environs des Cannes, (endemic), 12.06.1877, J. Heilmann.

***Senecio jacobaea* L.** – (4313 ) – ref.: Sp. Pl. ed. 1 870 (1753); sin.: *Senecio jacobaeoides* Willk.; *Senecio foliosus* Salzm.; - Romania, Braşov, Hirseni (Herzsa), Nagy Engis, - Flora Transsilvanica), 19.07.1872, leg. Csato.

***Senecio jacobaea* L.** – (4314 ) - ref.: Sp. Pl. ed. 1 870 (1753); sin.: *Senecio jacobaeoides* Willk.; *Senecio foliosus* Salzm.; - Romania, Bihor, Oradea, 04.10.1877, leg. Simkovics L.

***Senecio nebradensis* L.** – (4309 ) – ref.: Sp. Pl. ed. 2 1217 (1763); sin.: *Senecio duriaei* J.Gay; - Romania, Caraş-Severin, Zsudele, endemic, 20.08.1874, leg. Simkovics L.

***Senecio nemorensis* L.** – (4319 ) – ref.: Sp. Pl. ed. 1 870 (1753); sin.: *Senecio stabianus* Lacaita; - Romania, Bihor, Oradea, Băile Felix, 06.09.1879, leg. Simkovics L.

***Senecio paludosus* L.** – (4321 ) – ref.: Sp. Pl. ed. 1 870 (1753); sin.: *Senecio racemosus* auct. eur., non (M.Bieb.) DC.; *S. tataricus* Less.; *S. auratus* DC.; - Hungary, Pest, Bekasmege; - 21.06.1874, leg. Simkovics L.

***Senecio pyrenaicus* L.** - (4323 ) – ref.: Iter Hisp. 304 (1758); sin.: *Senecio tournefortii* Lapeyr.; *Senecio tournefortii* Lapeyr. subsp. *cespitosus* (Brot.) Cout.; *Senecio tournefortii* Lapeyr. subsp. *tournefortii*; *Senecio tournefortii* Lapeyr. subsp. *tournefortii* var. *tournefortii*; - France, Haute des Pyrenees, Somaute, leg. Bordere.

***Senecio vernalis* Waldst. & Kit.** – (4308 ) – ref.: Pl. Rar. Hung. 1: 23 (1800); sin.: *Senecio euxinus* Minderova; *Senecio vernalis* L.; - Romania, Caraş-Severin, Orşova (the Iron Gates), 06.04.1874, leg. Simkovics L.

***Senecio viscosus* L.** – (4307 ) – ref.: Sp. Pl. ed. 1 868 (1753); - Hungary, St. Endre (mt. Kartalya), 01.08.1875, leg. Simkovics L.

***Senecio vulgaris* L.** – (4306 ) – ref.: Sp. Pl. ed. 1 867 (1753); sin.: *Senecio dunensis* Dumort.; *Senecio radiatus* W.D.J.Koch; - Hungary, Csongrad, Eperjes, and in St. Endre (the large sample), 18.08. 1875, leg. Simkovics L.



Subfam. *Cichorioideae*Trib *Cichorieae*Gen *Crepis* L., 1753

***Crepis sancta* (L.) Bab.** – (n. 4326) – ref.: Univ. Calif. Publ. Bot. 19: 403 (1941); sin.: *Lagoseris bifida* (Vis.) W.D.J.Koch; *Lagoseris sancta* (L.) K.Maly; *Lagoseris sancta* (L.) K.Maly subsp. *bifida* (Vis.) Thell.; *Lagoseris nemausensis* (Gouan) W.D.J.Koch; *Lagoseris macrantha* (Bunge) Iljin; *Pterotheca nemausensis* (Gouan) C.A.Mey.; *Pterotheca bifida* (Vis.) Fisch. & C.A.Mey.; *Pterotheca sancta* (L.) K.Koch; *Crepis sancta* (L.) Bab. subsp. *bifida* (Vis.) Bab.; *Crepis sancta* (L.) Bab. subsp. *nemausensis* (Gouan) Bab.; - Romania, Mehedinți, Șvinița, (hill pastures), Mai – June 1874, leg. Simkovics L.

Trib *Cardueae*Subtrib *Centaureinae*Gen *Carthamus* L., 1753

***Carthamus lanatus* L. subsp. *lanatus*** – (n. 4341) – ref.: Sp. Pl. ed. 1 830 (1753); sin.: *Kentrophyllum lanatum* (L.) DC.; *Carthamus turbinatus* (Gasp.) Nyman; *Carthamus elatus* (Gasp.) Nyman; - Hungary, Feher, 15.07.1872, leg. I.A. Tauscher.

Gen *Centaurea* L., 1753

***Centaurea alba* L. subsp. *deusta* (Ten.) Nyman** – (n. 4354) – ref.: Consp. 420 (1879); sin.: *Centaurea deusta* Ten. subsp. *deusta* var. *deusta*; *Centaurea cinerascens* Bubani; *Centaurea deusta* Ten.; *Centaurea deusta* Ten. subsp. *deusta*; - Italy, Florenta (M-tii Ciceri, on rocky spots), endemic, , 14. 10.1870, leg. E. Levier.

***Centaurea arenaria* M.Bieb. ex Willd..** – (n. 4342) - ref. : Sp. Pl. 3: 2278 (1803); - Romania, Hunedoara, Calan (Klandorf, Kalan), Fîntîna Fetii (dry sunny hills), 21.08.1867, leg. Janka

***Centaurea biebersteinii* DC.** – (n. 4346) – ref.: Prodr. 6: 583 (1838); - Hungary, Pest, Budapesta, 22.09.1873, leg. Simkovics L.

***Centaurea biebersteinii* DC.** – (n.4348) – ref.: Prodr. 6: 583 (1838); - Hungary, Fejer, Adony (endemic), 01.08.1874, leg. I.A.Tauscher.

***Centaurea calcitrapa* L.** – (n. 4351) – ref.: Sp. Pl. ed. 1 917 (1753); sin.: *Centaurea calcitrapa* L. subsp. *torreana* (Ten.) Nyman; *C. myacantha* DC.; *C. calcitrapa* L. subsp. *horrida* (Ten.) Arcang.; *C. adulterina* Moretti; *C. macroacantha* Guss.; - Romania, Hunedoara, Călan (Klandorf, Kalan), Fîntîna Fetii (the Gilr's Fountain), 25.07.1873, leg. Simkovics L.

***Centaurea centauroides* L.** – (n. 4356) – ref.: Sp. Pl. ed. 1 918 (1753); - Italy, Puglia, Foggia, Cervare zone, on the skirts of the road and railroad, 18.07.1874, leg. Janka.

***Centaurea paniculata* L.** – (n. 4347) – ref.: Sp. Pl. ed. 1 912 (1753); sin.: *Centaurea gallica* Gugler, non Gouan; *C. maculosa* Lam. subsp. *incisa* Arcang.; *C. gallica* Gugler, non Gouan subsp. *gallica*; - France, Rhone, Arnas, Jule 1872, leg. M. Gandoger.

***Centaurea rupestris* L.** – (n. 4353) – ref.: Sp. Pl. ed. 2 1298 (1763); - Croatia, Rijeka (Fiume), (endemic) , 22.04.1875, leg. M. Staub.

***Centaurea rupestris* L. subsp. *ceratophylla* (Ten.) Gugler** – (n.4352) – ref.: Centaur. Ung. Nationalmus. 194 (1907) ; sin.: *Centaurea ceratophylla* Ten.; - Italia, Apruzzio, Caramanico, (endemic), iulie 1874, leg. H. Groves.

***Centaurea stenolepis* A.Kern.** –(n. 4344) -ref.: Österr. Bot. Zeitschr. 22: 45 (1872); sin.: *Centaurea cirrhata* Rchb. pro parte; *Centaurea phrygia* L. subsp. *capitata* (W.D.J.Koch) Arcang.; - Romania, Bihor, Oradea (in vineyards); 07.10.1878, leg. Simkovics L.

***Centaurea tauscheri* A.Kern.** – (n. 4355) – ref.: Österr. Bot. Zeitschr. 22: 119 (1872); sin.: *Centaurea arenaria* M.Bieb. ex Willd. subsp. *tauscheri* (A.Kern.) Soó; *C. hungarica* Gugler; - Hungary, Pest, Budapesta (Gubacs), sunny slope, (endemic), 24.09.1873, leg. Simkovics L.

***Centaurea trinervia* Stephan ex Willd.** – (n. 4345) - : Sp. Pl. 3: 2301 (1803); sin.: *Phaeopappus trinervius* (Stephan ex Willd.) Boiss.; *Odontolophus trinervius* (Stephan ex Willd.) Janka; *Odontolophus cyanoides* Cass.; - Romania, Cluj, Cluj-Napoca ("Hermas Domb"), 31.05.1878, leg. Simkovics L.

***Centaurea triniifolia* Heuff.** – (n. 4349) – ref.: Österr. Bot. Zeitschr. 8: 27 (1858), sin.: *Centaurea myriotoma* Vis. & Panc. Kic; *Centaurea campylacme* Bornm.; - Romania, Svinita, Trascaovat, (endemic) , 26.06.1874, leg. Simkovics L.

***Centaurea triniifolia* Heuff. var. *umbrosa* Simk.** – (n. 4350) – ref.: Österr. Bot. Zeitschr. 8: 27 (1858); sin.: *Centaurea myriotoma* Vis. & Pancic.; *Centaurea campylacme* Bornm.; *C. maculosa* Lamarck 1785 subsp. *triniaefolia* (Heuff.) Gugler 1907; - Romania, Cluj, Turda (Cheile Turzii), 21.07.1878, leg. Simkovics L.

Gen *Leuzea* A.P. de Candolle, 1805

***Leuzea conifera* (L.) DC.** - (n. 4327) – ref.: Fl. Fr. ed. 3 4: 109 (1805); sin.: *Centaurea pitycephala* Brot.; *Centaurea conifera* L.; - Italy, Sicilia, Palermo, no date, leg. Todaro, det. Onati.

Subtrib *Carduinae*  
Gen *Arctium* L., 1753

***Arctium x ambiguum* (Cel.) Nym.** – (n. 4333) – ref.: [1871, Prodr. Fl. Böhmen : 249] ; sin.: *Lappa ambigua* Celak; *Lappa x ambigua* Celak. ; *Arctium x ambiguum* (Cel.) Nym.; *Arctium lappa* subsp. *ambigua* Celak.; - Romania, Bihor, Oradea (Sânmartin – Băile 1 Mai), 20.08.1877, leg. Simkovics L.

Obs.: Celakovsky L. – “Flora von Oesterreich-Ungarn” in Plant Systematics and Evolution, Springer Wien, ISSN 0378-2697 (Print) 1615-6110 (Online), pg. 315-319.

***Arctium nemorosum* Lej.** - (n. 4334) – ref.: Mag. Hort. (Liège) 1: 289 (1833); sin.: *Lappa nemorosa* (Lej.) Körn.; *Arctium minus* Bernh. subsp. *nemorosum* (Lej.) Syme; ; *Arctium glabrescens* Klokov; - Hungary, Hajdu-Bihar, Marja (Kismarja), 17.07.1876, leg. Simkovics L.

Gen *Jurinea* Cassini, 1821

***Jurinea cyanoides* (L.) Rchb.** – (n. 4339) – ref.: Fl. Germ. Excurs. 290 (1831); Prodr. (DC.) 6: 676. 1838 [early Jan.1838]; - Germany, Hessen, Manz, August 1871, leg. Zichendrath.

***Jurinea mollis* (L.) Rchb.** – (n.4340) – ref.: Fl. Germ. Excurs. 290 (1831); Sitzb. Akad. Wiss. Wien xcvi. (1889) 575; - Hungary, Pest, Budapesta (Rakos), 29.05.1875, leg. Simkovics L.

Gen *Picnomon* Adanson, 1763

***Picnomon acarna* (L.) Cass.** - (n. 4374) – ref.: Prodr. 5: 396 (1836); sin.: *Phagnalon tenorii* (Spreng.) C.Presl; - Italy, Laxoli, August 1876, leg. Gibelli.

Gen *Ptilostemon* Cassini, 1816

***Ptilostemon strictus* (Ten.) Greuter** – (n. 4329) – ref.: Boissiera 13: 147 (1967); sin.: *Chamaepeuce stricta* (Ten.) DC.; *Cnicus strictus* Ten.; *Cirsium strictum* (Ten.) Link; - Italy, Campania, Abruzzo, Pescara, Caramarica (mt. Maiella), 02. 08.1874, leg. E. Levier.

Trib *Calenduleae*

Gen *Calendula* L., 1753

***Calendula bicolor* Raf.** - (n. 4328) – ref.: Caratt. 82 (1810); sin.: *Calendula arvensis* L. subsp. *bicolor* (Raf.) Nyman; - France, Rhone, Arnas, 18.08.1874, M. Gandoger.

Trib *Carlineae*

Gen *Xeranthemum* L., 1753

***Xeranthemum annuum* L.** – (n. 4330) – ref.: Sp. Pl. ed. 1 857 (1753); - Romania, Bihor, Oradea (the Șomleu hills), 14.07.1877, leg. Simkovics L.

***Xeranthemum cylindraceum* Sibth. & Sm.** – (n. 4331) – ref.: Fl. Graec. Prodr. 2: 172 (1813); sin. : *Xeranthemum foetidum* auct., non Moench; *Xeranthemum inapertum* auct., non (L.) Mill.; - Romania, Mehedinți, Șvinița, 25.07.1874, leg. Simkovics L.

Gen *Staehelina* L., 1753

***Staehelina dubia* L.** – (n. 4332) – ref.: Sp. Pl. ed. 1 840 (1753); - Italy, Etruria, Jule 1873, leg. Sommer.

Gen *Carlina* L., 1753

***Carlina acaulis* L. subsp. *simplex* (Waldst. & Kit.) Nyman** – (n. 4335) – ref.: Consp. 400 (1879); sin.: *Carlina caulescens* Lam.; *Carlina aggregata* Waldst. & Kit.; *Carlina alpina* Jacq.; *Carlina acaulis* L. subsp. *aggregata* (Waldst. & Kit.) Hegi; *Carlina simplex* Waldst. & Kit.; *Carlina cirsoides* Klokov; - Poland, Padolia (in the forest), endemic, 20.08.1873, leg. Karo.

***Carlina acanthifolia* All.** – (n. 4336) – ref.: Auct. Syn. Stirp. Horti Taur. 15 (1773); - Italy, Campania, Abruzzo, (mt. Maiella), ( mountain pastures, on limestones) , 04.08.1875, leg. Porta et Rigo.

***Carlina vulgaris* L.** – (n. 4337) – ref.: Sp. Pl. ed. 1 828, [1231] (1753); - Romania, Timis, Luncani ( “Bega” Valley), 24.07.1872, leg. Simkovics L.

***Carlina corymbosa* L.** – (n. 4338) – ref.: Sp. Pl. ed. 1 828, [1231] (1753); - Italy Florenta, Castillo (dry, rocky soil), 29.09.1872, leg. E. Levier.

Trib *Cichorieae*Gen *Lapsana* L., 1753

***Lapsana communis* L.** – (n. 4357) – ref.: Sp. Pl. ed. 1 811 (1753); - Romania, Bihor, Oradea (Sânmartin, Băile Felix), 17.06.1878, leg. Simkovics L.

Gen *Hyoseris* L., 1753

***Hyoseris foetida* L.** – (n. 4358) – ref.: Sp. Pl. 2: 808. 1753; sin.: *Aposeris foetida* (L.) Less. [Syn. Gen. Comp. 128 (1832)]; *Aposeris foetida* Cass.; - Romania, Bihor, zona Beiuș (Cornul Muntelui), 17.07.1879, leg. Simkovics L.

***Hyoseris scabra* L.** – (n. 4368) – ref.: Sp. Pl. ed. 1 809 (1753); - Italia, Catania, Aci Castello, 26.03.1874, leg. Dr. Heidenreich. (Flora Siciliae).

Gen *Leontodon* L., 1753

***Leontodon autumnalis* L.** – (n. 4359) – ref.: Sp. Pl. ed. 1 798 (1753); - Romania, Caraș-Severin, Făget (Facsad), mt. Capilna, 23.07.1872, leg. Simkovics L.

***Leontodon crispus* Vill. subsp. *crispus*.** – (n. 4362) – ref.: Prosp. Pl. Dauph. 34 (1779); sin.: *Leontodon asperum* (W. & K.); *Leontodon asper* (Waldst. & Kit.) Poir., non Forssk.; *L. asper* (Waldst. & Kit.) Poir., non Forssk. subsp. *asper*, *L. anomalus*

Ball; *L. crispus* Vill. subsp. *asper* (Waldst. & Kit.) Rohlen; *L. asper* (Waldst. & Kit.) Poir., non Forssk. subsp. *biscutellifolius* (DC.) Nyman; *Apargia aspera* Waldst. & Kit.; - Romania, Caraș-Severin, Drencova (near the river Alibeg), 25.06.1874, leg. Simkovics L.

***Leontodon hispidus* L.** – (n. 4360) – ref.; Sp. Pl. ed. 1 799 (1753); sin.: *Leontodon protheiformis* Vill.; - Hungary, Pest, Csepel Island, Ujfalu, Jule 1869, leg. I.A. Tauscher.

***Leontodon hispidus* L. subsp. *danubialis* (Jacq.) Simonk.** – (n. 4361) - ref.: Enum. Pl. Transs. 353 (1887); sin.: *Leontodon hastilis* L.; *L. danubialis* Jacq.; *Leontodon hastilis* L. subsp. *hastilis* var. *hastilis*; *L. hastilis* L. subsp. *hastilis* var. *glabratus* W.D.J.Koch; *L. hispidus* L. subsp. *hastilis* (L.) Janch.; *L. hispidus* L. subsp. *glabratus* (W.D.J.Koch) Hayek; *L. hastilis* L. subsp. *hastilis*; - Romania, Cluj, Cluj-Napoca (the Mill Valley), 16.07.1878, leg. Simkovics L.

***Leontodon taraxacoides* (Vill.) Mérat subsp. *taraxacoides*** – (n. 4363) – ref.: Ann. Sci. Nat. 22: 108 (1831); sin.: *Leontodon saxatilis* Lam.; *L. saxatilis* Lam. subsp. *saxatilis*; *Thrincia saxatilis* (Lam.) Holub & Moravec; ; *L. nudicaulis* auct., non (L.) Banks ex Schinz & R.Keller; *L. nudicaulis* (L.) Banks ex Schinz & R.Keller, nom. ambig. subsp. *taraxacoides* (Vill.) Schinz & Thell.; *L. crispus* Vill. subsp. *saxatilis* (Lam.) Nyman; *L. leysseri* Beck; *Thrincia nudicaulis* (L.) Dostál subsp. *taraxacoides* (Vill.) Gaudin; *Thrincia hirta* Roth; *T. nudicaulis* auct., non (L.) Dostál; - Italy, Veneto, Venetia, Verona, limy soil, May 1873, leg. Rigo.

#### Gen *Picris* L., 1753

***Picris crepoides* Sauter** – (n. 4364) – ref.: [1830, Flora (Regensb.), 13 : 409]; sin.: *Picris hieracioides* subsp. *villarsii*; - Romania, Caraș-Severin, Băile Herculane, at the neert of the forest, Cerna Valley, 02.08.1874, leg. Simkovics L.

***Picris echioides* L.** – (n. 4366) – ref.: Sp. Pl. ed. 1 792 (1753); sin.: *Helminthia lusitanica* Welw. ex Schltld.; *Helminthia echioides* (L.) Gaertn.; *Helminthia spinosa* DC.; *Picris spinosa* (DC.) Poir.; - Hungary, Baranya, Vallany, 14.06.1873, leg. Simkovics L.

***Picris sprengerana* (L.) Poir.** – (n a. 4365) – ref.: Encycl. Méth. Bot. 5: 310 (1804); sin.: *Picris integrifolia* Desf.; *Picris sprangeriana* Lam.; *P. aspera* (Lam.) Poir.; - France, Revert, Jule 1876, leg. Huet.

#### Gen *Hedypnois* P. Miller, 1754

***Hedypnois cretica* (L.) Dum.Cours.** – (n. 4367) – ref.: Bot. Cult. ed. 1 2: 339 (1802); sin.: *Hedypnois tubiformis* Ten.; *Hedypnois globulifera* Lam.; *Hedypnois rhagadioloides* (L.) F.W.Schmidt; *Hedypnois polymorpha* DC.; *Hedypnois pygmaea* Willk.; - Croatia, the Spalato-Dalmatian region (Dalmatia), Split (Spalato), April 1875, leg. Simkovics L.

Gen *Scorzonera* L., 1753

***Scorzonera laciniata* L.** – (n. 4369) – ref.: Sp. Pl. ed. 1 791 (1753); sin.: *Podospermum laciniatum* (L.) DC.; *P. decumbens* Gren. & Godr. subsp. *decumbens*; *P. decumbens* Gren. & Godr.; *P. intermedium* DC.; *P. decumbens* Gren. & Godr. subsp. *intermedium* (Guss.) Arcang.; *P. laciniatum* (L.) DC. subsp. *laciniatum*; *P. willkommii* Sch.Bip.; *P. calcitrapifolium* (Vahl) DC.; *P. laciniatum* (L.) DC. subsp. *integrifolium* Arcang.; *P. laciniatum* (L.) DC. subsp. *tenorii* (DC.) Arcang.; *Scorzonera resedifolia* L.; *Arachnospermum laciniatum* (L.) F.W.Schmidt; - Hungary, Nograd, Somos-Ujfalu, 26.06.1874, leg. Simkovics L.

Gen *Hypochoeris* L., 1753

***Hypochoeris glabra* L.** – (n. 4371) – ref.: *Species Plantarum* 2: 811. 1753.; sin.: *Hypochoeris salzmänniana* DC.; *Hypochoeris glabra* L subsp. *minima* (Cirillo) Arcang.; *Hypochoeris glabra* L subsp. *arachnoides* (Desf. ex Poir.) Nyman ; - Germany, Rhein, Cleve, 1869, leg. Wiegner.

***Hypochoeris radicata* L.** – (n. 4370) – ref.: *Species Plantarum* 2: 811. 1753.; sin.: *Seriola caespitosa* Porta; - Romania, Mehedinți, Orșova, 23.07.1874. leg. Simkovics L.

Gen *Prenanthes* L., 1753

***Prenanthes purpurea* L. var. *angustifolia* W.D.J.Koch** – (n. 4372) – ref.: Sp. Pl. ed. 1 797 (1753); - Romania, Timiș, Luncani, 24.07.1872, leg. Simkovics L.

Gen *Mycelis* Cassini, 1824

***Mycelis muralis* (L.) Dumort.** – (n. 4375) – ref.: Fl. Belg. 60 (1827); sin.: *Lactuca muralis* (L.) Gaertn.; *Cicerbita muralis* (L.) Wallr.; - unidentified location (Suvidya?), 27.04.1875, leg. M. Staubenvics. (Herb. M. Staub.).

Gen *Lactuca* L., 1753

***Lactuca saligna* L.** – (n. 4376) – ref.: Sp. Pl. ed. 1 796 (1753); - Serbia & Montenegro, Glozsan (the Bacs Bodrog Comitat in historical Hungary), August 1875, leg. A. Sztéhlo.

***Lactuca serriola* L.** – (n. 4377) – ref.: Cent. Pl. 2: 29 (1756); sin.: *Lactuca augustana* All.; *Lactuca scariola* L.; *Lactuca serriola* forma *integrifolia*; *Lactuca virosa* var. *integrifolia* Gray.; - Hungary, Fejer, Ercsi, Jule 1867, leg. I.A. Tauscher

***Lactuca quercina* L. subsp. *quercina* var. *integrifolia* (Bogenh.) Bisch.** – (n. 4378) – ref.: Sp. Pl. ed. 1 795 (1753); sin.: *Lactuca chaixii* Vill. (Prosp. Hist. Pl. Dauphine 32. 1779); *Lactuca quercina* L. subsp. *chaixii* (Vill.) Celak.; - Hungary, Hajdu-Bihar, Kismarja (forest), 17.07.1876, leg. Simkovics L.



***Lactuca serriola* L.** - (n. 4379) – ref.: Cent. pl. II:29. 1756 (Amoen. acad. 4:328. 1759); sin.: *Lactuca augustana* All.; *Lactuca serriola* forma *integrifolia*; *Lactuca scariola* L.; *Lactuca scariola* var. *integrata* Gren. & Godr.( *Fl. France* 2(1): 320. 1850 – annotation: citing basionym as „*L. angustana* All.”) ; *Lactuca virosa* var. *integrifolia* Gray; - Hungary, Szabolcs-Szatmar-Bereg, Halan, 08.09.1872, leg. Simkovics L.

***Lactuca quercina* L. subsp. *quercina*** – (n. 4380) - ref.: Sp. Pl. ed. 1 795 (1753); sin.: *Lactuca sagittata* Waldst. & Kit.; *Lactuca quercina* L.; *Lactuca quercina* L. subsp. *stricta* (Waldst. & Kit.) Hayek; *Lactuca quercina* L. subsp. *sagittata* (Waldst. & Kit.) Soó; *Lactuca altissima* Sch.Bip.; *Lactuca stricta* Waldst. & Kit. ; - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza,, August 1871, leg. Simkovics L.

***Lactuca perennis* L.** – (n.4381) – ref.: Sp. Pl. ed. 1 795 (1753); - Hungary, Pest, Budapesta ( “Farkas volgy”), 26.06.1874, leg. Simkovics L.

#### Gen *Cicerbita* Wallroth, 1822

***Cicerbita alpina* (L.) Wallr.** – (n. 4382) – ref.: Sched. Crit. 434 (1822); sin.: *Mulgedium alpinum* (L.) Less.; *Mulgedium alpinum* (L.) Less. var. *alpinum*; *Lactuca alpina* (L.) A.Gray; *Sonchus alpinus* L.; - Romania, Banat, Poiana Ruscă, 24.07.1872, leg. Simkovics L.

#### Trib *Gnaphalieae*

#### Gen *Phagnalon* Cassini, 1819

***Phagnalon rupestre* (L.) DC.** – (n. 4373) – ref.: Prodr. 5: 396 (1836); - - Croatia, Spalato-Dalmatian region (Dalmatija), Split (Spalato), May 1875, leg. Simkovics L.

#### Gen *Mantisalca* R. Brown, 1817

***Mantisalca salmantica* (L.) Briq. & Cavill.** (n. 4383) – ref.: *Archives des Sciences Physiques et Naturelles* ser. 5 12: 111. 1930. ; sin.: *Centaurea salamantica* L.; *Microlonchus salamaticus* (L.) DC (Prodromus 6 1838); *Microlonchus cichoraceus* C. Koch (1851, Linnaea, 24 ; 416); *Microlonchus clusii* Spach; *Microlonchus delileana* Spach; *Microlonchus duriaei* Spach; *Microlonchus elatus* Spach ; *Microlonchus gracilis* Pomel; *Microlonchus isernianus* J.Gay & Webb ex Graells; *Microlonchus leptolonchus* Spach; *Microlonchus papposus* Spach; - France, Alpes Maritimes, Environs des Cannes, 17.08.1869, leg. I. Heilmann.

#### Gen *Bombycilaena* (de Candolle) Smoljaninova, 1955

***Bombycilaena erecta* (L.) Smoljan.** – (n. 4384) – ref.: Not. Syst. (Leningrad)

17: 450 (1955); sin.: *Micropus erectus* L. subsp. *erectus*; *Micropus erectus* L.; - Hungary, Pest, Budapesta (Bekas – dry hills), 14.07.1874, leg. Simkovics L.

Gen *Hieracium* L., 1753  
*Hieracium* subg. *Pilosella*

***Hieracium (Pilosella) pilosella* L.** – (n. 4385) – ref.: Sp. Pl. ed. 1 800 (1753); sin.: *Hieracium pilosella* L.; *Pilosella officinarum* F.W.Schultz & Sch.Bip.; - Romania, Arad, Ineu (Boros leno), Stejar (Szarvashegy), forest, 29.06.1873, leg. Simkovics L.

***Hieracium (Pilosella) lactucella* Wallr.** – (n. 4386) – ref.: Sched. Crit. 1: 408 (1822); sin.: *Hieracium auricula* auct., non L.; - Romania, Bihor, Oradea, 10.06.1877, leg. Simkovics L.

***Hieracium (Pilostella) x brachiatum* Lamk.** – (n. 4387) – ref.: Fl. Fr. ed. 3 5: 442 (1815); sin.: *Hieracium brachiatum* Bert.; *Hieracium x brachiatum* Bertol. ex Lam.; *Hieracium bauginiflorum* (Nägeli & Peter) Juxip; *Hieracium ilyassowaense* (Zahn) Juxip; *Hieracium discolor* (Nägeli & Peter) Juxip; *Hieracium leptophyton* Nägeli & Peter; *Hieracium pseudobrachiolum* Celak.; *Hieracium pedunculatum* Wallr.; *Hieracium anocladum* (Nägeli & Peter) Juxip; *Hieracium tubuliflorum* (Nägeli & Peter) Juxip; *Hieracium dmitrovense* (Peter) Juxip; - Romania, Bihor, Oradea, 26.07.1879, leg. Simkovics L.

***Hieracium (Pilosella) x floribundum* Wimm. & Grab.** – (n. 4388) – ref.: Fl. Siles. 2(2): 204 (1829); sin.: *Hieracium auricula* L.; *Hieracium auricula* L. subsp. *auricula*; *Hieracium fulvescens* (Nägeli & Peter) Juxip, non Norrl.; - Romania, Bihor, Cornul Muntelui (the Bihorului Mt.), 17.07.1879, leg. Simkovics L.

***Hieracium (Pilosella) caespitosum* Dumort.** – (n. 4389) – ref.: Fl. Belg. 62 (1827); sin.: *Hieracium pratense* Tausch; *Hieracium collinum* auct., non Gochnat; *Pilosella caespitosa* (Dumort.) P.D.Sell & C.West; - Romania, Bihor, Oradea, (in the forest), 07.06.1879, leg. Simkovics L.

***Hieracium (Pilosella) aurantiacum* L.** – (n. 4390) – ref.: Sp. Pl. ed. 1 801 (1753); sin.: *Pilosella aurantiaca* (L.) F.W.Schultz & Sch.Bip.; - Romania, Cluj, Cluj-Napoca (the MillVale), 02.06.1878, leg. Simkovics L.

***Hieracium pilosella x praealtum*** – (n. 4391) – ref.: Tent. Pl. Cich. 17 (1808); sin.: *Hieracium insolens* Norrl.; *Pilosella praealta* (Vill. ex Gochnat) F.W.Schultz & Sch. Bip.; - Romania, Bihor, Oradea, 29.05.1877, leg. Simkovics L.

***Hieracium (Pilosella) praealtum* Vill. ex Gochnat** – (n. 4392) – ref.: Tent. Pl. Cich. 17 (1808); sin.: *Hieracium insolens* Norrl.; *Pilosella praealta* (Vill. ex Gochnat) F.W.Schultz & Sch.Bip.; - Romania, Bihor, Oradea, 07.06.1879, leg. Simkovics L.

***Hieracium (Pilosella) praealtum* Vill. ex Gochnat** – (n. 4393) – ref.: Tent. Pl. Cich. 17 (1808); sin.: *Hieracium insolens* Norrl.; *Pilosella praealta* (Vill. ex Gochnat) F.W.Schultz & Sch.Bip.; - Romania, Bihor, Oradea, 07.06.1879, leg. Simkovics L.

***Hieracium x bifurcum* M. Bieb.** – (n. 4396) – ref.: Flora 45: 423. 1862; sin.: *Hieracium albocinereum* Rupr.; *Hieracium bifurcum* M. Bieb.; *Pilosella x bifurca*

(M. Bieb.) F.W. Schultz & Sch.Bip.; *Pilosella bifurca* (M. Bieb.) Sch.Bip & F.W. Schultz.; *Pilosella echioides* x *P. officinarum*; - Serbia, Voievodina, Vrsac (Verșeț, Versec) , leg. Simkovics L., 28.05.1874, leg. Simkovics L.

***Hieracium rotundatum* Kit. ex Schult.** – (n. 4403) – ref.: Österreichs Fl. ed. 2 2: 439 (1814); sin.: *Hieracium transsilvanicum* Heuff.; - Romania, Caraș-Severin, Băile Herculane (mt. Ciorici), 27.05. – 02.08.1874, leg. Simkovics L.

*Hieracium* subg. *Hieracium*

***Hieracium polytrichum* Schur** – (n. 4394) – ref.: Hier. Gall. Hisp. Cat. 63, hybr. 1913; - Romania, Caras-Severin, Drencova (the premier sample), Mehedinți, Șvinița (the second sample), 20.05.1874, leg. Simkovics L.

***Hieracium echioides* Lumn.** - (n. 4395) – ref.: Fl. Poson. 348 (1791); sin.: *Hieracium asiaticum* Nagel & Peter; *Hieracium freynii* (Nagel & Peter) Juxip; *Hieracium macrocymum* (Nägeli & Peter) Juxip; *Hieracium malacotrichum* (Nägeli & Peter) Juxip; - Hungary, Pest, Csepel Island, Tokol, 11.06.1876, leg. I.A. Tauscher.

***Hieracium alpinum* L.** – (n. 4397) – ref.: Sp. Pl. ed. 1 800 (1753); -Romania, Hunedoara, Hațeg, Zănoaga, August 1874, leg. Simkovics L.

***Hieracium nigrescens* Willd.** – (n. 4398) – ref.: : Sp. Pl. 3: 1574 (1803); - Romania, Bihor, the Beiuș region, Cornul Muntelui, .17.07.1874, leg. Simkovics L.

***Hieracium nigrescens* Willd.** – (n. 4399) – ref.: Sp. Pl. 3: 1574 (1803); - Romania, Hunedoara, M-tii Retezat, Zănoaga, 13 – 16.08.1874, leg. Simkovics L.

***Hieracium lasiophyllum* W.D.J.Koch** – (n. 4400) – ref.: Syn. Fl. Germ. ed. 2 522 (1844); - the Adriatic Coastline [Kusterland = the Austrian Coastline during the Austrion-Hungarian Empire (1813-1918) ]; 20.05.1875, leg. J.C. Eques Pittoni a Donnenfeldt.

***Hieracium porphyriticum* A.Kern.** – (n. 4401) – ref.: Oesterr. Bot. Z. 13: 247. 1863; sin.: *Hieracium* subgen. *Hieracium silesiacum* group; - Romania, Bihor, Beiuș region, Cornul Munteleui, 17.07.1879, leg. Simkovics L.

***Hieracium saxatile* Vill., non Jacq.** – (n. 4402) – ref.: Prodr. 7: 232 (1838); sin.: *Hieracium phlomoides* Froel.; *Hieracium* Subgen. *Hieracium phlomoides* group ; - France, Hautes Pyrenees, Gedre, (on limestones), endemic, 10.07.1872, leg. Bordere.

***Hieracium murorum* L.** – (n. 4404) – ref.: Sp. Pl. ed. 1 802 (1753); - Romania, Hunedoara, M-tii Retezat, 12.08.1874, leg. Simkovics L.

***Hieracium sabaudum* L.** – (4405) – ref.: Sp. Pl. ed. 1 804 (1753); - Romania, Bihor, Oradea, Săldăbagiu, 14.07 – 15.10.1876, leg. Simkovics L.

***Hieracium humile* Jecq.** – (n. 4406) - ref.: Hist. Pl. Pyrenees 471.1813; sin.: *Hieracium jacquini* Vill.; *Hieracium jacquini* Chaix; *Hieracium godetii* Arv.-Touv; - France, Alpes maritimes, Environs des Cannes, 17.07.1874, leg. I. Heilmann.

***Hieracium rupicolum* Fr. var. *bifidum* Kit.** - (n. 4407) – ref.: Cat. Gr. Jard. Dijon (1848) 24; sin.: *Hieracium bifidum* Kit. [Hort. Hafn. 2: 761 (1851)]; - Romania, Mehedinți, Trascovat, 26.06.1874, leg. Simkovics L.

***Hieracium vulgatum* Fr.** – (n. 4408) – ref.: Nov. Fl. Suec. ed. 1 76 (1819); - Hungary, Pest, 01.08.1875, leg. Simkovics L.

***Hieracium vulgatum* Fr. var. *festigiatum*** – (n. 4409) – ref.: Nov. Fl. Suec. ed. 1 76 (1819); - Hungary, Nagrad, Somos – Ujfalu, 23.06.1873, leg. Simkovics L.

***Hieracium gothicum* Fr.** – (n. 4410) – reg.: Nova Acta Reg. Soc. Sci. Upsal. 14: 121 (1848); - Poland – Silezia, Friedland, Farfboden, no date, leg. Simkovics L.

***Hieracium glanduliferum* Hoppe** – (n. 4411) – ref.: Deutschl. Fl. 39: 623 (1815); - Austria, Tirol, limy soil, 27.07.1872, leg. G. Bernard.

***Hieracium boreale* Fr.** – (n. 4412) – ref.: Sp. Pl. ed. 1 804 (1753); sin.: *Hieracium* Subgen. *Hieracium sabaudum* group; - Romania, Bihor, Aleșd, 05.10.1878, leg. Simkovics L.

***Hieracium virescens* Sond.** – (n. 4413) – ref.: – ref.: Sp. Pl. ed. 1 804 (1753); sin.: *Hieracium* Subgen. *Hieracium sabaudum* group; - France, Aix en Provance, Rhose, 10.08.1873, leg. Gandager.

***Hieracium boreale* Fr.** – (n. 4414) – ref.: Sp. Pl. ed. 1 804 (1753); sin.: *Hieracium* Subgen. *Hieracium sabaudum* group; - Romania, Bihor, Pietroasa (the Bihorulul Monttains – the Aleu and Bulz – Galbena Valleys), 17 – 18.07.1873, leg. Simkovics L.

***Hieracium umbellatum* L.** – (n. 4415) – ref.: Sp. Pl. ed. 1 804 (1753); sin.: *Hieracium lactescens* Rouy; - Ungaria, Heves, Eger (Erlan, Agria), Jule 1874, leg. M. Vrahelyi, det. V. Borbas.

***Hieracium umbellatum* L.** – (n. 4416) – ref.: Sp. Pl. ed. 1 804 (1753); sin.: *Hieracium lactescens* Rouy; - Romania, Bihor, Oradea, 04.09.1877, leg. Simkovics L.

***Hieracium murorum* L. var. *macrolatitrium* Simk.** – (n. 4417) – ref.: Sp. Pl. ed. 1 802 (1753); - Hungary, Heves, Nagybatany (Batany), Agasvar, 22.06.1873, leg. Simkovics.

***Hieracium jankae* R.Uechtr.** – (n. 4418) – ref.: ref.: Österr. Bot. Zeitschr. 23: 239 (1873); - Romania, Mehedinți, Svinita (mt. Treskovar), 26.06. – 24.07.1874, leg. Simkovics L.

***Hieracium fuliginatum* Huter et Guder** – (n. 4419) – sin. posibil (indicat de autor): *Hieracium glanduliformum* x *piliferum*; - Austria, Tirol, Windisch-Matrei, (Virgen Valley), limy soil, August 1873, leg. Ansserdorfer.

***Hieracium senescens* Backh.f.** – (n. 4420) – ref.: Monogr. Brit. Hier. 32 (1856); - Austria, Tirol, Virgen, (endemic), 20.08.1866, leg. Garder.

***Hieracium apimedium* Fries.** – (n. 4421) – Austria, Tirol, Windisch-Matrei, Virgen Valley, August 1872, leg. Ansserdorfer.

***Hieracium juranum* Fr.** – (n. 4422) – ref.: Nova Acta Reg. Soc. Sci. Upsal. 14: 129 (1848); - Austria, Alpii Sudeți (Reisengebirge, Giant Mountains), Kesselgrube, August 1873, leg. Trautmann. (Flora Schlesien).

***Hieracium monticola* Jord.** - (n. 4423) – ref.: *Cat.Graines Jard. Bot. Grenoble* 20, 1849; - France, Alpes maritimes, Cannes, 07.08.1876, leg. I. Heilmann.

**Clasa *LILIOPSIDA* Scopoli, 1760**  
**Subclas. *Alismatidae* Takhtajan, 1967**  
**Superord. *Alismatanae* Takhtajan, 1967**  
 Ord. *Alismatales* Dumortier, 1829  
 Fam. *Alismataceae* Ventenat, 1799  
 Gen *Alisma* L., 1753

***Alisma plantago-aquatica* L.** – (n. 4675) – ref.: Sp. Pl. ed. 1 342 (1753); - Hungary, Fejer, Recsi, 18.07.1872, leg. I.A.Tauscher.

***Alisma plantago-aquatica* L. v. *graminifolium*** – (n. 4676) – ref.: Sp. Pl. ed. 1 342 (1753); - Hungary, Pest, Budapesta, 02.05.1875, leg. Simkovics L.

Gen *Luronium* Rafinesque, 1840

***Luronium natans* (L.) Raf.** – (n. 4677) – ref.: Autikon Bot. 63 (1840); sin.: *Alisma natans* L.; *Elisma natans* (L.) Buchenau; - Germany, Rhein, Crefeld., 1872, leg. Wiegener.

Gen *Sagittaria* L., 1753

***Sagittaria sagittifolia* L.** – (n. 4678) – ref.: Sp. Pl. ed. 1 993 (1753); - Germany, Saxony-Anhalt, Groben, Begecser Ada (B.-er Weichwald), August 1875, leg. A. Sztzechlof.

Ord. *Hydrocharitales* Dumortier, 1829  
 Fam. *Hydrocharitaceae* A.L. de Jussieu, 1789  
 Gen *Hydrilla* L.C. Richard, 1814

***Hydrilla verticillata* (L.f.) Royle** – (n. 4674) – ref.: Ill. Bot. Himal. Mount. 376 (1839); sin.: *Hydrilla verticillata* (L.f.) Royle var. *panoramica* (?); *Udora occidentalis* auct., non Spreng.; *Udora lithuanica* Andrz. ex Besser; *Elodea verticillata* (L.f.) F. Muell.; *Elodea nuttallii* auct. brit., non (Planch.) H.St.John; *Hydrilla lithuanica* (Andrz. ex Besser) Dandy; *Serpicula verticillata* L.f.; - unidentified location (Sellmentzen ?), 13.08.1871, leg. C. Sanio.

Ord. *Potamogetonales* Dumortier, 1829  
 Fam. *Potamogetonaceae* Dumortier, 1829

Gen *Potamogeton* Dumortier, 1829

***Potamogeton coloratus* Hornem.** – (n. 4681) – ref.: Fl. Dan. 9(25): 4 (1813); sin.: *Potamogeton siculus* Tineo ex Guss., non Bercht. & J.Presl; - Hungary, Pest, Budapesta (Buda), in the stagnant waters, 23.03.1873, leg. Simkovics L.

***Potamogeton crispus* L.** – (n. 4683) – ref.: Sp. Pl. ed. 1 126 (1753); - Hungary, Pest, Budapesta (Rakos), 14.06.1871, leg. Simkovics L.

***Potamogeton fluitans* Roth** – (n. 4680) – ref.: *Tentamen Florae Germanicae* 1: 72. 1788.; sin.: *Potamogeton x fluitans* Roth; *Potamogeton natans* var. *fluitans* (Roth) Cham.; - Romania, Bihor, Oradea (in Peța rivulet), 12.07.1879, leg. Simkovics L.

***Potamogeton natans* L.** – (n. 4679) – ref.: Sp. Pl. ed. 1 126 (1753); - Hungary, Baranya, Quinqueeclias (Monte Iakob), 22.07.1879, leg. Simkovics L.

***Potamogeton perfoliatus* L.** – (n. 4682) – ref.: Sp. Pl. ed. 1 126 (1753); - Serbia, Kopacs (in Drava river), 11.08.1873, leg. Simkovics L.

***Potamogeton pusillus* L.** – (n. 4685) – ref.: Sp. Pl. ed. 1 127 (1753); sin.: *Potamogeton panormitanus* Biv.; *Potamogeton gracilis* Fr., non Wolfg.; - Hungary, Pest, Budapesta (Buda), Jule 1875, leg. Simkovics L.

***Potamogeton pusillus* L. ssp. *tenuissimus* (Mert. & Koch) Haynes & C.B. Hellquist** – (n. 4686) – ref.: *Novon* 6(4): 370. 1996.; sin.: *Potamogeton tenuissimus* M. & K. ; *Potamogeton pusillus* var. *tenuissimus* Mert. & W.D.J. Koch (*Deutschlands Flora* ed. 3 1: 857. 1823.); *Potamogeton berchtoldii* Fieb. var. *tenuissimus* (Mert. & Koch) Fern.; *Potamogeton berchtoldii* Fieb. ; - Hungary, Pest, Budapesta (Soroksar), 04.07.1875, leg. Simkovics L.

***Potamogeton filiformis* Pers..** – (n. 4687) – ref.: Syn. Pl. 1: 152 (1805); sin.: *Potamogeton marinus* auct., non L.; - Hungary, Fejer, Ercsi, June-August 1875, leg. Simkovics L.

Gen *Groenlandia* J. Gay, 1854

***Groenlandia densa* (L.) Fourr.** – (n. 4684) – ref.: Ann. Soc. Linn. Lyon nov. ser. 17: 169 (1869); sin.: *Potamogeton densus* L.; - Hungary, Pest, Budapesta (in the stagnant waters of the Danube), May-June, 1875, leg. Simkovics L.

Fam. *Ruppiaceae* Horaninow ex Hutchinson, 1934Gen *Ruppia* L., 1753

***Ruppia maritima* L.** – (n. 4688) – ref.: Sp. Pl. ed. 1 127 (1753); sin.: *Ruppia rostellata* W.D.J.Koch; *Ruppia spiralis* L. ex Dumort. subsp. *transsilvanica* (Schur) Nyman; - Romania, Cluj, Cluj-Napoca (Someseni), no date, undecipherable signature.



Ord. *Najadales* reicherbach, 1828  
Fam. *Najadaceae* Durande, 1782, no. cons.  
Gen *Najas* L., 1753

***Najas minor* All.** – (n. 4690) – ref.: Auct. Syn. Stirp. Horti Taur. 3 (1773); - Romania, Bihor, Oradea, Sânmartin (in Peța rivulet), 24.07.1877, leg. Simkovics L.

Ord. *Cymodoceales* Dumortier, 1829  
Fam. *Zannichelliaceae* Dumortier, 1829  
Gen *Zannichellia* L., 1753

***Zannichellia palustris* L.** – (n. 4689) – ref.: Sp. Pl. ed. 1 969 (1753); sin.: *Zannichellia major* (Hartm.) Boenn. ex Rchb.; *Zannichellia polycarpa* Nolte ex Rchb.; *Zannichellia pedicellata* (Wahlenb. & Rosén) Fr.; *Zannichellia pedunculata* Rchb.; *Zannichellia peltata* Bertol.; *Zannichellia repens* Boenn.; *Zannichellia macrostemon* J.Gay ex Willk.; *Zannichellia dentata* Willd.; - Hungary, Czegled (in the moors), 11.08.1872, leg. Simkovics L.

Subclas. *Liliidae* Takhtajan, 1967  
Superord. *Dioscoreanae* (J.D. Hooker, in Le Maout & Decaisne, 1873)  
Takhtajan, 1997 ex Reveal & Doweld, 1999

Ord. *Dioscoreales* J.D. Hooker, in Le Maout & Decaisne, 1873  
Fam. *Dioscoreaceae* R. Brown, 1810  
Gen *Tamus* L., 1753

***Tamus communis* L.** – (n. 4705) – ref.: Sp. Pl. ed. 1 1028 (1753); - Romania, Bihor, Oradea, Săldăbagiu, forest, 09.06.1877, leg. Simkovics L.

Superord. *Lilianaes* Takhtajan, 1967  
Ord. *Asparagales* Bromhead, 1838  
Subord. *Asparaginae*  
Fam. *Ruscaceae* Sprengel ex Hutchinson, 1934  
Gen *Ruscus* L., 1753

***Ruscus aculeatus* L.** – (n. 4706) – ref.: Sp. Pl. ed. 1 1041 (1753); sin.: *Ruscus ponticus* Woronow; *Ruscus hyrcanus* sensu Stankov & Taliev, non Woronow; - Hungary, Baranya, Learsany, Mart 1873, leg. Simkovics L.

Ord. *Amaryllidales* Bromhead, 1840  
Fam. *Hyacinthaceae* Batsch ex Brockhausen, 1797  
Trib *Hyacintheae*  
Gen *Scilla* L., 1753

***Scilla bifolia* L.** – (n. 4709) – ref.: Sp. Pl. ed. 1 309 (1753); sin.: *Scilla subtriphylla*

Schur; *Scilla bifolia* L. subsp. *bifolia* var. *nivalis* (Boiss.) Baker; - Romania, Mehedinți, Șvinița, 03.04.1874, leg. Simkovics L.

Fam. *Alliaceae* J. Agardh, 1858

Subfam. *Allioideae*

Trib *Allieae*

Gen *Allium* L., 1753

***Allium albidum* Fisch. ex M.Bieb. subsp. *albidum*** - (n.4712) – ref.: Fl. taur.-caucas. 3:260. 1819 (F. E. L. Fischer, Cat. jard. Gorenki ed. 2. 10. 1812, nom. nud.?); sin.: *Allium flavescens* Besser; *Allium ammophilum* Heuff.; - Romania, Cluj, Cluj-Napoca, 15.07.1878, leg. Simkovics L.

***Allium angulosum* L.** - (n.4711) – ref.: Sp. Pl. ed. 1 300 (1753); sin.: *Allium acutangulum* Schrad.; - Hungary, Pest, Budapesta (Rakos), 28.07.1878, leg. Simkovics L.

***Allium oleraceum* L.** - (n.4715) – ref.: Sp. Pl. ed. 1 299 (1753); - Romania, Arad, Ineu (Boros Ieno), 01.08.1875, leg. Simkovics L.

***Allium paniculatum* L.** - (n.4716) – ref.: Syst. Nat. ed. 10 2: 978 (1759); sin.: *Allium praescissum* Rchb.; - Hungary, Pest, Csepel (between Csep and Tokol), 17.08.1875, leg. Simkovics L.

***Allium senescens* L. subsp. *montanum* (F.W.Schmidt) Holub** - (n.4710) – ref.: Folia Geobot. Phytotax. (Praha) 5: 341 (1970); sin.: *Allium montanum* F.W.Schmidt, non Schrank; *Allium lusitanicum* Lam.; *Allium fallax* Schult. & Schult.f., nom. illegit.; - Hungary, Pest, between Buda and Pilis Szanto, 12.08.1875, leg. Simkovics L.

***Allium sphaerocephalon* L.** - (n.4713) – ref.: Sp. Pl. ed. 1 297 (1753); sin.: *Allium cilicicum* auct. balcan., non Boiss.; - Hungary, Pest, Budapesta (Rakos), 17.06 – 08.07.1871, leg. Simkovics L.

***Allium vineale* L.** - (n.4714) – ref.: Sp. Pl. ed. 1 299 (1753); - Romania, Bihor, Oradea, 24.06.1879, leg. Simkovics L.

Fam. *Amaryllidaceae* jeune Saint-Hilaire, 1805, nom. cons

Trib *Zephyrantheae*

Gen *Sternbergia* Waldstein & Kitaibel, 1804

***Sternbergia colchiciflora* Waldst. & Kit.** – (n. 4700) – ref.: Pl. Rar. Hung. 2: 172 (1803-1804); sin.: *Sternbergia exscapa* Tineo; - Hungary, Pest, Budapesta, septembrie 1871, leg. Simkovics L.

***Sternbergia lutea* (L.) Ker Gawl. ex Spreng.** – (n. 4701) – ref.: Syst. Veg. ed. 16 2: 57 (1825); sin.: *Oporanthus luteus* (L.) Herb.; - Italy, Veneto, Venetia, Benaum, 10.09.1873, leg. G. Rigo.

Trib *Narciseae*  
Gen *Narcissus* L., 1753

***Narcissus poeticus* L. subsp. *radiiflorus* (Salisb.) Baker** – (n. 4702) – ref.: Handb. Amaryll. 12 (1888); sin.: *Narcissus radiiflorus* Salisb.; *Narcissus angustifolius* Curtis ex Haw.; *Narcissus poeticus* L. subsp. *angustifolius* Hegi; endemic; - Switzerland, Neuenburg, Neuchatel-Les Ponts-de-Martel, La Tourne, endemic, 11.06.1871, leg. Don de B. Jacob, a Cormoudeche. (Societe Helvetique).

Trib *Galantheae*  
Gen *Leucojum* L., 1753

***Leucojum vernum* L.** – (n. 4703) – ref.: Sp. Pl. ed. 1 289 (1753); endemic; - Romania, Bihor, Aleșd, Pădurea Neagră, endemic, 10.04.1876, leg. Simkovics L.

Gen *Galanthus* L., 1753

***Galanthus nivalis* L.** – (n. 4704) – ref.: Sp. Pl. ed. 1 288 (1753) ; - Hungary, Baranya, Vallany, 02.03.1873, leg. Simkovics L.

Ord. *Colchicales* Dumortier, 1829  
Fam. *Colchicaceae* A.P. de Candolle, 1805  
Subfam. *Colchicoideae*  
Gen *Bulbocodium* L., 1753

***Bulbocodium versicolor* (Ker Gawl.) Spreng.** - (n.4717) – ref.: Syst. Veg. ed. 16 2: 40 (1825); sin.: *Bulbocodium ruthenicum* Bunge; - Hungary, Hajdu-Bihar, Debretin (in the forest), 22.05.1878, leg. Simkovics L.

Gen *Colchicum* L., 1753

***Colchicum autumnale* L.** - (n.4718) – ref.: Sp. Pl. ed. 1 341 (1753); sin.: *Colchicum vernale* Hoffm.; *Colchicum praecox* Spenn.; *Colchicum transsilvanicum* Schur; *Colchicum vernum* Kunth; *Colchicum polyanthon* Ker Gawl.; *Colchicum vranjanum* Adamovic ex Stef.; *Colchicum multiflorum* Brot.; *Colchicum pannonicum* Griseb. & Schenk; *Colchicum bisignanii* Ten. ex Janka; *Colchicum bulgaricum* Velen.; *Colchicum haynaldii* Heuff.; *Colchicum commune* Neck.; - Romania, Bihor, Oradea, on the pasture, 20.05.1877 – September, leg. Simkovics L.

***Colchicum arenarium* Waldst. & Kit.** - (n.4719) – ref.: Pl. Rar. Hung. 2: 195 (1805); - Hungary, Pest, Budapesta (Rakos), October – May 1873, leg. Simkovics L.

***Colchicum cupanii* Guss.** – (n. 4720) – ref.: Fl. Sic. Prodr. 1: 452-3 (1827); sin.: *Colchicum bertolonii* Steven; *Colchicum parviflorum* Biv.; *Colchicum glossophyllum* Heldr.; *Colchicum rhenium* Heldr. ex Lakon; *Colchicum latifolium* Guss., non Sibth.

& Sm.; *Colchicum valery* Tineo ex Guss.; *Colchicum timidum* Heldr.; *Colchicum bertolonii* Steven subsp. *bertolonii*; *Colchicum creticum* Turrill; *Colchicum pusillum* Fiori & Bég., non Sieber; *Colchicum gussonei* Lojac.; - Hungary, Baranya, Harsenyi, 02.03.1873, leg. Simkovics L.

Ord. *Liliales* Perleb, 1826  
Fam. *Liliaceae* Adans, 1763, nom. cons.  
Trib *Tulipeae*  
Gen *Tulipa* L., 1753

***Tulipa agenensis* DC.** – (n. 4707) – ref.: *Liliacées* 1: 60 (1804); sin.: *Tulipa oculus-solis* St.-Amans; *Tulipa lortetii* Jord.; - France, Lot-et Garonne, Saint Mauris, on the field, 03.04.1874, leg. Ch. Arnaut.

Trib *Lloydieae*  
Gen *Gagea* R.A. Salisbury, 1806

***Gagea lutea* (L.) Ker Gawl.** – (n. 4708) – ref.: *Bot. Mag.* 30: t. 1200 (1809); sin.: *Gagea silvatica* (Pers.) Loudon; *Gagea erubescens* Besser; *Gagea burnatii* A.Terracc.; *Gagea reverchonii* Degen; - Hungary, Pest, Budapesta (mt. Ioannis), April 1871, leg. Simkovics L.

Ord. *Melanthiales* R. Dahlgren ex Reveal, 1992  
Fam. *Melanthiaceae* Batsch, 1802, nom. cons.  
Gen *Veratrum* L., 1753

***Veratrum album* L.** – (n. 4721) – ref.: *Sp. Pl. ed.* 1 1044 (1753); - Romania, Bihor, Aleșd, Pădurea Neagră, 26.05.1878, leg. Simkovics L.

***Veratrum nigrum* L.** – (n. 4722) – ref.: *Sp. Pl. ed.* 1 1044 (1753); - Romania, Transilvania, Alba, Cricau (Krakko), 08.07. 1876, leg. Csato (Flora Transilvanica).

Ord. *Iridales* Dumortier, 1829  
Fam. *Iridaceae* A.L. de jussieu, 1789  
Subfam. *Ixioideae*  
Trib *Ixieae*  
Gen *Crocus* L., 1753

***Crocus banaticus* J.Gay** – (n. 4694) – ref.: *Bull. Sci. Nat. Geol.* 25: 320 (1831); sin.: *Crociris iridiflora* (Heuff.) Schur; *Crocus iridiflorus* Heuff.; *Crocus byzantinus* Ker Gawl. pro parte; *Crocus nudiflorus* Schult., non Sm.; *Crocus speciosus* Rochel, non M.Bieb.; *Crocus herbertianus* Körn.; endemic; - Romania, Bihor, Bratca (in clear forest), 06.10.1878, leg. Simkovics L.

***Crocus vernus* (L.) Hill subsp. *vernus*** – (n. 4695) – sin.: *Crocus heuffelii* Körn.;

*Crocus heuffelianus* Herb.; *Crocus albiflorus* Kit. subsp. *heuffelianus* (Herb.) Hegi; *Crocus vittatus* Schloss. & Vuk., non Raf.; *Crocus discolor* G.Reuss; *Crocus exiguus* Schur; *Crocus scepusiensis* (Rehmann & Wol>I.) Borbás; *Crocus napolitanus* Mord.Laun. & Loisel.; *Crocus albiflorus* Kit. subsp. *neapolitanus* (Ker Gawl.) Hegi; *Crocus purpureus* Weston; *Crocus banaticus* Heuff., non J.Gay; *Crocus candidus* Schloss. & Vuk.; *Crocus uniflorus* Schur; *Crocus veluchensis* Schott, non Herb.; *Crocus babiogorensis* Zapal.; - Romania, Bihor, Oradea, 28.03.1877, leg. Simkovics L.

***Crocus flavus* Weston** – (n. 4696) – ref.: Univ. Bot. 2: 237 (1771); sin.: *Crocus maesiacus* Ker Gawl.; *Crocus vernus* Curtis, non (L.) Hill; *Crocus luteus* Lam.; *Crocus aureus* Sibth. & Sm.; *Crocus flavus* Haw., non Weston; *Crocus lageniflorus* Salisb.; *Crocus lacteus* Sabine; *Crocus floribundus* Haw.; - Romania, Mehedinți, Șvinița, 23.04.1874, leg. Simkovics L.

***Crocus biflorus* Mill.** – (n. 4697) – ref.: Gard. Dict. ed. 8 no. 4 (1768); sin.: *Crocus lineatus* Jan; *Crocus italicus* Gaudin; *Crocus argenteus* Sabine; *Crocus circumscissus* Haw.; *Crocus adamii* J.Gay; *Crocus minimus* Hook., non DC.; *Crocus annulatus* Herb.; *Crocus pusillus* Ten.; *Crocus alexandri* Nickic A ex Velen.; *Crocus tauricus* (Trautv.) Puring; *Crocus weldenii* Hoppe & Fürnr.; *Crocus pestalozzae* Boiss.; *Crocus praecox* Haw.; - Italy, Florenta, Mart 1878, leg. Levier (Herbarium etruscum).

Gen *Gladiolus* L., 1753

***Gladiolus imbricatus* L.** – (n. 4698) – ref.: Sp. Pl. ed. 1 37 (1753); sin.: *Gladiolus pauciflorus* Berdau; - Romania, Cluj, Cluj-Napoca (the Mill Valley), 16.07.1878, leg. Simkovics L.

Subfam. *Iridoideae*

Trb *Irideae*

Gen *Iris* L., 1753

***Iris variegata* L.** – (n. 4699) – ref.: Sp. Pl. ed. 1 38 (1753); sin.: *Iris mangaliae* Prodán; *Iris rudskyi* Horvat & M.D.Horvat; *Iris x squalens* L. subsp. *lepida* (Heuff.) Nyman; *Iris lepida* Heuff.; - Hungary, Pest, Budapesta, (on the hills), endemic, 07.06.1874, leg. Simkovics L.

Ord. *Orchidales* Dumortier, 1829

Fam. *Orchidaceae* Adans, 1763, nom. cons.

Gem *Coeloglossum* C.J. Hartman, 1820

***Coeloglossum viride* (L.) Hartm.** - (n. 4666) – ref.: Handb. Skand. Fl. ed. 1 329 (1820); sin.: *Coeloglossum purpureum* Schur; *Habenaria viridis* (L.) R.Br.; *Orchis viridis* L.; - Romania, Bihor, Padiș (Mt. Bihorului), 18.07.1879, leg. Simkovics L.

Gen *Himantoglossum* K. Kock

***Himantoglossum hircinum* (L.) Spreng.** - (n. 4665) – ref.: Syst. Veg. ed. 16 3: 694 (1826); sin.: *Aceras hircinum* (L.) Lindl.; *Loroglossum hircinum* (L.) Rich.; *Orchis hircina* (L.) Crantz; - Romania, Bihor, Oradea ( Somleu hills), 14.07.1876, leg. Simkovics L.

Gen *Nigritella* Rich.

***Nigritella nigra* (L.) Rchb.f.** - (n. 4667) – ref.: Icon. Fl. Germ. 13-14: 102 (1851); sin.: *Nigritella angustifolia* Rich.; *Nigritella miniata* (Crantz) Janch.; *Gymnadenia nigra* (L.) Rchb.; *Orchis nigra* (L.) Scop.; *Orchis reichenbachii* Mutel ; *Satyrium nigrum* L. (*Species Plantarum* 944. 1753.);- Switzerland, Jura, 30.06.1873, leg. Iacob.

Gen *Serapias* L., 1753

***Serapias neglecta* De Not.** - (n. 4669) – ref.: Repert. Fl. Ligust. 423 (1844) ; - France, Alpes maritimes, Cannes, 28.04.1875, leg. Masson.

Subfam. *Orchidoideae*Trib *Orchideae*Gen *Orchis* L., 1753

***Orchis coriophora* L.** - (n. 4659) – ref.: Sp. Pl. ed. 1 940 (1753); sin.: *Orchis nervulosa* Sakalo; - Hungary, Pest, Budapest (Rakos), 29.05.1875, leg. Simkovics L.

***Orchis laxiflora* Lam. subsp. *palustris* (Jacq.) Bonnier & Layens** - (n. 4660) – ref.: : Tabl. Syn. Pl. Vasc. 311 (1894); sin.: *Orchis palustris* Jacq.; *Orchis intermedia* J.Lloyd; - Hungary, Pest, Budapest, May 1875, leg. Simkovics L.

***Orchis militaris* L.** - (n. 4658) – ref.: Sp. Pl. ed. 1 941 (1753) ; - Romania, Mehedinți, Plevisevita (mt. Tucar), 23.05.1874, leg. Simkovics L.

***Orchis purpurea* Huds.** - (n. 4657) – ref.: Fl. Angl. ed. 1 334 (1762); - Hungary, Nadap (Meleghegy), May 1871, leg. Tauscher.

Gen *Dactylorhiza* Necker ex Nevski, 1937

***Dactylorhiza incarnata* (L.) Soó** - (n. 4662) – ref.: Nom. Nov. Gen. *Dactylorhiza* 3 (1962); sin.: *Orchis incarnata* L.; *Orchis strictifolia* Opiz; *Orchis incarnata* L. var. *incarnata*; *Orchis lanceolata* A.Dietr.; *Orchis impudica* Crantz; - Hungary, Pest, Budapesta (Rakos), May-June 1874, leg. Simkovics L.

***Dactylorhiza maculata* (L.) Soó** - (n. 4661) – ref.: Nom. Nov. Gen. *Dactylorhiza* 7 (1962); sin.: *Orchis maculata* L.; *Orchis maculata* L. subsp. *maculata* var. *maculate*; *Orchis cornubiensis* Pugsley; *Dactylorchis maculata* (L.) Verm.; *Dactylorchis maculata* (L.) Verm. subsp. *maculate*; - Romania, Cluj, Cluj-Napoca (Mill Valley), June 1878, leg. Simkovics L.



Gen *Anacamptis* I.C. Richard, 1817

***Anacamptis pyramidalis* (L.) Rich.** - (n. 4663) – ref.: Orchid. Eur. Annot. 33 (1817); sin.: *Aceras pyramidale* (L.) Rchb.f.; *Orchis pyramidalis* L.; *Anacamptis urvilleana* Sommier & Caruana; - Hungary, Pest, Budapesta (Rakos), June 1871, leg. Simkovics L.

Gen *Gymnadenia* R. Brown, in W. Aiton & W.T. Aiton, 1813

***Gymnadenia conopsea* (L.) R.Br.** - (n. 4664) – ref.: Hort. Kew. ed. 2 5: 191 (1813); sin.: *Orchis conopsea* L.; - Hungary, Pest, Budapesta (mt. Zugliget), June 1875, leg. Simkovics L.

Subfam. *Neottioideae*Trib *Epipactideae*Gen *Limodorum* Boehmer, in C.G. Ludwig, 1760, nom. cons.

***Limodorum abortivum* (L.) Sw.** - (n. 4668) – ref.: Nova Acta Reg. Soc. Sci. Upsal. 6: 80 (1799); sin.: *Ionorchis abortiva* (L.) Beck; *Centrosia abortiva* (L.) Sw.; - Hungary, Pest, Budapesta, 16.06.1871, leg. Simkovics L.

Gen *Cephalanthera* I.C. Richard, 1818

***Cephalanthera damasonium* (Mill.) Druce** - (n. 4671) – ref.: Ann. Scott. Nat. Hist. 1906: 225 (1906); sin.: *Cephalanthera grandiflora* Gray; *Cephalanthera alba* (Crantz) Simonk.; *Cephalanthera latifolia* Janch.; *Cephalanthera lonchophylla* (L.) Mansf.; *Cephalanthera pallens* Rich.; - Hungary, Pest, Budapesta, Jule-September 1871, leg. Simkovics L.

***Cephalanthera rubra* (L.) Rich.** - (n. 4670) – ref.: Orchid. Eur. Annot. 38 (1817); sin.: *Cephalanthera maravignae* Tineo; *Cephalanthera comosa* (L.) Simonk.; - Hungary, Pest, Budapesta, 05.06.1871, leg. Simkovics L.

Gen *Epipactis* Zinn

***Epipactis helleborine* (L.) Crantz** - (n. 4672) – ref.: Stirp. Austr. ed. 2 2: 467 (1769); sin.: *Epipactis latifolia* (L.) All.; *Epipactis viridiflora* (Hoffm.) H.Müll. pro parte; *Helleborine latifolia* (L.) Moench; *Helleborine viridans* Samp.; - Romania, Bihor, Oradea (forest), Jule 1877, leg. Simkovics L.

***Epipactis palustris* (L.) Crantz** - (n. 4673) – ref.: Stirp. Austr. ed. 2 2: 462 (1769); sin.: *Helleborine palustris* (L.) Schrank; - Hungary, Pest, Budapesta, June 1872, leg. Simkovics L.

Subclas. *Commelinidae* Tahtajan, 1967Superord. *Juncanae* Tahtajan, 1967

Ord. *Juncales* Dumortier, 1829  
Fam. *Juncaceae* Durande, 1782, nom. cons.  
Gen *Juncus* L., 1753

***Juncus conglomeratus* L.** – (n. 4723) – ref.: Sp. Pl. ed. 1 326 (1753); sin.: *Juncus communis* E.Mey. pro parte; *Juncus leersii* T.Marsson; *Juncus matthioli* Bubani; *Juncus subuliflorus* Drejer; - Hungary, Kis Narja (Narja), in peat bags, 17.07.1876, leg. Simkovics L.

***Juncus effusus* L.** - (n. 4724) – ref.: Sp. Pl. ed. 1 326 (1753); sin.: *Juncus communis* E.Mey. pro parte; *Juncus fistulosus* Guss.; *Juncus expansus* Jan; *Juncus pylaei* Laharpe; - Romania, Bihor, Oradea (on the skirt of the railroad), 09.06.1877, leg. Simkovics L.

***Juncus diffusus* Hoppe** - (n.4725) – sin.: *Juncus glauco-effusus* Schnizl. & Frickh.; - Romania, Bihor, between Drăgănești and Sudrigiu, 16.07.1879, leg. Simkovics L.

***Juncus inflexus* L.** – ( n. 4726) – ref.: Sp. Pl. ed. 1 326 (1753); sin.: *Juncus glaucus* Sibth.; *Juncus paniculatus* Hoppe, non Lucé; *Juncus tenax* Poir.; *Juncus brachyterpalus* (Trautv.) V.I.Krecz. & Gontsch.; *Juncus reflexus* Wender.; *Juncus deangelisii* Bertol.; *Juncus depauperatus* Ten.; *Juncus angelisii* Ten.; *Juncus diaphragmarius* Brot.; *Juncus elatus* Steud.; *Juncus acutus* Thuill.; *Juncus longicornis* Bastard; *Juncus pallidus* Hoppe, non R.Br.; *Juncus tenax* Banks & Sol.; - Hungary, Baranya, Villany, 13.07.1873, leg. Simkovics L.

***Juncus articulatus* L.** – (n. 4727) – ref.: Sp. Pl. ed. 1 327 (1753); sin.: *Juncus lampocarpus* Ehrh. ex Hoffm.; *Juncus foliosus* Hoppe, non Desf.; *Juncus longicapsularis* Chevall.; *Juncus macrocephalus* Viv.; *Juncus nigrifellus* D.Don; *Juncus gussonei* Parl.; *Juncus repens* Nolte; *Juncus olympicus* Schott; *Juncus tricephalus* J.Gay; *Juncus adscendens* Host; *Juncus paniculatus* Lucé; *Juncus affinis* Gaudin pro parte; *Juncus alpinoarticulatus* Chaix; *Juncus pallidiflorus* Beck; *Juncus isthmicus* Neck.; *Juncus radicans* Schur; *Juncus aquaticus* All.; *Juncus aristiflorus* Clairv.; *Juncus polycephalus* D.Don; *Juncus castellii* Tineo; - Hungary, Pest, Csepel Island, Ujfalu, 04.08.1870, leg. I.A. Tauscher.

***Juncus articulatus* L.** – (n. 4728) – ref.: Sp. Pl. ed. 1 327 (1753); sin.: *Juncus lampocarpus* Ehrh. ex Hoffm.; *Juncus foliosus* Hoppe, non Desf.; s.a. - Romania, Bihor, Oradea (in the damp places), 12.07.1877, leg. Simkovics L.

***Juncus atratus* Krock.** - (n. 4729) – ref.: Fl. Siles. 1: 562 (1787); sin.: *Juncus septangulus* Peterm.; *Juncus melananthos* Rchb.; *Juncus serotinus* Schur; - Ungaria, Kis Marja, 17.07.1876, leg. Simkovics L.

***Juncus compressus* Jacq.** - (n. 4730) – ref.: Enum. Stirp. Vindob. 60, 235 (1762); sin.: *Juncus soranthus* A.K.Becker, non Schrenk; *Juncus bracteosus* Kit.; *Juncus bulbosus* auct. et L. (1762), non L. (1753); - Hungary, Baranya, Darda, 01.08.1873, leg. Simkovics L.

***Juncus gerardi* Loisel.** - (n. 4731) – ref.: Jour. Bot. Rédigé 2: 284 (1809); sin.: *Juncus fominii* Zoz; *Juncus consanguineus* Ziz; *Juncus coenosus* Bicheno; *Juncus lesbiacus* P.Candargy; *Juncus attenuatus* Viv.; *Juncus bulbosus* auct. et L. (1762), non L. (1753); *Juncus bottnicus* Wahlenb.; *Juncus nitidiflorus* Dufour; - Romania, Bihor, Oradea (on the damp places), 10.05.1877, leg. Simkovics L.

***Juncus bufonius* L. f. *fasciculata* Koch.** - (n. 4732) – ref.: Sp. Pl. ed. 1 328 (1753); - Hungary, Fejer, Szt. Peter, 10.06.1876, leg. I.A.Tauscher.

***Juncus bufonius* L.** - (n. 4733) – ref.: Sp. Pl. ed. 1 328 (1753); sin.: *Juncus dregeanus* C.Presl; *Juncus divaricatus* Gilib.; - Romania, Bihor, Oradea, 12.07.1877, leg. Simkovics L.

***Juncus sphaerocarpus* Nees** - (n. 4734) – ref.: Flora (Regensb.) 1: 521 (1818); - Hungary, Baranya, Pecs, 22.07.1873, leg. Simkovics L.

Gen *Luzula* A.P. de Candolle, 1805

***Luzula alpinopilosa* (Chaix) Breistr.** - (n. 4737) – ref.: Bull. Soc. Sci. Dauph. 61: 609 (1947); sin.: *Luzula spadicea* (All.) DC.; *Luzula spadicea* (All.) DC. var. *spadicea*; - Romania, Hunedoara (Hateg County), Mt. Retezat, Zănoaga lake, Jule-August 1874, leg. Simkovics L.

***Luzula campestris* (L.) DC.** - (n. 4738) – ref.: Fl. Fr. ed. 3 3: 161 (1805); sin.: *Luzula campestris* (L.) DC. subsp. *alpestris* (Beyer) C\$Kelak.; *Luzula campestris* (L.) DC. subsp. *vulgaris* (Gaudin) Buchenau; *Luzula subpilosa* V.I.Krecz.; *Luzula calabra* Ten.; - Hungary, Pest, Budapesta (Rakos), April 1871, leg. Simkovics L.

***Luzula forsteri* (Sm.) DC.** - (n. 4736) – ref.: Syn. Pl. Fl. Gall. 150 (1806); sin.: *Luzula caspica* Rupr. ex Bordz.; - Romania, Mehedinți, Orșova (mt. Alion), May-April, 1874, leg. Simkovics L.

***Luzula pilosa* (L.) Willd.** - (n. 4735) – ref.: Enum. Pl. Horti Berol. 393 (1809); sin.: *Luzula vernalis* (Reichard) DC.; - Romania, Caraș-Severin, Băile Herculane, May 1874, leg. Simkovics L.

***Luzula luzuloides* (Lam.) Dandy & Wilmott** - (n. 4739) – ref.: Jour. Bot. (London) 76: 352 (1938); sin.: *Luzula nemorosa* (Pollich) E.Mey., non Hornem.; *Luzula angustifolia* (Wulfen) Wender.; *Luzula albida* (Hoffm.) DC.; - Romania, Hunedoara, Hateg, 17.08.1874, leg. Simkovics L.

***Luzula multiflora* (Retz.) Lej.** - (n. 4740) – ref.: Fl. Spa 1: 169 (1811); sin.: *Luzula campestris* (L.) DC. subsp. *multiflora* (Retz.) Buchenau; *Luzula erecta* Desv.; - Romania, Bihor, Oradea (forest), 17.06.1877, leg. Simkovics L.

***Luzula sudetica* (Willd.) DC.** - (n. 4741) – ref.: Fl. Fr. ed. 3 5: 306 (1815); sin.: *Luzula nigricans* Desv.; *Luzula campestris* (L.) DC. subsp. *sudetica* (Willd.) Celak.; *Luzula multiflora* (Retz.) Lej. subsp. *nigricans* (Desv.) W.D.J.Koch; - Romania, Bihor (Bihor Montains), Pietroasa, 17.07.1879, leg. Simkovics L.

Ord. *Cyperales* Burnett, 1835  
 Fam. *Cyperaceae* A.L. de Jussieu, 1789, nom.cons.  
 Subfam. *Cyperoideae*  
 Gen *Cyperus* L., 1753

***Cyperus fuscus* L.** – (n.4742) – ref.: Sp. Pl. ed. 1 46 (1753); sin.: *Cyperus calidus* A.Kern.; *Cyperus virescens* Hoffm.; - Hungary, Szabolcs-Szatmar-Bereg, Halasz, 08.09. 1872, leg. Simkovics L.

***Cyperus glomeratus* L.** – (n.4743) – ref.: Cent. Pl. 2: 5 (1756); sin.: *Chlorocyperus glomeratus* (L.) Palla; *Pycneus glomeratus* (L.) Hayek; - Slovenia, Lasko (on the bank of the Drava river), 10.08.1873, leg. Simkovics L.

***Cyperus flavescens* L.** – (n.4744) – ref.: Sp. Pl. ed. 1 46 (1753); sin.: *Pycneus flavescens* (L.) Rchb.; - Romania, Bihor, Oradea, 25.08.1877, leg. Simkovics L.

***Cyperus pannonicus* Jacq.** – (n.4745) – ref.: Fl. Austr. 5: 29 (1778); sin.: *Acorellus pannonicus* (Jacq.) Palla; - Hungary, Szabolcs-Szatmar-Bereg, Nyirgyhaza, August 1871, leg. Simkovics L.

Gen *Schoenus* L., 1753

***Schoenus nigricans* L.** – (n.4746) – ref.: Sp. Pl. ed. 1 43 (1753); - Hungary, Pest, Budapesta (Lopormalon), 23.03.1873, leg. Simkovics L.

Gen *Cladium* P. Browne, 1756

***Cladium mariscus* (L.) Pohl** – (n.4747) – ref.: Tent. Fl. Bohem. 1: 32 (1809); - Hungary, Zala, Kasthely (the west side of the Balaton lake), 17.08.1873, leg. Simkovics L.

Gen *Eleocharis* R. Brown, 1810

***Eleocharis acicularis* (L.) Roem. & Schult.** – (n.4751) – ref.: Syst. Veg. ed. nov. (15) 2: 154 (1817); sin.: *Scirpus acicularis* L.; - Hungary, Pest, Csepel Island, Schillia, Jule 1876, leg. I.A. Tauscher.

***Eleocharis carniolica* W.D.J.Koch** – (n.4750) – ref.: J. Bot. 25: 269. 1887; sin.: *Heleocharis carniolica* Koch [Fl. Germ. ed. 2 853 (1844)]; - Romania, Bihor, Oradea, damp forest, 12.07. - 08.1877, leg. Simkovics L.

***Eleocharis quinqueflora* (Hartmann) O.Schwarz** – (n.4752) – ref.: Mitt. Thür. Bot. Ges. 1: 89 (1949); sin.: *Eleocharis pauciflora* (Lightf.) Link; *Eleocharis czernjajevii* Zoz; *Eleocharis vierhapperi* Bojke; *Scirpus pauciflorus* Lightf.; - Hungary, Pest, Budapesta (Rakos), 29.05.1875, leg. Simkovics L.

***Eleocharis ovata* (Roth) Roem. & Schult.** – (n.4749) – ref.: Syst. Veg. ed. nov. (15) 2: 152 (1817); sin.: *Heleocharis ovata* (Roth); *Eleocharis soloniensis* (Dubois)

Mansf.; *Scirpus ovatus* Roth; - Romania, Bihor, Oradea, Jule-August 1877, leg. Simkovics L.

***Eleocharis palustris* (L.) Roem. & Schult.** – (n.4748) – ref.: Syst. Veg. ed. nov. (15) 2: 151 (1817); sin.: *Heleocharis palustris* L.; *Eleocharis oxystachys* Sakalo; *Eleocharis glaucescens* (Willd.) Schult.; *Eleocharis boissieri* Podp.; *Eleocharis eupalustris* H.Lindb.; *Eleocharis gracilis* Hayek; *Eleocharis levinae* Zoz; *Eleocharis intersita* Zinserl.; *Eleocharis nebrodensis* Parl.; *Scirpus palustris* L.; - Hungary, Vaszprem, Herend, 22.08.1873, leg. Simkovics L.

#### Gen *Scirpus* L., 1753

***Scirpus mucronatus* L.** – (n.4753) – ref.: Sp. Pl. ed. 1 50 (1753); sin.: *Schoenoplectus mucronatus* (L.) Palla; - Hungary, Baranya, Sellye, 06.08.1873, leg. Simkovics L.

***Scirpus triqueter* L.** – (n.4754) – ref.: Mantissa 29 (1767); sin.: *Schoenoplectus triqueter* (L.) Palla; - Hungary, Baranya, Villany, 14.07.1873, leg. Simkovics L.

***Scirpus pungens* Vahl** – (n.4755) – ref.: Enum. Pl. 2: 255 (1805); sin.: *Scirpus americanus* auct. eur., non Pers.; *Schoenoplectus americanus* auct.; - Hungary, Zala, at the lap of the Badacsony mountain, on the border the, Balaton lake, 18.08.1873, leg. Simkovics L.

***Scirpus lacustris* L. subsp. *tabernaemontani* (C.C.Gmel.) Syme** – (n.4756) – ref.: Engl. Bot. ed. 3 10: 64 (1870); sin.: *Scirpus tabernaemontani* C.C.Gmel.; *Scirpus glaucus* Sm., non Lam.; *Schoenoplectus tabernaemontani* (C.C.Gmel.) Palla; *Scirpus globifer* Welw. ex Steud.; - Hungary, Szabolcs-Szatmar-Berg, Geszterg, August 1873, leg. Simkovics L.

***Scirpus maritimus* L.** – (n.4757) – ref.: Sp. Pl. ed. 1 51 (1753); - Hungary, Ban Bodrog, in damp plces, August 1875, leg. A. Sztehlo (Flora Hungarica).

***Scirpus sylvaticus* L.** – (n.4758) – ref.: Sp. Pl. ed. 1 51 (1753); - Hungary, Csongrad, Eperjes, Sovari, 1868, leg. Simkovics L.

***Scirpus supinus* L.** – (n.4759) – ref.: Sp. Pl. ed. 1 49 (1753); sin.: *Isolepis supina* (L.) R.Br.; *Schoenoplectus supinus* (L.) Palla; *Scirpus melanospermus* C.A.Mey.; - Romania, Bihor, Oradea, forest, Jule-August 1877, leg. Simkovics L.

#### Gen *Isolepis* R. Brown, 1810

***Isolepis holoschoeum* L.** – (n.4760) – sin.: *Cyperus holoschenus* (L.) E.H.L. Krause in Sturm [1900, Deutschl. Fl., ed. 2, 2 : 20]; *Holoschoenus vulgaris* Fritsch; *Holoschoenus vulgaris* Link ( Hort. Berol. 1: 293 (1827); *Holoschoenus romanus* (L.) Fritsch; *Isolepis holoschoenus* (L.) Roem. et Schult.; *Scirpus holoschoenus* L., [ Sp. Pl. ed. 1 49 (1753); Čas. Nár. Mus., Odd. Přír. 140:127. 1972]; *Scirpoides*

*holoschoenus* ssp. *holschoenus* Greuter; - Hungary, Pest, Csepel Island, Tokol, June 1869, leg. Simkovics L.

***Isolepis michelianus* L.** – (n.4761) – ref.: Hort. Berol. 1: 303 (1827); sin.: *Cyperus michelianus* (L.) Link ; *Dichostylis michelinus* (L.) Nees; *Elocharis micheliana* (L.) Rchb.; *Isolepis micheliana* (L.) Roem. Et Schl.; *Fimbristylis micheliana* (L.) Rchb.; *Scirpus michelianus* L.; - Hungary, Szabolcs-Szatmar-Bereg, between Ibrany and Halasz, September 1871, leg. Simkovics L.

Gen *Blysmus* Panzer ex J.A. Schultes, 1824

***Blysmus compressus* (L.) Panz. ex Link** – (n.4763) – ref.: Hort. Berol. 1: 278 (1827); sin.: *Scirpus caricinus* Schrad.; *Scirpus planifolius* Grimm; *Scirpus compressus* (L.) Pers., non Moench; - Romania, Cluj, Cluj-Napoca (Mill Valley), 16.07.1878, leg. Simkovics L.

***Blysmus rufus* (Huds.) Link** – (n.4762) – ref.: Hort. Berol. 1: 278 (1827); sin.: *Scirpus rufus* (Huds.) Schrad. – Germany, Saxony-Anhalt, Oberroblingen, Eisleben (Lutherstadt Eisleben), 1974, leg. Kuntze.

Gen *Eriophorum* L., 1753

***Eriophorum angustifolium* Honck.** – (n.4765) – ref.: Vollst. Syst. Verz. 153 (1782); sin.: *Eriophorum angustifolium* Honck. subsp. *subarcticum* (V.N.Vassil.) Hultén; *Eriophorum polystachyum* L. pro parte; *Eriophorum polystachion* L. pro parte; *Eriophorum angustifolium* Honck. subsp. *alpinum* (Gaudin) Rothm.; - Hungary, Csongrad, Eperjes, 1868, leg. Simkovics L.

***Eriophorum latifolium* Hoppe** – (n.4764) – ref.: Bot. Taschenb. 1800: 108 (1800); sin.: *Eriophorum polystachyum* L. pro parte; *Eriophorum polystachion* L. pro parte; - Romania, Bihor, between Bratca and Ponor, 30.05.1878, leg. Simkovics L.

Subfam. *Caricoideae*

Gen *Carex* L., 1753

***Carex acuta* L.** – (n.4787) – ref.: Sp. Pl. ed. 1 978 (1753); sin.: *Carex acuta* L. subsp. *intermedia* Celak.; *Carex acuta* L. subsp. *erecta* Kük.; *Carex sareptana* V.I.Krecz.; *Carex mauritanica* Boiss. & Reut.; *Carex gracilis* Curtis subsp. *intermedia* (C Kelak.) Soó; *Carex panormitana* Guss.; *Carex gracilis* Curtis; *Carex gracilis* Curtis subsp. *gracilis*; *Carex cespitosa* L. var. *panormitana* (Guss.) Fiori; *Carex tricostata* Fr.; *Carex fuscovaginata* sensu V.I.Krecz., non Kük.; *Carex cespitosa* L. var. *gracilis* (Curtis) Fiori; *Carex graciliformis* V.I.Krecz.; - Romania, Bihor, Tărian, 20.05.1877, leg. Simkovics L.

***Carex acutiformis* Ehrh.** – (n.4815) – ref.: Beitr. Naturk. 4: 43 (1789); sin.: *Carex paludosa* Gooden.; *Carex paludosa* Gooden. subsp. *kochiana* (DC.) Arcang.;



*Carex riparia* Curtis subsp. *riparia* var. *acutiformis* (Ehrh.) Fiori; *Carex paludosa* Gooden. subsp. *paludosa*; - Romania, Bihor, Oradea and Sânmartin, on the bank of the Peța rivulet, 25.05.1877, leg. Simkovics L.

***Carex alba* Scop.** – (n.4796) – ref.: Fl. Carn. ed. 2 2: 216 (1772); - Hungary, Bakony, 23.04.1873, leg. Simkovics L.

***Carex atrata* L.** – (n.4788) – ref.: Sp. Pl. ed. 1 976 (1753); - Romania, Hunedoara, the Hațeg area, 30.07.1872, leg. Simkovics L.

***Carex brevicollis* DC.** – (n. 4803) – ref.: Fl. Fr. ed. 3 5: 295 (1815); - Romania, Mehedinti, Plevisevita, 23.05.1874, leg. Simkovics L.

***Carex brizoides* L.** – (n.4778) – ref.: Cent. Pl. 1: 31 (1755); - Romania, Bihor, Aleșd, Pădurea Neagră; 25.05.1878, Leg. Simkovics L.

***Carex brunnescens* (Pers.) Poir.** – (n.4821) – ref.: Encycl. Méth. Bot. Suppl. 3: 286 (1813); sin.: *Carex vitilis* Fr.; *Carex vitilis* Fr. subsp. *vitilis* (Fr.) Kalela; *Carex persoonii* Sieber; *Carex persoonii* Sieber subsp. *persoonii*; - Austria, Tirol, Lienz, 03.08.1870, leg. Garder.

***Carex buekii* Wimm.** – (n.4786) – ref.: Fl. Schles. ed. 3 81 (1857); sin.: *Carex cespitosa* L. var. *buekii* (Wimm.) Fiori; - Romania, Cluj, Cluj-Napoca, 01.06.1878, leg. Simkovics L.

***Carex caryophyllea* Latourr.** – (n.4792) – ref.: Chlor. Lugd. 27 (1785); sin.: *Carex verna* Chaix, non Lam.; *Carex fuscotincta* Merino; *Carex caryophyllea* Latourr. subsp. *trachyantha* (Dorner) Degen; *Carex ruthenica* V.I.Krecz.; *Carex praecox* Jacq., non Schreb.; - Hungary, Pest, Budapesta, 05.06.1872, leg. Simkovics L.

***Carex curta* Gooden.** – (n.4784) – ref.: Trans. Linn. Soc. London 2: 145 (1794); sin.: *Carex canescens* auct., non L.; *Carex hylaea* V.I.Krecz.; - Romania, Hunedoara, Mt. Retezat, Zănoaga lake, 16.08.1874, leg. Simkovics L.

***Carex curvula* All.** – (n.4768) – ref.: Fl. Pedem. 2: 264 (1785); Encicl. (Lamarck) 3 (2): 380. 1792 [13 febr. 1792]; sin.: *Carex tripartita* All.; - Romania, Hunedoara, the Hațeg area, Zănoaga, Jule-August 1874, leg. Simkovics L.

***Carex digitata* L.** – (n.4795) – ref.: Sp. Pl. ed. 1 975 (1753); sin.: *Carex digitata* L. subsp. *piroskana* (Nyár.) SEerb. & Nyár.; *Carex ornithopoda* auct. balcan. pro parte, non Willd.; *Carex digitata* L. subsp. *bulgarica* (Velen.) Nyman; - Romania, Bihor, Oradea, 05.05.1877, leg. Simkovics L.

***Carex distans* L.** – (n.4808) – ref.: Syst. Nat. ed. 10 2: 1263 (1759); sin.: *Carex forficula* Sennen; *Carex distans* L. subsp. *adriatica* Degen; *Carex bessarabica* (Sa\$Bvul. & Rayss) Zahar.; *Carex mariae-victorinii* Sennen; - Hungary, Szabolcs-Szatmar-Bereg, Demecser, May 1873, leg. Simkovics L.

***Carex distans* L.** – (n.4809) – ref.: Syst. Nat. ed. 10 2: 1263 (1759); sin.: *Carex forficula* Sennen; *Carex distans* L. subsp. *adriatica* Degen; *Carex bessarabica* (Sa\$Bvul. & Rayss) Zahar.; *Carex mariae-victorinii* Sennen; - Hungary, Szabolcs-Szatmar-Bereg, Demecser, May 1873, leg. Simkovics L.

**Carex disticha** Huds. – (n.4771) – ref.: Fl. Angl. ed. 1 347 (1762); sin.: *Carex teretiusscula* Gooden. subsp. *modesta* (J.Gay) Nyman; *Carex intermedia* Gooden., non Retz.; - Hungary, Szabolcs-Szatmar-Bereg, Nyiregyhaza, 23.05.1873, leg. Simkovics L.

**Carex divisa** Huds. – (n.4770) – ref.: Fl. Angl. ed. 1 348 (1762); sin.: *Carex disticha* auct. lusit., non Huds.; *Carex divisa* Huds. subsp. *ammophila* (Willd.) C.Vicioso; *Carex algarbiensis* Samp.; *Carex chaetophylla* Steud.; *Carex divisa* Huds. subsp. *chaetophylla* (Steud.) Nyman; *Carex divisa* Huds. subsp. *divisa* var. *chaetophylla* (Steud.) Fiori; *Carex ammophila* Willd.; *Carex chordorrhiza* sensu Willk., non L.f.; *Carex setifolia* Godr., non Kunze; *Carex rivalis* sensu Willk., non Gooden.; - Hungary, Pest, Budapesta (Rakos), 11.05.1873, leg. Simkovics L.

**Carex divulsa** Stokes – (n.4775) – ref.: Arr. Br. Pl. ed. 2 2: 1035 (1787); sin.: *Carex virens* Lam.; - Romania, Bihor, Oradea, Săldăbagiu (forest), 05.05.1877, leg. Simkovics

**Carex echinata** Murray – (n.4782) – ref.: Prodr. Stirp. Gotting. 76 (1770); sin.: *Carex grypos* Schkuhr.(Beschr., 2: 18, 1806); *Carex echinata* Murray subsp. *grypos* (Schkuhr) Arcang.; *Carex echinata* Murray subsp. *echinata* var. *grypos* (Schkuhr) Fiori; *Carex echinata proles grypos* (Schkuhr) Rouy; *Carex muricata* auct., non L.; *Carex stellulata* Gooden.; *Carex stellulata* Gooden. var. *grypos* (Schkuhr) W.D.J. Koch; *Vignea echinata* (Murray) Fourr.; - Romania, Bihor, Sărcău, 06.08.1874, leg. Simkovics L.

**Carex elata** All. subsp. *elata* – (n.4785) – ref.: *Flora Pedemontana* 2: 272. 1785.; nume botanic cu statut acceptat sin.: *Carex stricta* Gooden., non Lam.; *Carex fusca* All. subsp. *fusca* var. *broterana* (Samp.) C.Vicioso; *Carex hudsonii* A.Benn.; *Carex broterana* Samp.; - Hungary, Pest, Budapesta, 15.05.1873, leg. Simkovics L.

**Carex flacca** Schreb. subsp. *flacca* – (n.4799) – ref.: sin.: *Carex glauca* Scop.; *Carex glauca* Scop. subsp. *glauca*; *Carex glauca* Scop. subsp. *diversicolor* (Crantz) Moravec; *Carex recurva* Huds. subsp. *praetutiana* (Parl.) Arcang.; *Carex recurva* Huds.; *Carex diversicolor* Crantz var. *claviformis* (Hoppe); *Carex glauca* Scop. subsp. *claviformis* (Hoppe) Schinz & R.Keller; *Carex glauca* Scop. subsp. *praetutiana* (Parl.) Nyman; *Carex trachycarpus* Link; *Carex recurva* Huds. subsp. *erythrostachys* (Hoppe) Arcang.; *Carex recurva* Huds. subsp. *parlatoreana* (Ces.) Arcang.; *Carex claviformis* Hoppe; *Carex diversicolor* Crantz var. *diversicolor* pro parte; *Carex recurva* Huds. subsp. *recurva*; *Carex flacca* Schreb. subsp. *claviformis* (Hoppe) Degen; - Hungary, Pest, Budapesta (Rakos), 15.05.1872, leg. Simkovics L.

**Carex flava** L. – (n.4806) – ref.: Sp. Pl. ed. 1 975 (1753); sin.: *Carex flava* L. subsp. *vulgaris* (Döll) Hegi; *Carex nevadensis* Boiss. & Reut. subsp. *flavella* (V.I.Krecz.) Patzke & Podlech; *Carex flavella* V.I.Krecz.; - Hungary, Pest, damp fields, 11.05.1873, leg. Simkovics L.

**Carex hallerana** Asso – (n.4793) – ref.: Syn. Stirp. Arag. 133 (1779); sin.: *Carex hallerana* Asso subsp. *corsica* (Mabille) Cif. & Giacom.; *Carex alpestris* All.; *Carex*

*allorgei* Sennen; *Carex gynobasis* Vill.; - Hungary, Pest, Budapesta (Zugliget), May 1871, leg. Simkovics L.

***Carex hirta* L.** – (n.4817) – ref.: Sp. Pl. ed. 1 975 (1753); sin.: *Carex hirta* L. subsp. *hirtaeformis* (Pers.) Janch.; - Hungary, Pest, the Csepel Island, Ujfalu, damp fields, 22.05.1869, leg I.A. Tauscher.

***Carex hordeistichos* Vill.** – (n.4805) – ref.: Hist. Pl. Dauph. 2: 221 (1787); - Romania, Cluj, Cluj-Napoca, 15.07.1878, leg. Simkovics L.

***Carex hostiana* DC.** – (n.4810) – ref.: Cat. Pl. Horti Monsp. 88 (1813); sin.: *Carex fulva* sensu Host, ? an Schkuhr; *Carex distans* L. subsp. *distans* var. *hostiana* (DC.) Fiori; *Carex hornschruchiana* Hoppe; *Carex hornschruchiana* Hoppe subsp. *eckeroeensis* H.Lindb. & Palmgr.; *Carex hornschruchiana* Hoppe subsp. *hornschruchiana*; - Hungary, Pest, Budapesta, 10.06.1873, leg. Simkovics L.

***Carex humilis* Leyss.** – (n.4794) – ref.: Fl. Hal. ed. 1 175 (1761); - Hungary, Pest, Budapesta, 06.05.1874, leg. Simkovics L.

***Carex lachenalii* Schkuhr** – (n.4781) – ref.: Besch. Abbild. Riedgr. 51 (1801); sin.: *Carex lagopina* Wahlenb.; *Carex tripartita* auct., non All.; *Carex furva* Webb; *Carex heleonastes* L.f. var. *lachenalii* (Schkuhr) Fiori; - Switzerland, Vallais, 13.08.1872, leg. Favrat.

***Carex liparocarpos* Gaudin subsp. *liparocarpos*** – (n.4818) – ref.: nume botanic cu statut **acceptat**; sin.: *Carex obesa* auct., non All.; *Carex palentina* Losa & P.Monts.; - Hungary, Pest, Budapesta, 27.05.1873, leg. Simkovics L.

***Carex michelii* Host** – (n.4804) – ref.: Syn. Pl. Austr. 507 (1797); - Hungary, Pest, Piliscsaba, 15.06.1875, leg. Simkovics L.

***Carex mackenziei* V.I.Krecz.** – (n.4820) – ref.: Fl. URSS 3: 183 (1935); sin.: *Carex norvegica* Willd., non Retz.; - Sweden, Goelborg, 25.06.1871, leg. Reutermann.

***Carex melanostachya* M.Bieb. ex Willd.** – (n.4816) – ref.: Sp. Pl. 4: 299 (1805); sin.: *Carex nutans* Host, non J.F.Gmel.; - Hungary, Pest, the Csepel Island, Schellesy, 22.05.1869, leg I.A. Tauscher.

***Carex montana* L.** – (n.4791) – ref.: Sp. Pl. ed. 1 975 (1753); sin.: *Carex montana* L. subsp. *csetzii* (Janka) Nyman; - Hungary, Pest, Budapesta (Zugliget), 15.05.1874, leg. Simkovics L.

***Carex muricata* L.** – (n.4773) – ref.: Sp. Pl. ed. 1 974 (1753); - Hungary, Baranya, Pecs, Mecsek, June, 1877, leg. Simkovics L.

***Carex muricata* L.** – (n.4774) – ref.: Sp. Pl. ed. 1 974 (1753); - Romania, Bihor, Oradea, 10.06.1877, leg. Simkovics L.

***Carex norvegica* Retz. subsp. *norvegica*** – (n.4819) – ref.: Fl. Scand. Prodr. ed. 1 179 (1779); sin.: *Carex vahlii* Schkuhr; *Carex alpina* Lilj., non Schrank; *Carex media* R.Br. subsp. *media*; *Carex halleri* auct., ? an Gunnerus; - Switzerland, Albula, 17.08.1877, leg. Jaggi.

**Carex ovalis Gooden.** – (n.4780) – ref.: Trans. Linn. Soc. London 2: 148 (1794); sin.: *Carex leporina* auct., non L.; *Carex cousturieri* Gand.; *Carex leporina* auct., non L. subsp. *leporina*; *Carex argyroglochin* Hornem.; *Carex sicula* Tineo; *Carex elongata* sensu Willk., non L.; *Carex leporina* auct., non L. subsp. *sicula* (Tineo) Nyman; - Romania, Bihor, Sarcău, 06.08.1874, leg. Simkovics L.

**Carex pallescens L.** – (n.4801) – ref.: Sp. Pl. ed. 1 977 (1753); - Hungary, Pest, Budapesta, 30.05.1871, leg. Simkovics L.

**Carex panicea L.** – (n.4798) – ref.: Sp. Pl. ed. 1 977 (1753); sin.: *Carex panicea* L. subsp. *dalmatica* Degen & Lengyel; - Hungary, Szabolcs-Szatmar-Bereg, Nyirgyhaza, 23.06.1873, leg. Simkovics L.

**Carex paniculata L.** – (n.4776) – ref.: Cent. Pl. 1: 32 (1755); - Hungary, Baranya, Pecs, Kis Melyvolgy, 04.06.1873, leg. Simkovics L.

**Carex pendula Huds.** – (n.4800) – ref.: Fl. Angl. ed. 1 352 (1762); sin.: *Carex maxima* Scop.; - Hungary, Baranya, Pecs, 04.06.1873, leg. Simkovics L.

**Carex pilosa Scop.** – (n.4797) – ref.: Fl. Carn. ed. 2 2: 226 (1772); - Romania, Bihor, Sânmartin, Băile 1 Mai (28 April) and Săldăbagiu (5 May); 28.04 si 05.05.1877, leg. Simkovics L.

**Carex praecox Schreb.** – (n.4777) – ref.: Spicil. Fl. Lips. 63 (1771); sin.: *Carex schreberi* Schrank; *Carex praecox* Schreb. subsp. *velenovskiyi* (Domin) Jílek; *Carex curvata* Knaf; *Carex brizoides* L. var. *praecox* (Schreb.) Fiori; *Carex schreberi* Schrank subsp. *schreberi*; *Carex praecox* Schreb. subsp. *curvata* (Knaf) Kük.; *Carex praecox* Schreb. subsp. *intermedia* (Kelak.) W.Schultze-Motel; *Carex brizoides* L. subsp. *intermedia* Kelak.; *Carex schreberi* Schrank subsp. *curvata* (Knaf) P.Fourn.; *Carex brizoides* L. subsp. *curvata* (Knaf) Binz; - Romania, Bihor, Oradea, April-May, 1877, leg. Simkovics L.

**Carex praecox Schreb.** – (n.4779) – ref.: Spicil. Fl. Lips. 63 (1771); sin.: *Carex curvata* Knaf; *Carex praecox* Schreb. subsp. *velenovskiyi* (Domin) Jílek; *Carex brizoides* L. var. *praecox* (Schreb.) Fiori; *Carex schreberi* Schrank subsp. *schreberi*; *Carex praecox* Schreb. subsp. *curvata* (Knaf) Kük.; *Carex praecox* Schreb. subsp. *intermedia* (Kelak.) W.Schultze-Motel; *Carex schreberi* Schrank; *Carex brizoides* L. subsp. *intermedia* Kelak.; *Carex schreberi* Schrank subsp. *curvata* (Knaf) P.Fourn.; *Carex brizoides* L. subsp. *curvata* (Knaf) Binz; - Romania, Bihor, Oradea, 09.06.,1877, leg. Simkovics L.

**Carex pyrenaica Wahlenb.** – (n.4767) – ref.: Kungl. Svenska Vet.-Akad. Handl. nov. ser. 24: 139 (1803); - Romania, Hunedoara, the Hațeg area, 14.08.1874, leg. Simkovics L.

**Carex remota L.** – (n.4783) – ref.: Fl. Angl. 24 (1754); sin.: *Carex axillaris* Gooden.; *Carex axillaris* Gooden. subsp. *axillaris*; - Hungary, Nograd, Somos-Ujfalú, 23.06.1873, leg. Simkovics L.

**Carex riparia Curtis** – (n.4814) – ref.: Fl. Lond. 2(4): t. 60 (1783); - Romania, Bihor, Tărian, 20.05.1877, leg. Simkovics L.

**Carex rostrata Stokes** – (n.4812) – ref.: Arr. Br. Pl. ed. 2 2: 1059 (1787); sin.: *Carex ampullacea* Gooden.; *Carex inflata* V.I.Krecz., non Huds.; *Carex ampullacea* Gooden. subsp. *ampullacea*; - Hungary, Matra, Baktaito, May 1870, leg. Vrabelyi.

**Carex sempervirens Vill.** – (n.4802) – ref.: Hist. Pl. Dauph. 2: 214 (1787); sin.: *Carex sempervirens* Vill. subsp. *granatica* (Braun-Blanq.) C.Vicioso; *Carex ferruginea* Scop. subsp. *ferruginea* var. *sempervirens* (Vill.) Fiori; *Carex granatica* Braun-Blanq.; *Carex tatroum* (Zapal.) Racib.; *Carex sempervirens* Vill. subsp. *tristis* auct. eur., non (M.Bieb.) Kük.; - Romania, Hunedoara, Mt. Parâng, Sleoga Mare, 29.08.1874, leg. Simkovics L.

**Carex stenophylla Wahlenb.** – (n.4769) – ref.: Kungl. Svenska Vet.-Akad. Handl. nov. ser. 24: 142 (1803); sin.: *Carex divisa* Huds. subsp. *divisa* var. *stenophylla* (Wahlenb.) Fiori; *Carex uralensis* C.B.Clarke; - Hungary, Pest, Budapesta (Rakos), 05.05.1873, leg. Simkovics L.

**Carex supina Willd. ex Wahlenb.** – (n.4789) – ref.: Kungl. Svenska Vet.-Akad. Handl. nov. ser. 24: 158 (1803); sin.: *Carex nitida* Host, non Hoppe subsp. *supina* (Wahlenb.) Fiori; *Carex wohllebii* Hoppe; - Hungary, Pest, Budapesta, 11.05.1873, leg. Simkovics L.

**Carex sylvatica Huds.** – (n.4811) – ref.: Fl. Angl. ed. 1 353 (1762); sin.: *Carex silvatica* auct.; - Romania, Bihor, Oradea, April-May 1877, leg. Simkovics L.

**Carex tomentosa L.** – (n.4790) – ref.: Mantissa 123 (1767); sin.: *Carex tomentosa* L. subsp. *grossmanniana* Asch.; *Carex tomentosa* L. subsp. *subvillosa* (M.Bieb.) Nyman; *Carex filiformis* auct., non L.; - Hungary, Pest, the Csepel Island, Csep, forest, 08.06.1869, leg. I.A. Tauscher.

**Carex vesicaria L.** – (n.4813) – ref.: Sp. Pl. ed. 1 979 (1753); sin.: *Carex inflata* Huds.; - Romania, Bihor, Oradea, 10.05.1877, leg. Simkovics L.

**Carex viridula subsp. viridula Michx.** – (n.4807) – ref.: Nouv. fl. env. Paris ed. 2, 2:54. 1821; sin.: *Carex oederi* Ehrhart; *Carex oederi* auct., non Retz.; *Carex oederi* var. *recterostrata* (Victorin) Dorn; *Carex oederi* subsp. *viridula* (Michx.) Hulten; *Carex serotina* Méral; *Carex serotina* Méral subsp. *serotina*; - Hungary, Pest, Budapesta (Rakos), 04.06.1874, leg. Simkovics L.

**Carex vulpina L.** – (n.4772) – ref.: Sp. Pl. ed. 1 973 (1753); sin.: *Carex compacta* Lam.; *Carex vulpina* L. subsp. *vulpina* var. *compacta* (Lam.) Velen; - Romania, Bihor, Oradea, May – June 1877, leg. Simkovics L.

Gen *Kobresia* Willdenow, 1805

**Kobresia simpliciuscula (Wahlenb.) Mack.** – (n.4766) – ref.: Bull. Torrey Bot. Club 50: 349 (1923); sin.: *Carex simpliciuscula* Wahlenb. (basionym); *Kobresia caricina* Willd.; - Austria, Tirolul de Jos, Iselthal, Valea Virgen, rocky region, limy soil, 15.07.1875, leg. Anferdorfer.



**Superord. Poanae (Small, 1903) Takhtajan, 1997, ex Reveal & Doweld, 1999**Ord. *Poales* Small, 1903Fam. *Poaceae* (R. Brown) Bamhart, 1895Gen *Corynephorus* Palisot de Beauvois, 1812, nom. cons.

***Corynephorus canescens* (L.) P.Beauv.** – (n. 4854) – ref.: Agrost. 90 & 159 (1812); sin.: *Weingaertneria canescens* (L.) Bernh.; - Romania, Arad, Ineu, Stejar, (Szarvos) 29.06.1873, leg. Ssimkovics L.

***Corynephorus canescens* (L.) P.Beauv.** – (n. 4855) – ref.: Agrost. 90 & 159 (1812); sin.: *Weingaertneria canescens* (L.) Bernh.; - Romania, Arad, Ineu, Stejar (Szarvos), 29.06.1873, leg. Simkovics L.

Gen *Hordelymus* (Jess.) Hartz, 1885

***Hordelymus europaeus* (L.) Harz** – (n. 4913) – ref.: Samenk. 114 (1885); sin.: *Elymus europaeus* L.; *Cuviera europaea* (L.) Koeler; *Hordeum europaeum* (L.) All.; *Hordeum sylvaticum* Huds.; - Romania, Caraș-Severin, Băile Herculane, Jule 1874, leg. Simkovics L.

Gen *Psilurus* Trin.

***Psilurus incurvus* (Gouan) Schinz & Thell.** – (n. 4931) – ref.: Viert. Naturf. Ges. Zürich 58: 40 (1913); sin.: *Nardus aristata* L.; *Nardus incurva* Gouan (basyonim); *Psilurus aristatus* (L.) Trevis.; *Psilurus aristatus* (L.) Duval-Jouve; *Psilurus nardoides* Trin.; - Romania, Mehedinți, Șvinița, 22.05.1874, leg. Simkovics L.

Subfam. *Pooideae*Gen *Pholiurus* Host.

***Pholiurus pannonicus* (Host) Trin.** – (n. 4922) – ref.: Fund. Agrost. 132 (1820); sin.: *Lepturus pannonicus* (Host) Kunth; *Rottboellia panonica* Host. (basyonim); - Romania, Bihor, Roșiori, 02.07.1879, leg. Simkovics L.

***Pholiurus pannonicus* (Host) Trin.** – (n. 4923) – ref.: Fund. Agrost. 132 (1820); sin.: *Lepturus pannonicus* (Host) Kunth; *Rottboellia panonica* Host. (basyonim); - Romania, Bihor, Roșiori, 02.07.1879, leg. Simkovics L.

Trib *Andropogoneae*Gen *Heteropogon* Persoon, 1807

***Heteropogon contortus* (L.) P.Beauv. ex Roem. & Schult.** – (n. 4929) – ref.: Syst. Veg. ed. nov. (15) 2: 836 (1817); sin.: *Heteropogon allionii* (DC.) Roem. & Schult.; *Heteropogon glaber* Pers.; *Andropogon contortus* L.; - Italy, Venetia, Benacum, August 1873, leg. Rigo.



Gen *Sorghum* Moench. 1794, nom. cons.

***Sorghum bicolor* (L.) Moench** – (n. 4822) – ref.: Meth. 207 (1794); sin.: *Sorghum vulgare* Pers.; *Andropogon sorghum* (L.) Brot.; *Sorghum cernuum* (Ard.) Host; *Sorghum campanum* Ten. & Guss.; *Sorghum technicum* (Körn.) Roshev.; *Sorghum saccharatum* (L.) Pers.; - Hungary, Szabolcs-Szatmar-Bereg, Septembrie 1872, leg. Simkovics L.

Gen *Imperata* Cyrillo, 1792

***Imperata cylindrica* (L.) Raeusch.** – (n. 4930) – ref.: Nomencl. Bot. ed. 3 10 (1797); sin.: *Imperata arundinacea* Cirillo; *Saccharum cylindricum* (L.) Lam.; - France, Provence-Alpes-Cote d'Azur, Avignon, Jule 1879, leg. G. Uhof.

Trib Cynodonteae

Gen *Tragus* A. Haller, 1768

***Tragus racemosus* (L.) All.** - (n. 4823) – ref.: Fl. Pedem. 2: 241 (1785); - Switzrland, Valais, 25.09.1876, leg. O. Wolf.

Trib Paniceae

Gen *Panicum* L., 1753

***Panicum miliaceum* L.** - (n. 4824) – ref.: Sp. Pl. ed. 1 58 (1753); - Hungary, Fejer, Ercsi, Jule 1867, leg. Tauscher.

***Panicum ciliare* Petz.** – (n. 4825) – ref.: Sp.Pl. ed.1 :58 (1753); sin.: *Digitaria ciliaris* (Petz.) Koch.; Romania, Bihor, Oradea, 26.08.1877, leg. Simkovics L.

Gen *Digitaria* A. Haller, 1768, nom. cons.

***Digitaria ischaemum* (Schreb.) Muhl.** – (n. 4826) – ref.: Descr. Gram. Amer. Sept. 131 (1817); sin.: *Panicum glabrum* (Schrader.) Gaudin; *Digitaria glabra* (Schrader.) P.Beauv.; *Panicum lineare* auct., non L.; *Panicum ischaemum* Schreb.; *Digitaria humifusa* Rich.; *Digitaria filiformis* auct., non (L.) Koeler; *Panicum glabrum* (Schrader.) Gaudin; *Digitaria linearis* Crép., non (L.) Pers.; - Romania, Bihor, Oradea, 25.08.1877, leg. Simkovics L.

Gen *Setaria* Palisot de Beauvois, 1895

***Setaria italica* (L.) P.Beauv.** – (n. 4828) – ref.: Agrost. 51 & 178 (1812); sin.: *Setaria germanica* P.Beauv.- Hungary, Pest, Budapesta, 21-27.07.1875, leg. Simkovics L.

***Setaria pumila* (Poir.) Schult.** – (n. 4827) – ref.: Mantissa 2: 274 (1824); sin.: *Setaria glauca* auct., non (L.) P.Beauv.; *Setaria lutescens* (Weigel) F.T.Hubb.;

*Setariopsis glauca* auct., non (L.) Samp.; - Romania, Bihor, Oradea, at the skirt of the ploughland, 25.08.1877, leg. Simkovics L.

Trib *Phleaeae*  
Gen *Phalaris* L., 1753

***Phalaris arundinacea* L. v. *picta*** – (n. 4829) – ref.: Sp. Pl. ed. 1 55 (1753); - Romania, Bihor, Oradea, 25.05.1879, leg. Simkovics L.

***Phalaris arundinacea* L.** – (n. 4830) – ref.: Sp. Pl. ed. 1 55 (1753); sin.: *Phalaroides arundinacea* (L.) Rauschert; *Baldingera arundinacea* (L.) Dumort.; *Typhoides arundinacea* (L.) Moench; *Digraphis arundinacea* (L.) Trin.; - Hungary, Gonic, Rimon, 03.06.1868, leg. J. Fabry.

Gen *Phleum* L., 1753

***Phleum pratense* L.** – (n. 4833) – ref.: Sp. Pl. ed. 1 59 (1753); - Hungary, Fejer, Ercsi, Jule 1875, leg. Simkovics L.

***Phleum pratense* L. subsp. *bertolonii* (DC.) Bornm.** – (n. 4834) – ref.: Bot. Jahrb. 61, Beibl. 140: 157 (1928); sin.: *Phleum nodosum* L.; *Phleum bertolonii* DC.; - Hungary, Szabolcs-Szatmar-Bereg, Nyirgyhaza, iulie 1868, leg. Simkovics L.

***Phleum montanum* K.Koch** – (n. 4835) – ref.: Linnaea 21: 383 (1848); sin.: *Phleum ambiguum* Borbás, non Ten.; - Romania, Caraș-Severin, Moldova Nouă, 24.06.1874, leg. Simkovics L.

***Phleum phleoides* (L.) H.Karst.** – (n. 4836) – ref.: Deutsche Fl. ed. 1 374 (1881); sin.: *Chilochloa boehmeri* P.Beauv.; *Phalaris phleoides* L.; *Phleum phalarioides* Koeler; *Phleum boehmeri* Wibel; - Romania, Hunedoara, Sarmizegetusa (Varhely), 26.07.1872, leg. Simkovics L.

***Phleum paniculatum* Huds.** - (n. 4837) – ref.: Fl. Angl. ed. 1 23 (1762); sin.: *Phleum asperum* Jacq.; - Hungary, Borsod-Abauj-Zemplen, Tokaji, Tarcál, 20.07.1877, leg. Simkovics L.

Gen *Sesleria* Scopoli, 1760

***Sesleria heuflerana* Schur** – (n. 4847) – ref.: Verh. Zool.-Bot. Ges. Wien 6: 203 (1856); - Hungary, Pest, Budapesta, 18.04.1874, leg. Simkovics L.

***Sesleria rigida* Heuff. ex Rchb.** – (n. 4848) – ref.: Fl. Germ. Excurs. 140(3): (1831); sin.: *Sesleria haynaldiana* Schur; *Sesleria filifolia* Hoppe; - Romania, Mehedinți, Băile Herculane, 28.05.1874, leg. Simkovics L.

***Sesleria rigida* Heuff. ex Rchb.** – (n. 4849) – ref.: Fl. Germ. Excurs. 140(3): (1831); sin.: *Sesleria haynaldiana* Schur; *Sesleria filifolia* Hoppe; - Romania, Mehedinți, Șvinița and Drencova, 27.06.1874, leg. Simkovics L.

Trib *Poeae*  
Gen *Agrostis* L., 1753

***Agrostis rupestris* All.** - (n. 4840) – ref.: Fl. Pedem. 2: 237 (1785); - Romania, Hunedoara, the alpin pasture, neare Zănoaga lake, 12.08.1874,, leg. Simkovics L.

***Agrostis stolonifera* L.** – (n. 4839) – ref.: Sp. Pl. ed. 1 62 (1753); sin.: *Agrostis alba* auct., non L.; *Agrostis alba* auct., non L. subsp. *stolonifera* (L.) V.Jirásek; *Agrostis alba* auct., non L. subsp. *alba* var. *alba*; *Agrostis gaditana* (Boiss. & Reut.) Nyman; *Agrostis filifolia* Link; *Agrostis adscendens* Lange; *Agrostis albida* Trin.; *Agrostis capillaris* Pollich, non L.; *Agrostis scabriglumis* Boiss. & Reut.; *Agrostis stolonizans* Besser; *Agrostis maritima* Lam.; *Agrostis zerovii* Klovov; - Hungary , Szabolcs-Szatmar-Bereg, Ibrany, August 1876,leg. Simkovics L.

Gen *Aira* L., 1753

***Aira caryophyllea* L.** – (n. 4852) – ref.: Sp. Pl. ed. 1 66 (1753); sin.: *Avena caryophyllea* (L.) Weber; - Hungary, Baranya, Harkany, June-July 1873, leg. Simkovics L.

***Aira elegantissima* Schur** – (n. 4853) – ref.: Verh. Mitt. Siebenb. Ver. Naturw. 4 (Sert. Fl. Transs.): 85 (1853); sin.: *Aira capillaris* Host, non Savi; *Aira elegans* Willd. ex Gaudin, nom. illegit.; *Avena capillaris* (Host) Mert. & W.D.J.Koch; - Romania, Mehedinți, Svinița, May-June 1875, leg. Simkovics L.

Gen *Cynosurus* L., 1753

***Cynosurus cristatus* L.** – (n. 4887) – ref.: Sp. Pl. ed. 1 72 (1753); - Romania, Poiana Ruscă, (a Bega volgyiben), 24.07.1872, leg. Simkovics L.

***Cynosurus echinatus* L.** – (n. 4888) – ref.: Sp. Pl. ed. 1 72 (1753); sin.: *Falona echinata* (L.) Dumort.; - Romania, Mehedinți, Șvinița, 26.06.1874, leg. Simkovics L.

Gen *Dactylis* L., 1753

***Dactylis glomerata* L.** – (n. 4886) – ref.: Sp. Pl. ed. 1 71 (1753); sin.: *Dactylis hispanica* Roth; - Romania, Bihor, Oradea, in hayfields, 07.06.1877, leg. Simkovics L.

Gen *Deschampsia* Palisot de Beauvois, 1812

***Deschampsia cespitosa* (L.) P.Beauv.** – (n. 4850) – ref.: Agrost. 91, 160 (1812); sin.: *Aira cespitosa* L.; *Aira cespitosa* L. subsp. *cespitosa*; *Deschampsia glauca* Hartm.; - Romania, Bihor, Oradea, 20.08.1877, leg. Simkovics L.

***Deschampsia flexuosa* (L.) Trin.** – (n. 4851) – ref.: Bull. Sci. Acad. Imp. Sci. Pétersb. 1: 66 (1836); sin.: *Aira flexuosa* L.; *Avenella flexuosa* (L.) Drejer subsp. *flexuosa*; *Avenella flexuosa* (L.) Drejer subsp. *montana* (L.) A&A.Löve & D.Löve; *Aira*

*stricta* (Hack.) Nyman; *Deschampsia stricta* Hack.; *Avenella flexuosa* (L.) Drejer; *Lerchenfeldia flexuosa* (L.) Schur subsp. *montana* (L.) Tzvelev; *Lerchenfeldia flexuosa* (L.) Schur; *Lerchenfeldia flexuosa* (L.) Schur subsp. *flexuosa*; - Romania, Mehedinți, Șvinița, 26.06.1874, leg. Simkovics L.

Gen *Hierochloe* R. Brown, 1810

***Hierochloa australis* Roem. & Schuldes.** – (n. 4832) – ref.: Roem. Et Schuldes syst. veg. 2. pag.514; Gaud. Fl. Helv. 1. pag.345; Reich., Fl. Germ. excurs. 1. pag. 53; sin.: *Hierochloa australis* (Scrad.) Ret. Sch.; - Romania, Cluj, Cluj-Napoca, 18.04.1878, leg. Simkovics L.

***Hierochloa borealis* Romer & Schultes** – (n. 4831) – ref.: Hook, Fl. II., 234; sin.: *Anthoxanthum nitens* (Weber) Y. Schouten & Veldkamp; *Avena odorata* (L.) Koeler; *Hierochloa borealis* Schur; *Hierochloë odorata* (L.) P. Beauv. ; *Holcus odoratus* Linn. (Michx. Fl. I., 56.); *Holcus fragrans* Pursh. (Fl.I. 58.); - Hungary, Somlyóhegy, Foth mellet, 25.05.1875, leg. Simkovics L.

Gen *Holcus* L., 1753

***Holcus lanatus* L.** – (n. 4856) – ref.: Sp. Pl. ed. 1 1048 (1753; sin.: *Holcus glaucus* Willk.; *Holcus argenteus* C.Agardh; *Nothoholcus lanatus* (L.) Nash; - Romania, Bihor, Oradea, 20.05.1877, leg. Simkovics L.

Gen *Koeleria* Persoon, 1805

***Koeleria macrantha* (Ledeb.) Schult.** – (n. 4924) – ref.: Mantissa 2: 345 (1824); sin.: *Koeleria cristata* (L.) Pers. pro parte; *Koeleria aschersoniana* Domin; *Koeleria jankae* Ujhelyi; *Koeleria pseudocristata* Domin; *Koeleria gracilis* Pers.; *Koeleria nyaradyi* Ujhelyi; *Koeleria supra-arenaria* Domin; *Koeleria csatoi* Ujhelyi; *Koeleria caucasica* Domin; *Koeleria transsilvanica* Schur; *Koeleria talievii* Lavrenko; *Koeleria britannica* (Domin) Druce; *Koeleria javorkae* Ujhelyi; *Koeleria fenzliana* Schur; *Koeleria schurii* Ujhelyi; *Koeleria tenuipes* (Schur) Ujhelyi; *Koeleria majoriflora* (Borbás) Borbás; *Koeleria albescens* DC. pro parte; *Koeleria alpigena* Domin; *Koeleria sclerophylla* P.A.Smirn.; *Koeleria theodoriana* Klokov; - Hungary , Pest, Budapesta, 12.06.1873, leg. Simkovics L.

***Koeleria glauca* (Schrad.) DC.** – (n. 4925) – ref.: Cat. Pl. Horti Monsp. 116 (1813); sin.: *Koeleria sabuletorum* Czern. ex Domin; *Koeleria borysthenaica* Klokov; *Koeleria rochellii* Schur; *Koeleria albescens* DC. pro parte; *Koeleria pyrenaica* (Domin) Ujhelyi; *Koeleria pohleana* (Domin) Gontsch.; *Koeleria arenaria* Dumort.; *Koeleria maritima* Lange; - Hungary, Pest, Budapesta (the Csepel Island), 04.07.1875, leg. Simkovics L.

***Koeleria hirsuta* Gaudin** – (n. 4926) – ref.: Alpina (Winterthur) 3: 48 (1808); sin.: *Koeleria flavovirens* Domin; - Switzerland, Haut-Valais, 12.08.1872, leg. Favrat.

Gen *Lolium* L., 1753

***Lolium multiflorum* Lam.** – (n. 4920) – ref.: Fl. Fr. ed. 1 3: 621 (1779); sin.: *Lolium aristatum* Lag.; *Lolium siculum* Parl.; *Lolium italicum* A.Braun; *Lolium gaudinii* Parl.; - Romania, Bihor, Oradea, 10.07.1876, leg. Simkovics L.

***Lolium perenne* L.** – (n. 4919) – ref.: Sp. Pl. ed. 1 83 (1753); sin.: *Lolium cristatum* L. ex Nyman; - Romania, Bihor, Oradea, June-July 1877, leg. Simkovics L.

***Lolium temulentum* L.** – (n. 4921) – ref.: Sp. Pl. ed. 1 83 (1753); sin.: *Lolium arvense* With.; - Romania, Bihor, Oradea, 12.07.1877, leg. Simkovics L.

Gen *Milium* L., 1753

***Milium paradoxum* (L.) L.** – (n. 4841) – ref.: *Systema Naturae, Editio Decima* 872. 1759. ; Agrost. 18 & 173 (1812); sin.: *Agrostis paradoxa* L.; *Oryzopsis paradoxa* (L.) Nutt.; *Milium paradoxum* L.; *Piptatherum paradoxum* (L.) P.Beauv. ; - Romania, Timiș, Sânandrei, Caran Valley, May-June 1874, leg. Simkovics L.

***Milium vernale* M.Bieb.** – (n. 4842) – ref.: Fl. Taur.-Cauc. 1: 53 (1808); - Romania, Mehedinți, (the Iron Gates), Vârciorova, 06.04.1874, leg. Simkovics L.

Gen *Poa* L., 1753

***Poa* sp.** – (n. 4866) – label missing, location, date and author are left unidentified.

Gen *Puccinellia* Parlatores, 1848, nom. cons.

***Puccinellia distans* (L.) Parl.** – (n. 4883) – ref.: Fl. Ital. 1: 367 (1850); sin.: *Atropis distans* (L.) Griseb.; *Glyceria distans* (L.) Wahlenb.; - Hungary, Szabolcs-Szatmar-Bereg, Nyirgyhaza, August 1871, leg. Simkovics L.

Trib *Oryzeae*Gen *Leersia* O. Swartz, 1788, nom. cons.

***Leersia oryzoides* (L.) Sw.** - (n. 4838) – ref.: Nov. Gen. Sp. Pl. 21 (1788); sin.: *Homalocenchrus oryzoides* (L.) Pollich; *Leersia hexandra* auct., non Sw.; *Oryza oryzoides* (L.) Brand; *Oryza clandestina* A.Br.; - Roania, Bihor, Oradea, 01.09.1871, leg. Simkovics L.

Trib *Stipeae*Gen *Stipa* L., 1753

***Stipa capillata* L.** – (n. 4845) – ref.: Sp. Pl. ed. 2 116 (1762); - Romania, Alba, Vințu de Jos, 13.06.1877, leg. Csato

***Stipa lessingiana* Trin. & Rupr.** – (n. 4843) - Mém. Acad. Sci. Pétersb. (Sci.

phys. math.) ser. 6 7(2): 79 (1843); - Romania, Cluj, Cluj-Napoca, 31.05.1878, leg. Simkovics L.

***Stipa tirsa* Steven** – (n. 4844) – ref.: Bull. Soc. Nat. Moscou 30(2): 115 (1857); sin.: *Stipa stenophylla* (Czern. ex Lindem.) Trautv.; *Stipa longifolia* Borbás; - Romania, Cluj, Cluj-Napoca, 01.06.1878, leg. Simkovics L.

Trib *Arundineae*

Gen *Molinia* Schrank, 1789

***Molinia caerulea* (L.) Moench** – (n. 4884) – ref.: Meth. 183 (1794); -- Hungary, Pest, Budapesta (Rakos), August-October 1871, leg. Simkovics L.

Gen *Phragmites* Adanson, 1763

***Phragmites australis* (Cav.) Trin. ex Steud.** – (n. 4846) – ref.: Nomencl. Bot. ed. 2 2: 324 (1841); sin.: *Phragmites communis* Trin.; *Phragmites vulgaris* Samp.; *Phragmites pumila* Willk.; *Phragmites gigantea* J.Gay; *Arundo phragmites* L.; *Phragmites loscosii* Willk.; - Romania, Bihor, Oradea, 15.09.1877, leg. Simkovics L.

Gen *Danthonia* A.P. de Candolle, 1805

***Danthonia alpina* Vest** – (n. 4857) – ref.: Flora (Regensb.) 4: 145 (1821); sin.: *Danthonia calycina* (Vill.) Rchb., non (Lam.) Roem. & Schult.; *Danthonia provincialis* DC.; - Romania, Cluj, Cluj-Napoca ( Hoia hills), 12.07.1878, leg. Simkovics L.

***Danthonia decumbens* (L.) DC.** – (n. 4858) – ref.: Fl. Fr. ed. 3 3: 33 (1805); sin.: *Triodia decumbens* (L.) P.Beauv.; *Sieglingia decumbens* (L.) P.Beauv.; - Romania, Cluj, Cluj-Napoca, Jule 1878, leg. Simkovics L.

Gen *Schismus* Palisot de Beauvois, 1812

***Schismus barbatus* (L.) Thell.** – (n. 4929) – ref.: Bull. Herb. Boissier sér. 2, 7:391. 1907; sin.: *Festuca barbata* L. (basionym); *Schismus calycinus* L.; *Schismus calycinus* (Loefl.) Koch (Linnaea 21:397. 1848); France, Pyrenees Orientales, Perpignon, April 1873, leg. Debeaux.

Trib *Meliceae*

Gen *Glyceria* R. Brown, 1810

***Glyceria maxima* (Hartm.) Holmb.** - (n. 4879) – ref.: Bot. Not. 1919: 97 (1919); sin.: *Glyceria aquatica* (L.) Wahlenb., non (L.) J.Presl & C.Presl; *Glyceria altissima* (Moench) Schloss. & Vuk.; *Glyceria spectabilis* Mert. & W.D.J.Koch; - Hungary, Pest, Budapesta, 18.05.1873, leg. Simkovics L.



***Glyceria maxima* (Hartm.) Holmb.** – (n. 4880) — ref.: Bot. Not. 1919: 97 (1919); sin.: *Glyceria spectabilis* Mert. & W.D.J.Koch; *Glyceria aquatica* (L.) Wahlenb., non (L.) J.Presl & C.Presl; *Glyceria altissima* (Moench) Schloss. & Vuk.; - Hungary, Pest, Csepel Island, Uifalu, June 1870, leg. Tausher.

***Glyceria fluitans* (L.) R.Br.** – (n. 4881) – ref.: Prodr. Fl. Nov. Holl. ed. 1 179 (1810); - Romania, Bihor, Oradea, damp places, May-June 1876, leg. Simkovics L.

***Glyceria plicata* (Fr.) Fr.** – (n. 4882) – ref.: Nov. Fl. Suec. Mant. 3: 176 (1842); sin.: *Glyceria fluitans* (L.) R.Br. subsp. *plicata* Fr.; - Hungary, Szabolcs-Szatmar-Bereg, Demecser, 24.05.1873, leg. Simkovics L.

#### Gen *Melica* L., 1753

***Melica altissima* L.** – (n. 4859) – ref.: Sp. Pl. ed. 1 66 (1753); - Romania, Bihor, Oradea, 20.08.1877, leg. Simkovics L.

***Melica ciliata* L.** – (n. 4860) – ref.: Sp. Pl. ed. 1 66 (1753) – Romania, Bihor, Vadu Crișului, 11.07.1875, leg. Simkovics L.

***Melica nutans* L.** – (n. 4861) – ref.: Sp. Pl. ed. 1 66 (1753); sin.: *Melica montana* Huds.; - Romania, Bihor, Oradea, 05.05.1877, leg. Simkovics L.

***Melica picta* K.Koch** - (n. 4862) – ref.: Linnaea 21: 395 (1848); - Romania, Bihor, Oradea, 18.05.1878, leg. Simkovics L.

***Melica uniflora* Retz.** – (n. 4863) – ref.: Obs. Bot. 1: 10 (1779); - Romania, Mehedinți, Șvinița, 21.05.1874, leg. Simkovics L.

#### Trib *Cynodonteae*

#### Gen *Eragrostis* N.M. Wolf, 1776

***Eragrostis minor* Host** – (n. 4864) – ref.: Gram. Austr. 4: 15 (1809); sin.: *Eragrostis brizoides* Costa; *Eragrostis suaveolens* A.K.Becker ex Claus; *Eragrostis poaeoides* P.Beauv.; - Romania, Bihor, Oradea (Șomleu hills), August 1877, leg. Simkovics L.

***Eragrostis pilosa* (L.) P.Beauv.** - (n. 4865) – ref.: Agrost. 71 & 162 (1812); sin.: *Eragrostis gracilis* Velen.; - Hungary, Szabolcs-Szatmar-Bereg, Kerenut, August 1871, leg. Simkovics L.

#### Gen *Kengia*, Packer

***Kengia serotina* (L.) Packer** – (n. 4885) – ref.: Botaniska Notiser 113:291. 1960 ; Sinensia 5: 149 (1934); sin.: *Agrostis serotina* (L.)L.; *Bromus strictus* Scop.; *Cleistogenes serotina* (L.) Keng; *Diplachne serotina* (L.) Link; *Diplachne serotina* (L.) Link subsp. *serotina*; *Festuca serotina* L.; *Molinia serotina* (L.) Mert. & W.D.J.Koch; *Schenodorus serotinus*; - Hungary, Pest, Budapesta (Harshagy), October 1872, leg. Simkovics L.

Trib *Bromeae*  
Gen *Bromus* L., 1753

***Bromus arvensis* L.** – (n. 4892) – ref.: Sp. Pl. ed. 1 77 (1753); sin.: *Bromus arvensis* L. subsp. *billotii* (F.W.Schultz) Hegi; *Serrafalcus scoparius* (L.) Parl.; *Serrafalcus arvensis* (L.) Godr.; *Bromus billotii* F.W.Schultz; - Romania, Bihor, Oradea and Băile Felix, 14.06-12.07.1877, leg. Simkovics L.

***Bromus commutatus* Schrad.** – (n. 4890) – ref.: Fl. Germ. 353 (1806); sin.: *Serrafalcus commutatus* (Schrad.) Bab.; - Romania, Bihor, Oradea (Băile Felix), 21.06.1877, leg. Simkovics L.

***Bromus erectus* Huds.** - (n. 4897) – ref.: Fl. Angl. ed. 1 39 (1762); sin.: *Bromus pubiflorus* Borbás; *Bromus racemiferus* Borbás; *Bromus borbasii* Hack.; *Bromus variegatus* auct., non M.Bieb.; *Bromopsis riparia* (Rehmann) Holub subsp. *heterophylla* (Klokov) Tzvelev; *Bromus hackelii* Borbás; *Bromopsis erecta* (Huds.) Fourr.; *Zerna erecta* (Huds.) Gray; *Bromus caprinus* A.Kern.; *Bromus heterophyllus* (Klokov) Stankov; *Bromus glabriflorus* Borbás; - Hungary, Pecs, Pillishegy, June-July 1873-75, leg. Simkovics L.

***Bromus hordeaceus* L. subsp. *hordeaceus*** – (n. 4891) – ref.: nume botanic cu statut **acceptat**, sin.: *Bromus mollis* L.; - Hungary, Pest, Budapesta (Rakos), Jule 1873, leg. Simkovics L.

***Bromus japonicus* Thunb.** – (n. 4893) – ref.: Fl. Jap. 52 (1784); sin.: *Bromus patulus* Mert. & W.D.J.Koch; *Bromus kerlobagensis* Degen; *Serrafalcus patulus* (Mert. & W.D.J.Koch) Parl.; - Romania, Bihor, Oradea, 17.07.1876, leg. Simkovics L.

***Bromus ramosus* Huds.** – (n. 4895) – ref.: Fl. Angl. ed. 1 40 (1762); sin.: *Bromus asper* Murray; *Zerna ramosa* (Huds.) Lindm.; *Bromopsis ramosa* (Huds.) Holub; *Bromopsis ramosa* (Huds.) Holub subsp. *ramose*; - Romania, Bihor, Oradea, 14.07.1876 and Sânmartin (Felix), 26.08.1877, leg. Simkovics L.

***Bromus secalinus* L.** – (n. 4889) – ref.: Sp. Pl. ed. 1 76 (1753); sin.: *Serrafalcus secalinus* (L.) Bab.; - Hungary, Pest, Budapesta (Rakos), 30.06. 1872, leg. Simkovics L.

***Bromus serotinus* Beneken.** – (n. 4898) – ref.: Oe. bot. Z. 1866. 5Tr.10. S. 232; sin.: *Bromus ramosus* Huds. subsp. *ramosus*; *Bromus asper* Murray; *Zerna ramosa* (Huds.) Lindm.; *Bromopsis ramosa* (Huds.) Holub; - Germany, Renania-Palatinat, Neuwied, Linz am Rhein, August 1873, leg. Melscheimer.

***Bromus squarrosus* L.** - (n. 4894) – ref.: Sp. Pl. ed. 1 76 (1753); sin.: *Bromus wolgensis* Fisch. ex Jacq.; *Serrafalcus squarrosus* (L.) Bab.; - Hungary, Pest, Budapesta, 22.05.1872, leg. Simkovics L.

***Bromus tectorum* L.** - (n. 4896) – ref.: Sp. Pl. ed. 1 77 (1753); sin.: *Zerna tectorum* (L.) Panz.; *Anisantha tectorum* (L.) Nevski; - Hungary, Pest, Budapesta (Rakos), June 1871, leg. Simkovics L.

Trib *Triticeae*  
Gen *Triticum* L., 1753

***Triticum aestivum* L.** – (n. 4899) – ref.: Sp. Pl. ed. 1 85 (1753) sin.: *Triticum vulgare* Vill.; *Triticum sativum* Lam.; *Triticum hybernum* L.; *Triticum linnaeanum* Lag.; - Hungary, Borsod-Abauj-Zemplen, Tolcsva, 26.07.1877, leg. Simkovics L.

***Triticum dicoccon* Schrank** – (n. 4901) – ref.: Baier. Fl. 1: 389 (1789); sin.: *Triticum volgense* (Flaksb.) Nevski; *Triticum violaceum* auct. scand.; - Romania, Cluj, Turda, 21.07.1878, leg. Simkovics L.

***Triticum monococcum* L.** – (n. 4902) – ref.: Sp. Pl. ed. 1 86 (1753); - Romania, Cluj, Cluj-Napoca, 13.07.1878, leg. Simkovics L.

***Triticum sasvignonioni* De Not..** – (n. 4908) – Hungary, Pest, Budapesta (Szt. Gellert); June 1873, leg. Simkovics L.

Gen *Daspyrum* (Coss. & Durieu) T. Durand

***Daspyrum villosum* (L.) P.Candargy** – (n. 4900) – ref.: Arch. Biol. Vég. (Athènes) 1: 35 & 62 (1901); sin.: *Triticum villosum* (L.) M.Bieb. ( *Flora Taurico-Caucasica* 3: 94. 1819.); *Secale villosum* L.; *Pseudosecale villosum* (L.) Degen; *Haynaldia villosa* (L.) Schur; *Agropyron villosum* (L.) Link; - Romania, Mehedinți, Orșova, May 1874, leg. Simkovics L.

Gen *Elymus* L., 1753

***Elymus caninus* (L.) L.** – (n. 4904) – ref.: Fl. Suec. ed. 2 39 (1755); sin.: *Triticum caninum* L.; *Triticum rupestre* Link; *Triticum biflorum* Brign.; *Agropyron caninum* (L.) P.Beauv.; *Agropyron biflorum* (Brign.) Schult.; *Agropyron donianum* F.B.White; *Roegneria behmii* Melderis; *Roegneria canina* (L.) Nevski; *Roegneria doniana* (F.B.White) Melderis; *Elytrigia canina* (L.) Drobow; *Brachypodium caninum* (L.) Lindm.; *Goulardia canina* (L.) Husn.; - Hungary, Pest, Piliscsaba, June 1875 and Romania, Bihor, Oradea, June 1878, leg. Simkovics L.

***Elymus hispidus* (Opiz) Melderis** – (n. 4907) – ref.: Bot. Jour. Linn. Soc. 76: 380 (1978); sin.: *Triticum glaucum* Desf. ex DC., non Moench; *Triticum latronum* Godr.; *Triticum intermedium* Host; *Agropyron intermedium* (Host) P.Beauv.; *Agropyron glaucum* Roem. & Schult.; *Agropyron latronum* (Godr.) Boissonade & Loret; *Agropyron intermedium* (Host) P.Beauv. subsp. *intermedium*; *Agropyron banaticum* (Heuff.) Simonk.; *Agropyron hispidum* Opiz; - Romania, Bihor, Oradea, July 1878, leg. Simkovics L.

***Elymus repens* (L.) Gould** - (n. 4903) – ref.: Madroño 9: 127 (1947); sin.: *Triticum repens* L.; *Triticum repens* L. var. *repens*; *Elytrigia repens* (L.) Nevski; *Elytrigia repens* (L.) Nevski subsp. *repens* var. *repens*; ; *Agropyron repens* (L.) P.Beauv.; *Agropyron repens* (L.) P.Beauv. subsp. *repens* var. *repens*; *Agropyron*

*caesium* J.Presl & C.Presl; *Agropyron caesium* J.Presl & C.Presl proles *caesium*; *Agropyron caldesii* Goiran; - Romania, Bihor, Oradea, June 1878, leg. Simkovics L.

***Elymus pungens* (Pers.) Melderis** – (n. 4909) – ref.: Bot. Jour. Linn. Soc. 76: 380 (1978); sin.: *Triticum pungens* Pers.; *Agropyron pungens* (Pers.) Roem. & Schult.; *Agropyron pungens* (Pers.) Roem. & Schult. subsp. *pungens*; *Elytrigia pungens* (Pers.) Tutin; - Germany, Schleswig-Holstein, Strande, no date, leg. Slauses.

#### Gen *Aegilops* L., 1753

***Aegilops cylindrica* Host** - (n. 4906) – ref.: Gram. Austr. 2: 6 (1802); sin.: *Triticum cylindricum* (Host) Ces., Pass. & Gibelli; *Aegilops tauschii* auct. taur., non Coss.; - Hungary, Pest, Budapesta (Szt. Gellert); 05.06.1875, leg. Simkovics L.

***Aegilops geniculata* Roth** – (n. 4905) – ref.: Bot. Abh. 45 (1787); sin.: *Triticum ovatum* (L.) Gren. & Godr.; *Triticum ovatum* (L.) Gren. & Godr. subsp. *ovatum*; *Triticum vagans* (Jord. & Fourr.) Greuter; *Aegilops ovata* L. pro parte; - Italy, Venetia, Benacum, 29.05.1866, leg. Porta.

#### Gen *Secale* L., 1753

***Secale cereale* L.** – (n. 4910) – ref.: Sp. Pl. ed. 1 84 (1753); - Romania, intre Drencova (Caraș-Severin) și Șvinița (Mehedinți), 20.06.1874, leg. Simkovics L.

***Secale sylvestre* Host** – (n. 4911) – ref.: Gram. Austr. 4: 7 (1809); sin.: *Secale fragile* M.Bieb.; - Hungary, Pest, Budapesta, 06.06.1874, leg. Simkovics L.

***Secale sylvestre* Host** – (n. 4912) – ref.: Gram. Austr. 4: 7 (1809); sin.: *Secale fragile* M.Bieb.; - Hungary, Pest, Budapesta, 06.06.1874, leg. Simkovics L.

#### Gen *Leymus* Hochstetter

***Leymus arenarius* (L.) Hochst.** – (n. 4914) – ref.: Flora (Regensb.) 31: 118 (1848) sin.: *Elymus arenarius* L.; - Germany, Brandenburg, Uckermark, Lychen, August 1873, leg. Heiland.

#### Gen *Taeniatherum* Nevski

***Taeniatherum caput-medusae* (L.) Nevski** – (n. 4915) – ref.: Acta Univ. As. Med. ser. 8b (Bot.) 17: 38 (1934); sin.: *Elymus crinitus* Schreb.; *Elymus intermedius* M.Bieb.; *Elymus asper* (Simonk.) Hand.-Mazz.; *Elymus caput-medusae* L.; *Hordelymus asper* (Simonk.) Beldie; *Cuviera caput-medusae* (L.) Simonk.; *Taeniatherum asperum* (Simonk.) Nevski; *Hordeum asperum* (Simonk.) Degen; *Hordeum caput-medusae* (L.) Coss. & Durieu; *Hordeum crinitum* (Schreb.) Desf. – Hungary, Pest, Csobanka, 01.08.1875, leg. Simkovics.

Gen *Hordeum* L., 1753

***Hordeum vulgare* L.** – (n. 4916) – ref.: Sp. Pl. ed. 1 84 (1753); sin.: *Hordeum polystichon* Haller f.; *Hordeum hexastichum* L.; - Romania, Bihor, Oradea, 26.06.1879, leg. Simkovics L.

***Hordeum distichon* L.** – (n. 4917) – ref.: Sp. Pl. ed. 1 85 (1753); - Romania, Bihor, Oradea, 26.06.1879, leg. Simkovics L.

***Hordeum marinum* Huds.** – (n. 4918) – ref.: Fl. Angl. ed. 2 1: 57 (1778); sin.: *Hordeum maritimum* Stokes; *Hordeum maritimum* Stokes subsp. *maritimum*; - Hungary, Pest, Szentendre (Szt.Endre), August-September 1875, leg. Simkovics L.

Trib *Nardeae*Gen *Nardus* L., 1753

***Nardus stricta* L.** – (n. 4927) – ref.: Sp. Pl. ed. 1 53 (1753); - Romania, Hunedoara, Poiana Ruscă, leg. Simkovics L.

Subclas. *Aridae* (Bartl., 1830) Takhtajan, 1997Ssuperord. *Aranae* (Dumortier, 1829) Thome ex Reveal, 1992Ord. *Arales* Dumortier, 1829Fam. *Lemnaceae* Gray, 1821Subfam. *Lemnoideae*Gen *Lemna* L., 1753

***Lemna minor* L.** – (n. 4693) – ref.: Sp. Pl. ed. 1 970 (1753); - Romania, Bihor, Oradea, in waters, 09.06.1878, leg. Simkovics L.

***Lemna trisulca* L.** – (n. 4691) – ref.: Sp. Pl. ed. 1 970 (1753); - Hungary, Hajdu-Szobosclo, 01.08.1877, leg. Simkovics L.

Gen *Spirodela* Schleiden, 1839

***Spirodela polyrhiza* (L.) Schleid.** – (n. 4692) – ref.: Linnaea 13: 392 (1839); sin.: *Lemna polyrhiza* L.; - Hungary, Szabolcs-Szatmar-Bereg, Dombrad, Jule 1871, leg. Simkovics L.

## Conclusions

Similar to the first part, here again, subsequent to proceeing of the material in terms of upgraded taxonomical classification with the mention of accepted the denomination and its most common synonyms, of location (where identified), respectively, the date and author of collection (when indicated), we present a

number of 997 taxons of 313 genuses and 90 families which, according to the employed taxonomic classification (*Systema Naturae 2000*) belong to the phylum *Tracheophyta*, clas. *Magnoliopsida* and *Liliopsida*, excep for three taxons that belong to the îphylum *Bryophyta*, clas. *Bryopsida*, not included in the previous presentation.

The samples in Part II were also collected in the second half of the 19<sup>th</sup> century, in their vast majority by Simonkai L. (alias Simkovics L.), but also completed by materials obtained from different botanists of that age whose area of interest coincided with his own, a basic specialization being that of *Spermatophytae*, to which that of *Bryophytae* is added. Most authors were mentioned in Part I, yet there is a relatively thorough list with all signatures that could be identified on the herbarium labels in Annex 2. The list is proof for the laboriousness of this botanic collection which by the diversity of its collaborators points to Simonkai's extended regions of investigation which in those days were historically, socially, administratively differently configured.

An initial important component of the herbarium is the collection of samples for a possible botanic map of historical Hungary (part of the Austrian-Hungarian Empire at that time), consisting of material collected in Central Hungary (the Hungary today), Transylvania (labelled as *Oriental Hungary*) and Banat (mentioned as *Austral Hungary*). They are added material collected in the Serbain banat (Voievodina) and in the present territories of Croatia and Slovakia. There are names of botanists like Vince von Borbas, colector botanic species both in Hugarly and Croatia, Transylvania and Banat, or like Gyula (Julius August) Tauscher, Moriz Staub, Kunset Ianos, Lasanocz., A. Sztehló., Marton Vrabélyi, who worked on the territories of Hungary, F. A. Hazslinszky (collector in the region of Maramurs) or Janos Csato and Josef Barth, who collected on the territory of Transylvaniei. There are also names like that of W. Hugo Lojka (lichenologist, and author of *Flora Exiccata Austro-Ungarica*), of Fabry Janos, Hungarian botanist maghiar collector in the present territory of Slovakia, similar to Erich B. Behnick and Josef Ludovit Holuby, or Hugo von Klinggraff, collector on the present territory of Croatia. Other contributors are the Austrian botanists Victor von Janka, Robert Trautmann, Wladyslaw Boberski, Eduard Brandmayer, Peter Iulius Gremlich, Georg Kaspar Zollikofer, Gustav Adolf Zwanziger, collector of the present territory of Austria and the Lower Tirol.

Another component of the herbarium, related to the fact that Lajos von Simonkai is introduced as a botanist and collector for *Belgium's national Herbarium*, consists of a biological material collected by several authors and due to some exchanges and donations gets to Simonkai's collection, the donors being botanists in



central and north-European countries, such as Switzerland, Germany, Poland, up to and south of Sweden and Kalinigrad Oblast. There is material coming from Italy, as far as Palermo, or from France ranging from the Cote d'Azur to the Pyrenees Mountains collected by German botanists such as Anton Ansserdorfer, Ferdinand C. G. Arnold, Friedrich Holl, Ludvig Holtz, Ferdinand Wilhelm Werner Bertram (the editor of "Flora of Braunschweig"), M. Firlé, Karl Moritz Schumann (both collectors for „Flora of Silesia”), A. Wiegner, A. Braun, Oskar Uhlworm, Wilhelm Uloth, Anton Vigener, F.O. Wolf, by some Swiss botanists like F. Tripet., Georg Albano von Jacobi, Jakob Jaggi, or Ferdynand Karo, C. Sanio, and Anton Rehman, who collected on the present territory of Poland. Two Swedish botanists' names are mentioned, Troed Ael Ludwig Gronvall and Sven Berggren then those of the Italians Henry (Enrico) Groves (founder of the Tuscany Botanic Society), Giuseppe Gibelli, Pietro Porta, Gregorio Rigo and Agostino Todaro (member of the Italian Society of Natural Sciences, professor of botanics and head of the Botanical gardens in Palermo, author of the study *Hortus Botanicus Panormitanus*). Among the French botanists' names mentioned Simonkai's herbarium there are those of Alfred Huet du Pavillon (curator of the *De Candolle* herbarium), Henri Bordere, Jean Henri Casimir Fabre, Lous Favrat, Michel Gandoger, J. Heilmann, Jean Odon Debeaux, August Liegard, E. de Pommaret, Ernest Henry Tourlet.

The geographical area of collection is quite large and covers the mapping scheme used in the description above. When upgrading the location we see that it includes many countries: Romania, Hungary, Austria, Serbia, Slovenia, Slovakia, Germany, Switzerland, Italy, France, Poland, The Czech Republic, Denmark, Sweden, Kalinigrad Oblast (Exclavae of the Russian Federation at the Baltic Sea). As mentioned in Part I, there are unsigned herbarium sheets, or undecipherably signed. There are cases when the locations were not mentioned or could not be identified. Neither location nor the way of mentioning the date follow a certain rule in the herbarium which suggests its unfinished, work-in-progress structure. There are samples labelled with the final destination of the collection (e.g. *Flora Transylvaniae*, *Flora Banatica* or *Flora Ungariae*, *Com. Baranya*), containing the mention of species, location (place or geographical zone), date (day, month, year, or month and year, or simply the year) and sometimes the biotype. Other times the labels mentioned the species, the place (or zone) and the country, or only the species and the country. Each author had a personal way of rendering details related to the identified species. But this was not a rule either as noticeable on the sheets signed by Simonkai where the place was mentioned either in Hungarian or in latin (e.g. Oradea is mentioned either as *Nagyvárad* or as *Magnowaradinum*, and Cluj-Napoca may appear either as *Kolozsvár* or as *Claudiopolis*), meaning

that the labels, though written in different moments, they had similar destinations.

We mentioned that in Part II we have herbarium sheets lacking the collected species but containing the information about them (as mentioned on the labels), that is, the species, location, date and author. As in case of Part I, we found it worth mentioning these data in Annex 1.

### Bibliography

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- xxx – Royal Botanic Garden Edinburgh – *Flora Europaea* (PANDORA taxonomic data base system)
- xxx - Global Biodiversity Information Facility. (<http://www.gbif.org>),
- xxx - uBio Portal ([www.ubio.org/portal/-5k](http://www.ubio.org/portal/-5k)),
- xxx – Species 2000 & ITIS Catalogue of Life: 2007 Annual Checklist.
- xxx – International Information System on Crop Wild Relatives ([www.genres.de/CF/ipgri\\_cwr/.../authors.cfm?...](http://www.genres.de/CF/ipgri_cwr/.../authors.cfm?...))

## Annex 1.

**Data on the label of the herbarium sheet regarding several missing species**

Species	Taxonomy	Location and author
<b><i>Elatine alsinastrum</i> L.</b> – (n. 4656) – ref. : Sp. Pl. ed. 1 368 (1753);	<b><i>Theanae</i>, <i>Elatinales</i>, <i>Elatinaceae</i>, <i>Elatine</i></b>	Romania, Bihor, Oradea, 26.08.1877, leg. Simkovics L.
<b><i>Viola odorata</i> L.</b> – (n. 4010) – ref. : Sp. Pl. ed. 1 934 (1753); sin.: <i>Viola stolonifera</i> Rodr.;	<b><i>Violanae</i>, <i>Violales</i>, <i>Violaceae</i>, <i>Violoideae</i>, <i>Violeae</i>, <i>Viola</i></b>	Romania, Bihor, on the Cris river, 20.04.1878, leg. Simkovics L.
<b><i>Primula inflata</i> Duby.</b> - (n. 4566) – ref.: Monogr. Primul. 26, t.2. f.1. 1817	<b><i>Primulanae</i>, <i>Primulales</i>, <i>Primulaceae</i>, <i>Primuleae</i>, <i>Primula</i></b>	Hungary, Pest, Budapest, 14.05.1875, leg. Simkovics L.
<b><i>Echium vulgare</i> L.</b> – (n. 4487) – ref.: Sp. Pl. ed. 1 139 (1753); sin.: <i>Echium argenteum</i> Pau; <i>Echium granatense</i> Coincy; <i>Echium hispanicum</i> Asso;	<b><i>Solananae</i>, <i>Boraginales</i>, <i>Boraginaceae</i>, <i>Lithospermeae</i>, <i>Echium</i></b>	Hungary, Pest, Budapest (Rakos), Juny 1871, leg. Simkovics L.
<b><i>Scabiosa columbaria</i> L.</b> - (n. 4237) – ref.: Sp. Pl. ed. 1 99 (1753); sin.: <i>Scabiosa pratensis</i> Jord.; <i>S. columnae</i> Ten.; <i>S. communis</i> Rouy; <b><i>S. banatica</i></b> Waldst. & Kit.; <i>S. ceratophylla</i> Ten.; <i>S. affinis</i> Gren. & Godr.; <i>S. dubia</i> Velen., non Moench;	<b><i>Dipsacanae</i>, <i>Dipsacales</i>, <i>Dipsacaceae</i>, <i>Scabiosa</i> L.,</b>	Romania, Caras-Severin, Baile Herculane, Jule 1872, leg. Haynald.
<b><i>Scabiosalemontha</i> Schrd.</b> -(n.4238)	<b><i>Dipsacanae</i>, <i>Dipsacales</i>, <i>Dipsacaceae</i>, <i>Scabiosa</i> L.,</b>	France, Rhone-Alpes, Drome, 29.08.1873, leg. Bernadin.
<b><i>Centaurea stenolepis</i> A.Kern.</b> – (n. 4343) – ref.: Österr. Bot. Zeitschr. 22: 45 (1872); sin.: <i>Centaurea cirrhata</i> Rchb. pro parte; <i>Centaurea phrygia</i> L. subsp. <i>capitata</i> (W.D.J.Koch) Arcang.;	<b><i>Asteraranae</i>, <i>Asterales</i>, <i>Asteraceae</i>, <i>Cichorioideae</i>, <i>Cardueae</i>, <i>Centaureinae</i>, <i>Centaurea</i></b>	Romania, Bihor, Oradea (in vineyards); 07.10.1878, leg. Simkovics L.
<b><i>Poa bulbosa</i> L.</b> – (n. 4868) – ref.: Sp. Pl. ed. 1 70 (1753); sin.: <i>Poa bulbosa</i> L. subsp. <i>vivipara</i> (Koeler) Arcang.; <i>Poa carniolica</i> Hladnik & Graf ex Rchb.; <i>Poa pseudoconcinna</i> Schur; <i>Poa bulbosa</i> L. subsp. <i>leucoglossa</i> Velen.;	<b><i>Poanae</i>, <i>Poales</i>, <i>Poaceae</i>, <i>Pooideae</i>, <i>Poeae</i>, <i>Poa</i></b>	
<b><i>Poa badensis</i> Haenke ex Willd.</b> – (n. 4869) – ref.: Sp. Pl. 1: 392 (1797); sin.: <i>Poa bulbosa</i> L. subsp. <i>badensis</i> (Haenke ex Willd.) Beck; <i>Poa alpina</i> L. subsp. <i>badensis</i> (Haenke ex Willd.) Beck;	<b><i>Poanae</i>, <i>Poales</i>, <i>Poaceae</i>, <i>Pooideae</i>, <i>Poeae</i>, <i>Poa</i></b>	

<b><i>Poa trivialis</i> L.</b> – (n. 4870) – ref.: Sp. Pl. ed. 1 67 (1753);	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa palustris</i> L.</b> – (n. 4871) – ref.: Syst. Nat. ed. 10 2: 874 (1759); sin.: <i>Poa serotina</i> Ehrh. ex Hoffm.; <i>Poa tanfiljewii</i> Roshev.; <i>Poa volhynensis</i> Klokov; <i>Poa pinetorum</i> Klokov' <i>Poa fertilis</i> Host;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa nemoralis</i> L.</b> – (n. 4872) – ref.: Sp. Pl. ed. 1 69 (1753); sin.: <i>Poa lapponica</i> Prokudin; <i>Poa hypanica</i> Prokudin;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa pratensis</i> L.</b> – (n. 4873) – ref.: Sp. Pl. ed. 1 67 (1753); sin.: <i>Poa pratensis</i> L. subsp. <i>attica</i> (Boiss. & Heldr.) Rech.f.; <i>Poa pinegensis</i> Roshev.; <i>Poa turfosa</i> Litv.; <i>Poa attica</i> Boiss. & Heldr.; <i>Poa angustifolia</i> L.; <i>Poa alpigena</i> (Fr. Ex Blytt) Lindm.;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa compressa</i> L.</b> – (n. 4874) – ref.: Sp. Pl. ed. 1 69 (1753); sin.: <i>Poa langeana</i> Rchb.;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa hybrida</i> Gaudin</b> – (n. 4875) – ref.: <i>Alpina</i> (Winterthur) 3: 46 (1808); sin.: <i>Poa jurana</i> P.A.Genty;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa pannonica</i> A.Kern.</b> – (n. 4876) – ref.: Österr. Bot. Zeitschr. 14: 84 (1864);	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa coarctata</i> Haller fil. ex Gaudin</b> – (n. 4877) – ref.: [1808, <i>Alpina</i> (Winterthür), 3 : 35] = <i>P. nemoralis</i> ;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa angustifolia</i> L.</b> – (n. 4878) – ref.: Sp. Pl. ed. 1 67 (1753); sin.: <i>Poa pratensis</i> L. subsp. <i>angustifolia</i> (L.) Gaudin; <i>Poa capillifolia</i> Kalchbr.;	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	
<b><i>Poa annua</i> L.</b> – (n. 4867) – ref.: Sp. Pl. ed. 1 68 (1753);	<b>Poanae</b> , Poales, Poaceae, Pooideae, Poeae, Poa	

## Annex 2.

**The list of authors identified on the labels of Lajos Simonkai's herbarium**

Fullname	Abreviation	Alternative names	Dates	Countries
Ansserdorfer, Anton	Ansserdorfer	Anton Ansserdorfer	1836-1885	Germany, Austria
Arnold, Ferdinand Christian Gustav	Arnold	Ferdinand Christian Gustav Arnold	1828-1901	Germany
	Alph. Autheman			France
Baenitz, Carl (Karl) Gabriel	Baenitz	Carl (Karl) Gabriel Baenitz	1837-1913	Germany, Polonia
Barth, Josef (Joseph)	Barth	Josef (Joseph) Barth	1833-1915	Hungary
Behnick, Erich B.	Behnick	Erich B. Behnick		Slovakia
Bentham, George	Benth.	George Bentham	1800-1884	England, Germany
Berggren, Sven	Berggr.	Sven Berggren	1837-1917	Sweden
Bernard, Georges Eugene	Bernard	Georges Eugene Bernard	18??-1925	France
Bernard, No	N. Bernard	No Bernard	1874-1911	France
Bertram, Ferdinand Wilhelm Werner	Bertarm	Ferdinand Wilhelm Werner Bertram	1835-1899	Germany
	Nestor Bertram	Nestor Bertram		Germany
Boberski, Wladyslaw	Boberski	Wladyslaw Boberski	1846-1891	Austria
	S. Bochmann			Germany
	Boneberger			Switzerland
Borbas, Vince von	Borbas	Vince von Borbas	1844-1905	Hungary, Croatia, Romania (Flora Banatica)
Bordere, Henri	Bordere	Henri Bordere	1825-1889	France
Braun, Alexander Carl Heinrich	A. Braun	Alexander Carl Heinrich Braun	1805-1877	Germany
Brandmayer, Eduard	Brandmayer	Eduard Brandmayer		Austria
	Cismas			Switzerland
Csato, Janos	Csato	J. Csato	1833-1913	Hungary
Debeaux, Jean Odon	Debeaux	Jean Odon Debeaux	1826-1910	France
	Dhernic			Poland, Low Silesia,
	A. Digener			

	Don de B. Jacob	Don de B. Jacob, a Cormoudeche.		Switzerland,
	P. Drecesen.			Germany
Dresler, Ernst Friedrich	Dresler	Ernst Friedrich Dresler	1824-x	Germany
	O. Ebof.			France
Fabre, Jean Henri Casimir	Fabre	Jean Henri Casimir Fabre	1823-1915	France
Fabry Janos	Fabry	Janos Fabry	1830-1907	Hungary
Favrat Louis	Favrat	Lous Favrat	1827-1893	France
	Dr. Feuttinger			
	M. Firle			
	Fray.			France
Freyn, Josef Franz	Freyn	Josef Franz Freyn	1845-1903	Czech Republic
Gandoger, Michel	Gandoger (Gand.) Garder.	Michel Gandoger	1850-1926	France
				Austria
Geheeb, Adalbert	Geheeb (Geh.)	Adalbert Geheeb	1842-1909	Germany Switzerland
Gibelli, Giuseppe	Gibelli	Giuseppe Gibelli	1831-1898	Italy
Grantzow, Carl (Karl)	Grantzow	Carl (Karl) Grantzow	x-1894	Germany
Grembllich, Peter Julius	Grembl.	Peter Iulius Gremlich	1851-1905	Austria
Gronvall, Troed Axel Ludvig	Gronvall	Troed Ael Ludvig Gronvall	1838-1892	Sweden
Groves, Henry (Enrico)	Groves	Henry (Enrico) Groves	1835-1891	Italy
Grover, Frederick Orville	Grover	Frederick Orville Grover	1868-1964	Italy
Hazslinszky Frgyes Akos	Hazslinszky	Frgyes Akos Hazslinszky	1818-1896	Hungary
	Heiland.			Germany
Heilmann, J	Heilmann.	J. Heilmann.		France
	Heidenreich.	Dr. Heidenreich.		
Herpell, Gustav Jacob	Herp.	G. Herpell	1828-1912	Germany
Holl, Friedrich	Holl	Friedrich Holl	1820-1850	Germany
Holtz, Johan Fredrich Ludvig	Holtz	Ludvig Holtz	1824-1907	Germany
Holuby, Josef Ludovit	Holuby	Josef (Joszef) Ludovit Holuby	1836-1932	Slovakia
	Horzhenfsse			



Huet du Pavillon, Alfred	A. Huet	Alfred Huet du Pavillon	1829-1907	France
	Hugo			Hungary, Czech Republic
Huter, Rupert	Huter.	Rupert Huter	1834-1919	
Jacobi, Georg Albano von	Jacobi	Georg Albano von Jacobi	1805-1874	Switzerland
Jaggi, Jakob (Jacob)	Jaggi	Jakob Jaggi	1829-1894	Switzerland
Janka, Victor von	Janka	Victor von Janka	1837-1890	Austria
Karo, Ferdynand (Kastanowitsch)	Karo	Ferdynand Karo	1845-1927	Poland
	Kastrop.			
	A. Kerner			
Klinggraff, Hugo Erich Meyer von	H. Klinggraff	Hugo von Klinggraff	1820-1902	Germany, Croatia
Kolb, Max	Kolb	Max Kolb.	1829-1915	Germany
	Krom			Switzerland
	O. Kun.			Poland
Kuntze, Carl Ernst Otto	Kuntze	Carl Eduard Otto Kuntze	1843-1907	Germany, Italy
Kunze, Johannes	J. Kunze	Johannes Kunze	x-1881	Germany
	Kunze János,			Hungary
	Lamianiker Hanes			
Lamy de la Chapelle, Pierre Marie Edouard	Lamy.	Pierre Marie Edouard Lamy de la Chapelle	1804-1886	France
	Lakony Hotty			
	Lasanocz.			Hungary
Liegard, August	Lieg.	August Liegard	1801?-1892	France
Levier, Emile (Emilo)	Levier	E. Levier	1839-1911	Italy, Spain Portugal
Lojka, (W.) Hugo	Lojka	W. Hugo Lojka	1844-1887	Hungary
Marcus, Alex.	Alex. Marcus	Markus Sandor, Alex. Markus	1831-1867	Hungary
	Materbach.			
Matz, Julius	Matz	Julius Matz	1886-x	
	Maty			France
Mayer, Anton	Mayer	Anton Mayer	1867-1951	Germany, Switzerland
Masson, Rosine	Masson	Rosine Masson	1808-1891	Switzerland

	Materbach.			Poland
Melsheimer, Marcellus	Melsh.	Marcellus Melsheimer	1827-1920	Germany
Milne-Edwards Alphonse	Milne-Edw.	Alphonse Milne-Edwards	1835-1900	France
Milde, Carl August Julius	Milde	Carl August Julius Milde	1824-1871	Germany
Morthier, Paul	P. Morthier.	Paul Morthier	1823-1886	Switzerland
Mouilleferet, Pierre	Mouill.		1845-1903	France
	Muillet., .			France
Neygenfind, Friedrich Wilhelm	Neygenf. (Ney.)	Friedrich Wilhelm Neygenfind	fl. 1821	Germany
	Onati.			
Pallas, Peter (Pyotr) Simon von	Pall.	Peter (Pyotr) Simon von Pallas	1741-1811	Germany
Pittoni, Josef Claudius	Pittoni	Josef Claudius Pittoni (J.C. Eques Pittoni a Donnenfeldt.)	1797-1878	Austria
Pommaret, E. de	E. de Pommaret	E. de Pommaret		France
Porta, Pietro	Porta	Pietro Porta	1832-1923	Italy
Rackestrom, Emfis	Rackestrom.	Emfis Rackestrom.		Danemark
Rehman, Anton	Rehman	Anton Rehman	1840-1917	Poland, Czech Republic,
	W. Reinache			Germany
	Reisenberg			Poland, Low Silesia,
	Reutermann			Sweden,
Rigo, Gregorio	Rigo	Gregorio Rigo	1841-1922	Italy
	Rottenbachthal			
Sanio, Carl Gustav	Sanio	Carl Gustav Sanio	1832-1891	Germany Poland
	Salub.			
Scheitz, Antal	Scheitz	Antal Scheitz		
Schmidely, Auguste Isaac Samuel	Schmidely	Auguste Isaac Samuel Schmidely	1838-1918	Switzerland
Schrank, Eckart	E. Schrank	Eckart Schrank	x-x	France
Schultz, Friedrich Wilhelm	F.W. Schulz	Friedrich Wilhelm Schultz	1804-1876	Germany
Schumann, Karl Moritz	K. Schum.	Karl Moritz Schumann	1851-1904	Germany

Siegfried, Hans	Siegfried	Hans Siegfried	1837-1903	Germany
Simonkai, Lajos von	Simonk. (Simkovics L.)	Lajos von Simonkai, Lajos Philipp von Simkovics	1851-1910	Hungary
	Slauses.			Germany
	Sommier.			
Staub Moriz (Moricz, Moritz)	Staub	Moriz (Moricz, Moritz) Staub	1842-1904	Hungary
Sztehlo, A.	Sztehlo.	A. Stehlo.		Hungary
Tauscher, Gyula (Julius August)	Tauscher (I.A. Tauscher)	Gyula (Julius August) Tauscher	1832-1882	Hungary
Todaro Agostino	Todaro (Tod.)	Agostino Todaro	1818-1892	Italy
Tourlet, Ernest Henry	Tourlet	Ernest Henry Tourlet	1842-1907	France
Trautmann, Robert	Trautmann	Robert Trautmann	1873-1953	Austria
Tripet, F.	F. Tripet. (F.T.)	F. Tripet.		Switzerland
Uhlworm, Oskar	Uhlworm	Oskar Uhlworm	1849-1929	Germany
Uloth, Wilhelm (Ludwig Henrich)	Uloth	Wilhelm Uloth	1833-1895	Germany
Vatz, L	Vatz	L. Vatz		
Vigener, Anton	A. Vigener	Anton Vigener	1840-1921	Germany
Vilmos, Neudkovich	Vilmos	Neudkovich Vilmos.		Serbia
Vrabélyi, Marton	Vrabelyi	Marton Vrabélyi	1808-1877	Hungary
	Wiegner	A. Wiegner		Germany
Wagner Janos	Wagner	Janos Wagner	1870-1955	Hungary
Winter, Ferdinand	F.Winter	Ferdinand Winter	1835-1888	Germany
	Wirtz.			Switzerland
Wolf, Ferdinand Otto	F.O. Wolf	Ferdinand Otto Wolf	1838-1906	Germany Switzerland
Zirkendrath, Ernst	Zirkendrath,	E. Zirkendrath,		Germany, Switzerland
Zollikofer, Georg Kaspar	Zollikofer	Georg Kaspar Zollikofer.	1816-1895	Austria Switzerland
Zwanziger, Gustav Adolf	Zwanziger	Gustav Adolf Zwanziger	1839-1893	Austria

<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>167 - 206</b>	<b>Oradea, 2009</b>
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## Standard malacofaunistical work of Sălaj county and western part of the Plopişului/Şesului Mountains (Romania)

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**Abstract.** The malacofaunistical data of the studied area (Northern part of the West Carpathians /Munții Apuseni) were compiled on the basis of references (Table 1) and our collected malacological material (60 new collection sampling sites). The faunistical investigation was concentrated first on the following land snail taxa: Familia Clausiliidae, *Bradybaena fruticum*, *Monachoides vicina*, *Drobacia/Helicigona banatica*, *Helix lutescens*, *Helix pomatia*, *Kovacsia kovacsi* and *Lozekia transsylvanica*. The malacofauna of the area studied consists of 87 terrestrial snails, seven freshwater snails (Gastropoda) and three mussels (Bivalvia), a total of 97 taxa, 644 new units altogether.

### Short conspectus of the area (topography, hydrography, petrology, soil condition, meteorology)

Sălaj County and western part of the Şesului/Plopişului Mountains were studied. The study area is marked out approximately by border of Sălaj County, except the SW side. On this side, between Ciucea and Uileacu de Criş, the border runs

along the national primary road marked 1 or E 60. From Uileacu de Criș the border changes in the direction of Brusturi –Tria – Marghita – Suplacu de Barcău. The study area is positioned on the sketch map (Fig.1).

The studied area is divided by us into three parts:

1. Sălaj hilly landscape (Măgura Șimleului 596 m) with the wide catchment basin valley of the Someș, the Crasna and the Barcău. This unit is covered by Tertiary layers (Eocene limestone tables, Oligocene deposits). The Tertiary hilly area slopes along the fault line towards the Great Plain. At the western side of the hilly area, it is loess-covered, sandy. The annual mean temperature is 8–10°C, and the annual precipitation is between 800 and 850 mm. The catchment area of Crasna receives less water than the inner parts: 500–700 mm.

2. Meseș Mountains /Munții Meseșului (Măgura Mare 918 m) and Plopiș Mountains/ Munții Plopișului or Șesului (Măgura Priei 996 m) up to the Crișul Repede River. Both mountains are situated on the northern part of the Apuseni Mountains. Crystalline shale is the base of both. The Plopișului is almost uncovered, on the Meseș there is Eocene limestone lying on the block of the crystalline shale.

The W part of M. Plopișului/ Șesului is to be found in Bihor County. In the Plopișului Mountains, the annual mean temperature is 6–8°C; the annual precipitation is 700–1000 mm. In the Meseș, it is only 7–9 °C and 600–700mm.

3. Almaș and Agrij drainage Basin (Basarabi 501 m) and Cluj-Dej hilly landscape (Vf., Dealului 627m). The catchment basin is located surrounded by the Meseș Mountains and the dacite tuff hills of Cluj-Dej belong also to the Câmpia Transilvaniei proper. In it, Oligocene and Eocene deposits come to the surface all around from under the Miocene sediments. The annual mean temperature and precipitation are 7–8°C and 600–700 mm (Andó 1999).

The Someș, the Crasna, the Barcău and the Crișul Repede drain the waters of study area (Fig.1).

### Malacofaunistical introduction

History of the malacofaunistical research of this area is not too rich. The past malacofaunistical data from the area comes from Csiki (1906) (Table 1: column 1), Bába & Kovács (1975) (Table 1: 2), Váncsa (2006) (leg.: Kovács, 1977) (Table 1: 3), Sárkány-Kiss et al. (1997) (Table 1: 4, 5, 6), Sárkány-Kiss et al. (1999) (Table 1: 7, 8, 9), Bába & Sárkány-Kiss (1999) (Table 1: 10) and Nordsieck (2006) (Table 1: 1).

**Table 1. Sampling sites and taxa (40) of the studied area on the basis of references**

1. Élesd/Aleșd: *Bulgarica vetusta*, *Bradybaena fruticum*, *Helicigona banatica*, *Helix pomatia*, *Pseudalinda stabilis*, *Radix peregra* (Csiki 1906), *Macrogastra borealis bielzi* (Nordsieck 2006); Nagy-Bárod/Borod: *Cochlodina orthostoma*, *Laciniaria plicata*, *Perforatella dibothrion*, *Pseudalinda stabilis*; 2. Cornișel, Pasul Piatra Craiului, near the restaurant; 3. Ciucia, Cast. Boncza/Goga; 4. Tusa, Spring Barcău; 5. Boghiș, Barcău, 6. Suplacu de Barcău, Barcău; 7. Letca, Someș. 8. Someș Odorhei, Someș. 9. Ticău, Someș. 10. Benesat, oak-hornbeam-grown.)

Taxa	Sampling site										
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
<i>Alinda biplicata</i>		+	+								
<i>Ancylus fluviatilis</i> aquatic				+	+			+	+		
<i>Anodonta cygnaea</i> aquatic								+	+		
<i>Arion ater</i>											+
<i>Bielzia coerulans</i>											+
<i>Bradybaena fruticum</i>	+									+	+
<i>Bulgarica vetusta</i>	+		+								+
<i>Carpathica calophana</i>											+
<i>Cochlicopa lubrica</i>		+									
<i>Cochlodina laminata</i>		+	+								
<i>Cochlodina orthostoma</i>	+										
<i>Deroceras reticulatum</i>											+
<i>Deroceras transcaucasicus</i>											+
<i>Deroceras transsylvanicus</i>											+
<i>Euomphalia strigella</i>		+									
<i>Galba truncatula</i> aquatic							+	+	+		
<i>Helicigona banatica</i>	+		+							+	
<i>Helix pomatia</i>	+										
<i>Hygromia transsylvania</i>		+	+							+	
<i>Laciniaria plicata</i>	+		+								+
<i>Lehmannia marginata</i>											+
<i>Limax cinereoniger</i>											+
<i>Lytopenia occidentalis</i>											+
<i>Macrogastra borealis bielzi</i>	+										
<i>Oxychilus glaber</i>			+								
<i>Oxyloma elegans</i>							+				
<i>Perforatella dibothrion</i>	+										+
<i>Phenecolimax annularis</i>			+								
<i>Physa acuta</i> aquatic							+	+	+		
<i>Planorbis planorbis</i> aquatic									+		
<i>Pseudalinda fallax</i>		+									
<i>Pseudalinda stabilis</i>	+	+									
<i>Radix auricularia</i> aquatic									+		
<i>Radix peregra</i> aquatic	+			+	+						
<i>Ruthenica filograna (gallinae)</i>			+								
<i>Sphyradium doliolum</i>		+	+								
<i>Trichia bielzi</i>										+	
<i>Unio crassus</i> aquatic					+			+	+		
<i>Vallonia pulchella</i>			+								
<i>Vitrina pellucida</i>		+	+								



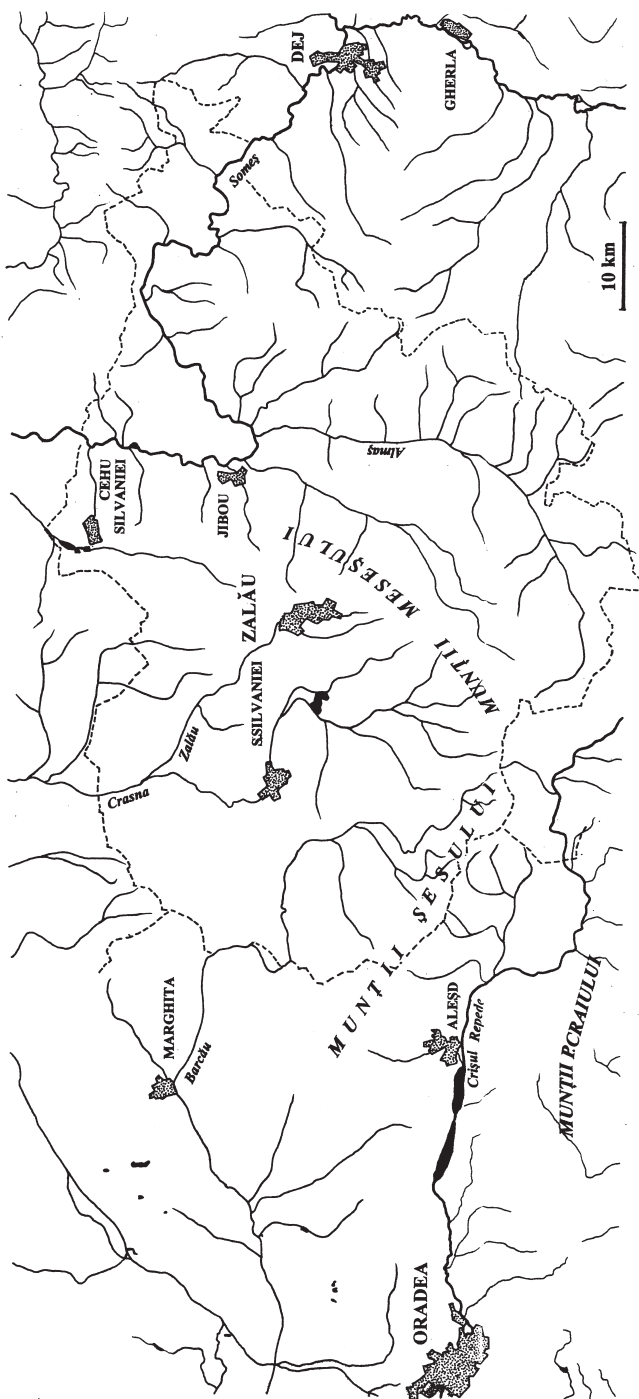


Fig.1. The topographic sketch map of the study area (Sălaj county –thin pecked line – and western part of the Şesului /Plopişului Mts.).

Some more information is to be found in Grossu's book (1983; Table 1:11.: *Arion ater*, *Bielzia coerulans*, *Carpathica calophana*, *Deroceras reticulatum*, *Deroceras transcaucasicus*, *Deroceras transsylvanicus*, *Lehmannia marginata*, *Limax cinereoniger*, *Lytopenelte occidentalis*) and in the malacological collection of the Hungarian Natural History Museum (Budapest) [Table 1: 11.:Élesd/Aleșd, Sólyomkői-erdő/forest: *Perforatella dibothrion* (Nr.18563); Zilah/Zalău, Vármező/ Castle-field: *Bradybaena fruticum* (Nr.18634); Ciucea: *Bulgarica vetusta* (Nr. 3113), *Laciniaria plicata* (Nr. 3107)].

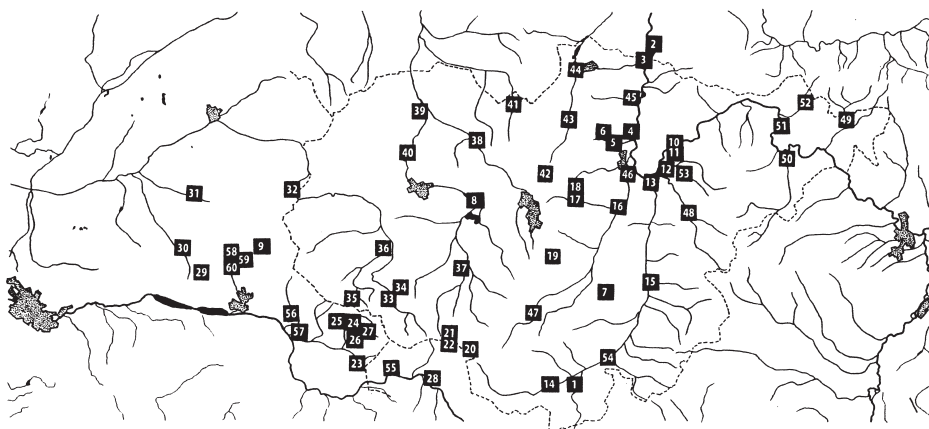
In the mollusks collection of Alexandru V. Grossu from the study area anything cannot be found in Muzeul Țării Crișurilor, Oradea (Gagiu 2007).

Taking everything in account, number of discovered species in the study area is 40.

### Description of the sampling sites

The sampling sites are presented in chronological order (Fig. 2):

1. Almașu/Váralmás, Cetatea Almașului – the ruin of the castle made of metamorphic and sand stones. Near the ruins, there are bushes (hazel) and trees (*Carpinus*, *Acer*). Dry dead leaves of forest and broken fragments of the ruins.  
27 May 2007.
2. Cheile (Țicău Pass) between Țicău (Jud. Maramureș) and Benesat. The site is near the parking place on the left Someș River side. We collected under poplars in humed dead leaves and also from 20 cm deep of the fluvial sediment (sand).  
27 May 2007.
3. County boundary between Țicău and Benesat. A steep hillside with metamorphic stones. Dry dead leaves of forest (*Carpinus*, *Acer*). The soil is covered by *Allium*.  
27 May 2007.
4. Someș Guruslău – the right side of the Someș. The sampling site is 100 m S from the bridge. Salicetum on the flood plain, rubbish bushes and great burdock (*Urtica*, *Robinia*).  
27 May 2007.
5. Jibou– 2km NW from the settlement. The great burdock found on the left side of the Șoimuș brook. Thin dead leaves of forest on the sandy soil. A relatively open and warm biotope on the skirts of arable land. A forest can be found on the right (south) side of the brook.  
27 May 2007.



**Fig. 2.** The sketch map of the sampling sites in chronological order.

6. Jibou – 2km NW from the settlement. The forest is situated near the road between Jibou and Șoimuș. Dry dead leaves of forest (*Acer*, *Carpinus*).  
27 May 2007.
7. Poarta Sălajului– a mountain pass (300m) 3 km SE from the settlement. The alluvia covered with very dry dead leaves of forest (*Acer*) are situated near the road bend. A relatively open biotope.  
28 May 2007.
8. Vârșolț/Varsolc– the left side of the Crasna brook at the bridge. A humed great burdock biotope NW from the bridge.  
28 May 2007.
9. Aleșd/Élesd (Jud. Bihor) – 9,6 km N from the settlement (road No.1H). A side valley with water ooze. Thick dead leaves of forest (*Fagus*); the ground covered by twigs and great burdock. A humed biotope.  
28 May 2007.
10. Ciocmani– on left side of the Someș River. The flood plain between vehicular and railway bridge. Loamy alluvial soil on stratified loamy sandy and silty substratum.  
21 October 2007.
11. Ciocmani – on the left side of the Someș River. The stony bank of an unknown brook with trees (*Alnus*), near the bridge and the road.  
21 October 2007.
12. Surduc – the sand wall in the settlement near the railway. A grassy area exposed to sun.  
21 October 2007.

13. Tihău – partly face with concrete, on the left side of the Almaş brook, near the bridge of the road (No. 1H). The 5-m-wide green corridor (*Populus*, *Salix*, *Amorpha*; *Urtica*, *Rubus*) of the brook, 25 m NW from the bridge. Thick humed and mouldy dead laeves of forest.  
21 October 2007.
14. Almaşu/Váralmás, Valea Almaş, 1 km SW from the settlement at the bridge (road No.1G). The 5-m-wide green corridor (*Salix*, *Alnus*, *Populus*; great burdock) of the Almaş brook. Sandy and silty substratum.  
22 October 2007.
15. Baica, Valea Printre – the wooded (*Robinia*, *Amorpha*, *Salix*), high bank of the Printre Văi brook, near the bridge. 2 km W from Sânpetru Almaşului. The site is open and faces south. The sandy soil is covered by fragments of concrete.  
22 October 2007.
16. Between Lupoiaia and Creaca – near bridge of the Agrij brook. The right side is S from the bridge. In the green corridor (*Salicetum*), small sand-hills covered by *Urtica* and *Rubus* are to be found.  
22 October 2007.
17. Between Moigrad-P. and Ortelec – the left sandy bank of the Ortelec brook covered by great burdock (*Urtica*, *Petasites*, *Equisetum*). A very humid sampling site. The brook flows by the forest (*Carpinus*). The biotope is opened and exposed to sun. The green corridor is only 5–3-meters-wide.  
22 October 2007.
18. Between Moigrad-P. and Ortelec. The sampling site faces south and is to be found by the road, on grassy calcareous stones (Eocene) and under bushes bordering the road hillside. A dry biotope.  
22 October 2007.
19. Zalău – 3 km S from Poarta Meseşului (pass). The dry dead leaves biotope is to be found NE from Meseş (600), near the big road bend, in a sparse forest (*Fagus*).  
22 October 2007.
20. Vânători (Jud. Cluj) – 10 km NE from Ciucia in the direction of Huta, 1,5 km N from Magura Priei (996m). The woody (*Alnus*) sampling area can be found on both side of the Poicu brook, near the road. The soil is very stony and humed.  
23 October 2007.
21. Vânători (Jud. Cluj), Plopiş (610 m) – a mountain pass near the boundary of two counties (Cluj/Sălaj). A grassy area, a sheep-run near by the road.

A mossy and stony biotope at the crucifix.

23 October 2007.

22. Vânători (Jud. Cluj), Plopiș (610m) – a mountain pass near the boundary of two counties (Cluj/ Sălaj). The couloir in the forest (*Fagus*) by the grassy area on the N side of the road.

23 October 2007.

23. Groapa Iepii, Cornișel (Jud. Bihor), Pasul Piatra Craiului (mountain pass 582 m) – a forest (*Fagus*) on the N side of the road (E60), near Inn Kojak. A dead leaves biotope facing W. The sampling area is humid (*Fagus*, *Urtica*, *Rubus*) or rather very humid (*Carex*, *Pteridium*). The first snail data were gathered in 1973 by Kovács (Bába & Kovács 1975).

23 October 2007.

24. Borod (Jud. Bihor) – 3km N from the road (E60). The green corridor (*Salix*, *Alnus*; *Urtica*) of the Răchita brook. Humid dead leaves of forest on the left brook-side.

23 October 2007.

25. Borod (Jud. Bihor) – 3 km N from the road (E60). The sample is from the first concrete dam of the Răchita brook. The malacological specimens are fixed on the concrete.

23 October 2007.

26. Borod (Jud. Bihor) – 3km N from the road (E60). The coppice [green corridor (*Salix*, *Alnus*, *Urtica*)] on the left side of the Răchita brook in front of the bridge.

23 October 2007.

27. Borod (Jud. Bihor) – 3km N from the road (E60) A grassy area on the left side of the Șerani brook. A relatively open and warm mossy biotope.

23 October 2007.

28. Ciucea (Jud. Cluj) – at the foot of the wall rock to be found under castle called Ady-Goga Museum. A stony sampling site near the road (E60). Dead leaves of forest and stony debris (metamorphic crystalline rocks).

28 October 2007.

29. Cuișd (Jud. Bihor) – 500 m SE from the settlement (5,2 km from the junction Țigănești de Cris) in the direction of Lugașu de Cris. Scum and Mollusks taken from the right-hand-side of the brook, near the plough-land. On the brook side: alder, hasel, walnut, *Rubus*, *Urtica*. On the left-hand-side of the brook, a forest road and a *Fagus* forest on the downhill can be found.

08 July 2008.

30. Piculeu (Jud. Bihor) – on the right-hand-site of the Fânetelor brook, near the

plough-land at the settlement-plate of Brusturi, in the direction of Varasău. Clusters of willow trees, in a 10-meter-wide ruderal strip of land.

08 July 2008.

- 31.** Tria (Jud. Bihor) – at the eastern end of the settlement. The humid silty scum in the Salicetum of the Tria brook.

08 July 2008.

- 32.** Suplacu de Barcău/Berettyószéplak (Jud. Bihor) – the left-hand-side bank of the Barcă River, at the vehicular bridge. The sampling site covered by great burdock (bramle, nettle). The scum was empty.

09 July 2008.

- 33.** Preoteasa – Cheile of the Barcă River (4 km from the Vf. Hulupiştii: 727m), at the S end of the settlement. The sampling site faces SE and is to be found at the foot of the hill on cristalline rocks. Dead leaves, logging stumps and fine logging woody debris of hornbeam grove.

09 July 2008.

- 34.** Preoteasa – swampy hillside with cluster of dwarf alder tree above NE from the settlement.

09 July 2008.

- 35.** Sub Cetate, Ruină de Cetate Valcău – near the Barcău River on the Castle hill (422m). The site is shady and faces SW. It is a nettle and stony biotope. The soil is covered by fragments of wall and dead leaves of forest (*Robinia*, elm).

09 July 2008.

- 36.** Boghiş/Szilágybagos – at the vehicular bridge of the Jaz brook. The sampling site is on the right-hand-side of the brook. It is a willow, great burdock (bramle, nettle, hop) biotope.

09 July 2008.

- 37.** Horoatu Crasnei/Krasznahorvát – 0,5 km S from the settlement, on the left-hand-side of the green corridor (willow, great burdock) of the Crasna brook.

10 July 2008.

- 38.** Bocşa – near railway station, at the vehicular bridge. Left-hand-side of the Zalău brook. The scum (fine stem broken by water-borne transport) band (0,10–0,20 meters wide) on the cut great burdock is to be found on the 1,5 m height of the brook on steep bank above.

10 July 2008.

- 39.** Moiad – at the vehicular bridge of the Crasna. The some meters wide green corridor (great burdock) with many living specimens.

10 July 2008.



40. Uileacu Șimleului/Somlyóújlak – on the left-hand-side of the Crasna brook. The steep willowy bank covered by great burdock. There are many living specimens.  
10 July 2008.
41. Achid/Szilágyerked – the green corridor (willowy, great burdock) of the Șerpelit brook and its canal, at the vehicular bridge.  
10 July 2008.
42. Cristur-Criseni/Szilágyfőkeresztúr – the sampling site is exposed to SE and to be found on the hilly landscape. The hornbeam-oak grove near to the road. Dry soil and dead leaves of forest.  
11 July 2008.
43. Naimon/ Nagymon – the green corridor (willowy and great burdock) of the Sălaj brook, at the vehicular bridge, in the direction of settlement of Șoimuș. It is a relatively humid biotope.  
11 July 2008.
44. Cehu Silvaniei/Szilágycseh – the green corridor (willowy, great burdock) of the Sălaj brook, in the direction of Hodod, 100 meters from the road junction.  
11 July 2008.
45. Inău – the nettle bank of the Inău brook at the settlement. Both sides of the brook are full off rubbish.  
11 July 2008.
46. Jibou – the green corridor (willowy, nettle, bramble) at the industrial park. We took samples from a sunny and a shady biotope, too.  
11 July 2008.
47. Between Buciumi and Răstolt – a comparatively wide green corridor (aldery, willowy, nettle, bramble) because the Agrij brook near the bridge divides into several arms. The ground is covered with dead trees and branches, dead leaves, litter and fine woody debris. It is a relatively humid biotope in the plough-land periphery.  
11 July 2008.
48. Fabrica – 1 km S from the settlement, at the bridge. The silty scum of the Brâglez brook. We collected scum on either side of the brook. The scum is composed of dead wood (big dead trees, branches, fine logging woody, unclassified debris)  
11 July 2008.
49. Poiana Plenchii, Cheile Babei. We took samples in the middle of the gorge, at foot of the rock wall exposed to NE. The biotope was shrub detritic limestone rock, and the soil was covered by moss and nettle.  
12 July 2008.

- 50.** Rus – near the vehicular bridge. A sonny and shady willowy band on the right-hand-side of the Şimişna brook.  
12 July 2008.
- 51.** Dabaceni – N from the end of the settlement, a 200-meter-wide flood plain. The willowy sampling site is to be found on right-hand-site slop bank of the Someş River. The sandy soil covered by dead wood and great burdock. It is a very humid biotope.  
12 July 2008.
- 52.** Ileanda – the 5-meter-wide alder forest belt of the Ileanda brook, near the bridge, in the direction of Măleni.  
12 July 2008.
- 53.** Criştoţel – the green corridor (willow-alder, great burdock) of the Criştoţel brook. It extends 200 meters W from the settlement, near the bridge.  
12 July 2008.
- 54.** Bozolnia – the willowy left-hand-side of the Almaş brook. The biotope is in two steps and very rich in malacofauna.  
12 July 2008.
- 55.** Negreni, Lacu Crişului. The pine-grown slope of hill at curve in the road, near a filling station. We took samples from under the litter (shavings).  
13 July 2008.
- 56.** Cetea – S from the settlement, near the vehicular bridge. The green corridor (alder, ach, great burdock) of the Cetea brook. The sampling site 10 m W from the bridge. Here and there a 0,1-0,2 meters wide scum (fine stem broken by water-borne transport).  
13 July 2008.
- 57.** Cetea – S from the settlement, near the vehicular bridge. The green corridor of the Cetea brook. (See site Nr. 56.) The stony bed of the Cetea brook.  
13 July 2008.
- 58.** Aleşd/Élesd – 3 km N from the settlement. Ruins of Cetatea Şinteului (484 m). The site faces south. It is a grassy and cavernous limestone biotope. The ground is covered by fragments of wall.  
13 July 2008.
- 59.** Alesd/Élesd – the foot of the rock wall (karstic limestone) under the ruin of the Cetatea Şinteului (→**58.**). Humid ground with broken fragments of rock and dead leaves of forest.  
13 July 2008.
- 60.** Aleşd/Élesd – alder in both side of the Secătura brook. The sampling site is found in the great burdock near **59th** sampling site.  
13 July 2008.

## Methods

We took the samples from dead leaves of forest, big standing dead trees (snag), litters and fine woody debris, etc only via singling (60 minutes/site). It is generally known that singling increases the proportion of the the species of larger-size; therefore, we took the sampling via singling.

After cleaning and drying, we selected out and classified shells coming from malacological material or anatomical investigation. In order to identify the species we used the taxonomic books or papers from Soós (1943); Grossu (1981, 1983); Kerney et al (1983); Kiss, Pintér (1985). Our nomenclature follows A.V. Grossu (1993) approximately with some modifications. Among from the enumeration of species we reduced the subspecies and different forms, with the exception of Familia Clausiliidae. In this case, we used nomenclature according to M. Szekeres.

## Results

During the standard examination (compilation, collecting) time 97 Mollusca taxa and 644 new units were found (Check list, Table 1, 2, 3).

The number of terrestrial species is 87.

Among the species of relatively large size we found the rare (the frequency was lower than 20%) *Isognomostoma isognomostoma*, *Alinda biplicata*, *Agardhiella lamellata*, *Argna bielzi*, *Bulgarica cana*, *Campylea faustina*, *Perforatella bidentata*, *Pseudalinda stabilis*, *Bulgarica vetusta*, *Clausilia pumila*, *Kovacsia kovacsi*, *Macrogastra borealis*, *Perforatella dibothrion* (In increasing order of the frequency), etc.

*Ruthenica filigrana*, *Trichia hispida*, *Helicigona banatica*, *Laciniaria plicata*, *Helix lutescens*, *Monachoides vicina*, *Cochlodina laminata*, *Helix pomatia*, *Euomphalia strigella*, *Bradybaena fruticum* (in increasing order of the frequency) are relatively frequent on the northern part of Apuseni Montains.

The number of aquatic snails (Gastropoda) is seven and of mussels (Bivalvia) is three.

Table 2/1. Sampling sites and terrestrial snail taxa of the study area

	Taxa	Sampling site														
		0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	1 0	1 1	1 2	1 3	1 4	1 5
1.	<i>Achanthinula aculeata</i>															
2.	<i>Acicula perpusilla</i>															
3.	<i>Acicula polita</i>															
4.	<i>Aegopinella epipedostoma</i>			•							•					
5.	<i>Aegopinella minor</i>	•		•		•		•			•				•	
6.	<i>Agardhiella lamellata</i>		•													
7.	<i>Alinda biplicata</i>								•					•		•
8.	<i>Arion circumscriptus</i>				•										•	
9.	<i>Arion subfuscus</i>															
10.	<i>Argna bielzi</i>															
11.	<i>Bradybaena fruticum</i>	•	•	•	•	•			•		•	•		•	•	•
12.	<i>Bulgarica cana</i>								•							
13.	<i>Bulgarica vetusta</i>					•										
14.	<i>Campylea faustina</i>										•					
15.	<i>Carpathica calophana</i>															
16.	<i>Carychium minimum</i>				•									•		
17.	<i>Carychium tridentatum</i>		•												•	
18.	<i>Cepaea vindobonensis</i>	•				•			•		•	•		•		•
19.	<i>Chondrina clienta</i>															
20.	<i>Chondrula tridens</i>															•
21.	<i>Clausilia pumila</i>					•										•
22.	<i>Cochlicopa lubrica</i>			•	•				•		•	•		•	•	•
23.	<i>Cochlicopa lubricella</i>												•	•	•	•
24.	<i>Cochlodina laminata</i>		•	•	•	•				•	•	•		•	•	•
25.	<i>Columella edentula</i>													•	•	•
26.	<i>Deroceras</i> sp.				•				•		•				•	•
27.	<i>Discus perspectivus</i>															
28.	<i>Ena montana</i>			•												
29.	<i>Euconulus fulvus</i>	•													•	
30.	<i>Euomphalia strigella</i>	•	•	•		•							•	•		•
31.	<i>Granaria trumentum</i>	•														
32.	<i>Helicella obvia</i>	•														•
33.	<i>Helicigona banatica</i>		•	•	•				•	•	•					•
34.	<i>Helicodiscus singleyanus</i>															
35.	<i>Helix lutescens</i>	•	•	•	•	•		•	•	•	•	•	•	•	•	•
36.	<i>Helix pomatia</i>		•		•			•		•	•	•	•	•		
37.	<i>Isognomostoma isognomostoma</i>					•										
38.	<i>Kovaccia kovacsi</i>															
39.	<i>Laciniaria plicata</i>		•	•	•						•			•		•
40.	<i>Lehmanna marginata</i>															
41.	<i>Limax maximus</i>				•			•	•							
42.	<i>Macrogastra borealis</i>													•	•	•
43.	<i>Malacolimax tenellus</i>															
44.	<i>Merdigera obscura</i>			•		•										
45.	<i>Monacha cartusiana</i>	•							•							
46.	<i>Monachoides vicina</i>			•	•	•			•	•	•			•	•	•
47.	<i>Nesovitreia hammonis</i>															
48.	<i>Oxychilus draparnaudi</i>										•			•		•
49.	<i>Oxychilus glaber</i>		•													
50.	<i>Oxychilus inopinatus</i>															
51.	<i>Oxychilus montivagus</i>															
52.	<i>Oxychilus orientalis</i>													•		
53.	<i>Perforatella bidentata</i>										•	•				
54.	<i>Perforatella dibothrion</i>					•				•						
55.	<i>Phenacolimax pellucida</i>	•	•							•	•		•		•	•
56.	<i>Pseudolinda stabilis</i>		•	•						•						
57.	<i>Punctum pygmaeum</i>															
58.	<i>Pupilla muscorum</i>															
59.	<i>Ruthenica filigrana</i>		•													•
60.	<i>Sphyradium dolium</i>		•	•												
61.	<i>Succinea oblonga</i>					•								•		
62.	<i>Succinea putris</i>				•			•		•	•					
63.	<i>Trichia bielzi</i>								•							
64.	<i>Trichia hispida</i>				•						•	•			•	
65.	<i>Truncatellina cylindrica</i>	•												•		•
66.	<i>Vallonia costata</i>	•												•		•
67.	<i>Vallonia pulchella</i>													•		•
68.	<i>Vertigo angustior</i>		•													
69.	<i>Vertigo pygmaea</i>													•		
70.	<i>Vitrea contracta</i>		•													
71.	<i>Vitrea crystallina</i>										•					
72.	<i>Vitrea diaphana</i>			•		•				•						
73.	<i>Vitrea subrimata</i>															
74.	<i>Zenobiella rubiginosa</i>		•		•	•			•					•		
75.	<i>Zonitoides nitidus</i>				•	•			•		•					
	Numbers of taxa	12	16	15	15	16	0	3	10	10	19	12	4	22	14	18

Table 2/2. Sampling sites and terrestrial snail taxa of the study area

	Taxa	Sampling site														
		1 6	1 7	1 8	1 9	2 0	2 1	2 2	2 3	2 4	2 6	2 7	2 8	2 9	3 0	
1	<i>Achanthinula aculeata</i>									•				•		
2	<i>Acicula perpusilla</i>															
3	<i>Acicula polita</i>															
4	<i>Aegopinella epipedostoma</i>					•								•		
5	<i>Aegopinella minor</i>	•			•				•					•		
6	<i>Agardhiella lamellata</i>															
7	<i>Alinda biplicata</i>								•		•			•		
8	<i>Arion circumscriptus</i>															
9	<i>Arion subfuscus</i>	•				•										
10	<i>Argna bielzi</i>															
11	<i>Bradybaena fruticum</i>	•	•	•									•	•	•	
12	<i>Bulgarica cana</i>															
13	<i>Bulgarica vetusta</i>			•									•			
14	<i>Campylea faustina</i>									•						
15	<i>Carpathica calophana</i>					•	•		•	•				•		
16	<i>Carychium minimum</i>															
17	<i>Carychium tridentatum</i>															
18	<i>Cepaea vindobonensis</i>				•					•			•		•	
19	<i>Chondrina clienta</i>									•						
20	<i>Chondrula tridens</i>	•		•						•						
21	<i>Clausilia pumila</i>															
22	<i>Cochlicopa lubrica</i>	•						•							•	
23	<i>Cochlicopa lubricella</i>			•				•				•		•		
24	<i>Cochlodina laminata</i>	•	•		•					•	•			•		
25	<i>Columella edentula</i>															
26	<i>Deroceras</i> sp.	•												•		
27	<i>Discus perspectivus</i>															
28	<i>Ena montana</i>															
29	<i>Euconulus fulvus</i>															
30	<i>Euomphalia strigella</i>	•	•												•	
31	<i>Granaria frumentum</i>				•											
32	<i>Helicella obvia</i>				•					•						
33	<i>Helicigona banatica</i>	•	•											•		
34	<i>Helicodiscus singleyanus</i>															
35	<i>Helix lutescens</i>	•	•	•												
36	<i>Helix pomatia</i>	•	•							•	•	•		•	•	
37	<i>Isognomostoma isognomostoma</i>															
38	<i>Kovacsia kovacsi</i>				•	•					•			•		
39	<i>Laciniaria plicata</i>							•	•				•			
40	<i>Lehmannia marginata</i>				•	•										
41	<i>Limax maximus</i>								•					•		
42	<i>Macrogastra borealis</i>			•												
43	<i>Malacolimax tenellus</i>															
44	<i>Merdigera obscura</i>															
45	<i>Monacha cartusiana</i>			•												
46	<i>Monachoides vicina</i>	•	•			•				•	•			•		
47	<i>Nesovittrea hammonis</i>															
48	<i>Oxychilus draparnaudi</i>	•														
49	<i>Oxychilus glaber</i>															
50	<i>Oxychilus inopinatus</i>															
51	<i>Oxychilus montivagus</i>	•			•											
52	<i>Oxychilus orientalis</i>	•	•													
53	<i>Perforatella bidentata</i>															
54	<i>Perforatella dibothrion</i>								•							
55	<i>Phenacolimax pellucida</i>	•	•		•				•					•	•	
56	<i>Pseudolinda stabilis</i>								•							
57	<i>Punctum pygmaeum</i>															
58	<i>Pupilla muscorum</i>							•								
59	<i>Ruthenica filograna</i>	•							•	•		•	•	•		
60	<i>Sphyradium dolium</i>									•				•		
61	<i>Succinea oblonga</i>	•												•	•	
62	<i>Succinea putris</i>													•		
63	<i>Trichia bielzi</i>															
64	<i>Trichia hispida</i>	•														
65	<i>Truncatellina cylindrica</i>				•			•		•				•		
66	<i>Vallonia costata</i>			•				•				•				
67	<i>Vallonia pulchella</i>							•				•				
68	<i>Vertigo angustior</i>											•				
69	<i>Vertigo pygmaea</i>							•							•	
70	<i>Vitrea contracta</i>															
71	<i>Vitrea crystallina</i>															
72	<i>Vitrea diaphana</i>									•		•				
73	<i>Vitrea subinata</i>															
74	<i>Zenobiella rubiginosa</i>	•														
75	<i>Zonitoides nitidus</i>	•	•													
	Numbers of taxa	21	16	8	7	6	8	2	12	12	5	5	6	18	8	

Table 2/3. Sampling sites and terrestrial snail taxa of the study area

	Taxa	Sampling site														
		3	3	3	3	3	3	3	3	4	4	4	4	4	4	
1.	<i>Achanthinula aculeata</i>															
2.	<i>Acicula perpusilla</i>															
3.	<i>Acicula polita</i>															
4.	<i>Aegopinella epipedostoma</i>															
5.	<i>Aegopinella minor</i>				•											
6.	<i>Agardhiella lamellata</i>															
7.	<i>Alinda biplicata</i>															
8.	<i>Arion circumscriptus</i>								•		•	•				
9.	<i>Arion subfuscus</i>		•							•						
10.	<i>Argna bielzi</i>															
11.	<i>Bradybaena fruticum</i>	•	•			•	•	•	•	•	•		•	•		
12.	<i>Bulgarica cana</i>															
13.	<i>Bulgarica vetusta</i>				•											
14.	<i>Campylea faustina</i>															
15.	<i>Carpathica calophana</i>			•												
16.	<i>Carychium minimum</i>															
17.	<i>Carychium tridentatum</i>															
18.	<i>Cepaea vindobonensis</i>	•					•	•	•	•	•		•			
19.	<i>Chondrina clienta</i>															
20.	<i>Chondrula tridens</i>							•			•					
21.	<i>Clausilia pumila</i>															
22.	<i>Cochlicopa lubrica</i>	•						•					•			
23.	<i>Cochlicopa lubricella</i>		•					•					•			
24.	<i>Cochlodina laminata</i>	•		•	•											
25.	<i>Columella edentula</i>															
26.	<i>Deroceras</i> sp.							•		•			•			
27.	<i>Discus perspectivus</i>							•								
28.	<i>Ena montana</i>															
29.	<i>Euconulus fulvus</i>	•														
30.	<i>Euomphalia strigella</i>	•	•			•	•	•		•	•			•		
31.	<i>Granaria frumentum</i>															
32.	<i>Helicella obvia</i>															
33.	<i>Helicigona banatica</i>			•		•										
34.	<i>Helicodiscus singleyanus</i>							•								
35.	<i>Helix lutescens</i>		•			•		•	•	•	•		•	•		
36.	<i>Helix pomatia</i>			•	•			•	•	•			•	•	•	
37.	<i>Isognomostoma isognomostoma</i>															
38.	<i>Kovacsia kovacsi</i>			•												
39.	<i>Laciniaria plicata</i>			•												
40.	<i>Lehmannia marginata</i>															
41.	<i>Limax maximus</i>		•			•		•								
42.	<i>Macrogastra borealis</i>															
43.	<i>Malacolimax tenellus</i>			•												
44.	<i>Merdigera obscura</i>															
45.	<i>Monacha cartusiana</i>	•	•					•		•			•			
46.	<i>Monachoides vicina</i>	•					•	•								
47.	<i>Nesovitrea hammonis</i>															
48.	<i>Oxychilus draparnaudi</i>							•					•			
49.	<i>Oxychilus glaber</i>															
50.	<i>Oxychilus inopinatus</i>							•								
51.	<i>Oxychilus montivagus</i>				•											
52.	<i>Oxychilus orientalis</i>															
53.	<i>Perforatella bidentata</i>			•												
54.	<i>Perforatella dibothrion</i>															
55.	<i>Phenacolimax pellucida</i>	•	•	•		•					•					
56.	<i>Pseudolinda stabilis</i>			•												
57.	<i>Punctum pygmaeum</i>															
58.	<i>Pupilla muscorum</i>															
59.	<i>Ruthenica filograna</i>			•	•											
60.	<i>Sphyradium dolium</i>			•	•											
61.	<i>Succinea oblonga</i>	•	•					•					•			
62.	<i>Succinea putris</i>							•	•	•			•	•		
63.	<i>Trichia bielzi</i>															
64.	<i>Trichia hispida</i>															
65.	<i>Truncatellina cylindrica</i>															
66.	<i>Vallonia costata</i>															
67.	<i>Vallonia pulchella</i>	•	•					•					•			
68.	<i>Vertigo angustior</i>															
69.	<i>Vertigo pygmaea</i>															
70.	<i>Vitrea contracta</i>															
71.	<i>Vitrea crystallina</i>															
72.	<i>Vitrea diaphana</i>															
73.	<i>Vitrea subornata</i>															
74.	<i>Zenobiella rubiginosa</i>	•						•			•		•			
75.	<i>Zonitoides nitidus</i>	•						•			•		•			
	Numbers of taxa	13	10	13	6	6	4	20	5	8	9	3	14	4	1	

Table 2/4. Sampling sites and terrestrial snail taxa of the study area

	Taxa	Sampling site															
		4	4	4	4	5	5	5	5	5	5	5	5	5	5	6	1-
		6	7	8	9	0	1	2	3	4	5	6	8	9	0		60
1.	<i>Acharanthinula aculeata</i>																2
2.	<i>Acicula perpusilla</i>				•												1
3.	<i>Acicula polita</i>				•												1
4.	<i>Aegopinella epipedostoma</i>												•	•			7
5.	<i>Aegopinella minor</i>				•												12
6.	<i>Agardhiella lamellata</i>				•												2
7.	<i>Alinda biplicata</i>			•						•		•					10
8.	<i>Arion circumscriptus</i>		•					•		•							8
9.	<i>Arion subfuscus</i>																4
10.	<i>Argna bielzi</i>				•												2
11.	<i>Bradybaena fruticum</i>	•			•		•		•	•		•			•		34
12.	<i>Bulgarica cana</i>		•	•													2
13.	<i>Bulgarica vetusta</i>				•								•				7
14.	<i>Campylea faustina</i>				•									•			4
15.	<i>Carpathica calophana</i>											•					7
16.	<i>Carychium minimum</i>						•										3
17.	<i>Carychium tridentatum</i>				•											•	4
18.	<i>Cepaea vindobonensis</i>	•				•			•	•			•				23
19.	<i>Chondrina clienta</i>													•			2
20.	<i>Chondrula tridens</i>	•		•						•							9
21.	<i>Clausilia pumila</i>							•		•		•				•	7
22.	<i>Cochlicopa lubrica</i>	•	•			•	•	•				•					19
23.	<i>Cochlicopa lubricella</i>			•			•					•					12
24.	<i>Cochlodina laminata</i>		•		•				•	•		•	•	•			26
25.	<i>Columella edentula</i>							•									3
26.	<i>Deroceras</i> sp.																9
27.	<i>Discus perspectivus</i>																1
28.	<i>Ena montana</i>																1
29.	<i>Euconulus fulvus</i>				•	•						•					6
30.	<i>Euomphalia strigella</i>	•		•		•		•	•	•		•		•			26
31.	<i>Granaria frumentum</i>				•								•		•		6
32.	<i>Helicella obvia</i>	•		•		•											1
33.	<i>Helicigona banatica</i>		•	•					•			•		•	•		18
34.	<i>Helicodiscus singleyanus</i>																1
35.	<i>Helix lutescens</i>					•	•			•							22
36.	<i>Helix pomatia</i>	•					•	•				•		•	•		26
37.	<i>Isognomostoma isognomostoma</i>																1
38.	<i>Kovacsia kovacsi</i>												•	•	•		8
39.	<i>Laciniaria plicata</i>	•	•	•	•					•		•	•	•			18
40.	<i>Lehmannia marginata</i>																2
41.	<i>Limax maximus</i>			•			•										10
42.	<i>Macrogastra borealis</i>		•	•		•				•							8
43.	<i>Malacolimax tenellus</i>																1
44.	<i>Merdigera obscura</i>											•		•			4
45.	<i>Monacha cartusiana</i>	•		•								•					12
46.	<i>Monachoides vicina</i>	•	•	•				•		•		•			•		24
47.	<i>Nesovitreia hammonis</i>											•					2
48.	<i>Oxychilus draparnaudi</i>	•					•					•					9
49.	<i>Oxychilus glaber</i>																1
50.	<i>Oxychilus inopinatus</i>				•												2
51.	<i>Oxychilus montivagus</i>				•												4
52.	<i>Oxychilus orientalis</i>				•												4
53.	<i>Perforatella bidentata</i>						•					•					4
54.	<i>Perforatella dibothrion</i>				•											•	8
55.	<i>Phenacolimax pellucida</i>		•				•	•		•			•	•	•		25
56.	<i>Pseudalinda stabilis</i>								•								6
57.	<i>Punctum pygmaeum</i>													•			1
58.	<i>Pupilla muscorum</i>																3
59.	<i>Ruthenica filograna</i>				•			•				•					12
60.	<i>Sphyradium doliolum</i>				•												8
61.	<i>Succinea oblonga</i>	•	•	•				•	•	•		•			•		17
62.	<i>Succinea putris</i>		•	•			•	•	•	•					•		16
63.	<i>Trichia bielzi</i>				•		•	•	•	•				•			3
64.	<i>Trichia hispida</i>		•				•	•	•	•		•			•		12
65.	<i>Truncatellina cylindrica</i>					•											8
66.	<i>Vallonia costata</i>		•			•						•					10
67.	<i>Vallonia pulchella</i>			•				•									10
68.	<i>Vertigo angustior</i>																2
69.	<i>Vertigo pygmaea</i>																1
70.	<i>Vitrea contracta</i>																1
71.	<i>Vitrea crystallina</i>		•		•		•			•		•					6
72.	<i>Vitrea diaphana</i>				•												6
73.	<i>Vitrea subrimata</i>				•												1
74.	<i>Zenobiota rubiginosa</i>		•	•		•	•					•					14
75.	<i>Zonitoides nitidus</i>	•		•			•	•	•			•					16
	Numbers of taxa	13	15	22	20	12	15	14	9	17	2	23	8	16	12		634



**Table 3. Sampling sites and terrestrial snail taxa of the study area**

	Taxa	Sampling site								
		23	25	31	34	38	41	48	57	1-60
1.	<i>Ancylus fluviatilis</i>		•						•	2
2.	<i>Anisus spirorbis</i>			•						1
3.	<i>Galba truncatula</i>					•	•	•		3
4.	<i>Physa acuta</i>					•				1
5.	<i>Radix peregra</i>		•		•					2
1.	<i>Pisidium</i> sp.	•								1
	Numbers of taxa	1	2	1	1	2	1	1	1	10

**Checklist in systematic order (Grossu 1993) of the mollusks****Class Gastropoda****Subclass Prosobranchia**

Familia Aciculidae Gray, 1850

*Acicula polita* Hartmann, 1840**Comment:** It is found only in Cheile Babei (Poiana Plenchii).*Acicula perpusilla* Reinhardt, 1880

**Comments:** This species is known from Hungary, from the alluvia (scum) of the Tisza River, at the settlement Tiszatelek (EU53) (Pintér & Suara 2004). Maybe these scums resulted from the catchment area of the Someș River. By Grossu's opinion, this species can be present in southwestern Transylvania (Grossu 1993).

**Subclass Pulmonata**

Familia Ellobiidae Adams, 1855

*Carychium minimum* O.F. Müller, 1774*Carychium tridentatum* (Risso, 1826)

Familia Physidae Fitzinger, 1833

*Physa acuta* Draparnaud, 1805

Familia Lymnaeidae Rafinesque, 1815

*Lymnaea palustris* (O.F. Müller, 1774)*Radix auricularia* (Linnaeus, 1758)

**Comments:** In the Someș River. (Sárkány-Kiss et al., 1999).

*Radix peregra* (O.F. Müller, 1774)

*Galba truncatula* (O.F. Müller, 1774)

Familia Ancyliidae Rafinesque, 1815

*Ancylus fluviatilis* O.F. Müller, 1774

**Comments:** Found in rapid flowing clean water of the brook fixed on stones.

Familia Planorbidae Rafinesque, 1815

*Planorbis planorbis* (Linnaeus, 1758)

**Comments:** In the Someș River. (Sárkány-Kiss et al. 1999).

*Anisus spirorbis* (Linnaeus, 1758)

*Armiger crista* (Linnaeus, 1758)

Familia Succinaeidae Beck, 1857

*Succinea oblonga* Draparnaud, 1805

*Succinea putris* (Linnaeus, 1758)

*Oxyloma elegans* (Risso, 1826)

**Comments:** In the site of the Someș River (Sárkány-Kiss et al., 1999). In this area, it is very often difficult to tell them (*Succinea putris* and *Oxyloma elegans*) apart on the basis of shell morphology.

Familia Cochlicopidae Pilsbry, 1900

*Cochlicopa lubrica* (O.F. Müller, 1774)

*Cochlicopa lubricella* (Porro, 1838)

**Comments:** Both species frequently in the study area.

Familia Orculidae Pilsbry, 1913

*Sphyradium doliolum* (Bruguière, 1792)

*Argna bielzi* (Rossmässler, 1859) (→ Fig.4.)

**Comments:** It is found in the scum of the Brâglez brook, near the settlement of Fabrica and in the redeposited silt of the gorge/Cheile Babei. *Argna bielzi* became known in the Rodna Mountains (Valea Mare, before Arieș – Bába & Sárkány-Kiss, 1999a) and in Hungary, from the alluvia (scum) of the Tisza River, at settlements of Tiszatelek (EU53) and Szeged (DS32)(Pintér & Suara, 2004). Maybe these scums result from the catchment area of the Someș River.

*Aghardiella lamellata* (Clessin, 1887) (→ Fig.4.)

**Comments:** It is found in Țicău and Babei Pass. By Grossu's opinion (Grossu, 1993) this species lives in the Făgăraș Mountains, Brezoi, Olt River Valley. It became known as *Argna lamellata* in Hungary, in the alluvia (scum) of the Tisza River, at the settlements of Tiszatelek (EU53) and Újkenéz (EU94) (Pintér & Suara, 2004). Maybe these scums result from the catchment area of the Someș River.

Familia Valloniidae, Morse, 1864

*Vallonia pulchella* (O.F. Müller, 1774)

*Vallonia costata* (O.F. Müller, 1774)

*Acanthinula aculeata* (O.F. Müller, 1774)

Familia Vertiginidae Fitzinger, 1833

*Vertigo pusilla* (O.F. Müller, 1774)

*Vertigo pygmaea* (Draparnaud, 1801)

*Vertigo angustior* Jeffrey, 1830f

*Columella edentula* (Draparnaud, 1805)

*Truncatellina cylindrica* (Férussac, 1822)

Familia Pupillidae Turton, 1821

*Pupilla muscorum* (Linnaeus, 1758)

Familia Chondrinidae Steenberg, 1925

*Granaria frumentum* (Draparnaud, 1801)

*Chondrina clienta* (Westerlund, 1883)

*Chondrula tridens* (O.F. Müller, 1774)

*Ena montana* (Draparnaud, 1801)

**Comments:** Only in the humed dead leaves of forest in Cheile Țicău (Țicău Pass). Because of its broken shell (apical fragments), it may belong to the genus *Mastus* (T. Deli ex verbis).

*Merdigera obscura* (O.F. Müller, 1774)

Familia Clausiidae Schmidt, 1857

*Cochlodina laminata* (Montagu, 1803) (→ Fig.21.)

*Cochlodina orthostoma* (Menke, 1830)

**Comments:** This species is known only from references (Csiki, 1906).

*Ruthenica filograna* (Rossmässler, 1836) (→ Fig.15.)

**Comments:** Frequently in the Western Carpathian Mountains. The dimension of shells is very varied.

*Clausilia pumila* C. Pfeiffer, 1828 (→ Fig.10.)

**Comments:** Only in Munții Șesului/Plopișului.

*Macrogastra borealis* (Boettger, 1878) (→ Fig.12.)

**Comments:** This species and its forms are present as *M. latestriata* in 'The catalogue of the Mollusks from Romania'. (Grossu, 1993). It was found in Hungary, in the alluvia (scum) of the Tisza River, at the settlements of Tiszaszalka, Tiszavid (EU93), Tiszatelek (EU53), Szolnok (DT32) and Szeged (DS31, 32). Maybe these scums result from the catchment area of the Szamos/Someș River (Almaș and Agrij drainage Basin). It was found also in the scum of the Kraszna/Crasna River, at the settlement of Vásárosnamény (EU93) (Pintér & Suara, 2004). It is a typical river transport.

*Laciniaria plicata* Draparnaud, 1805 (→ Fig.18.)

*Balea biplicata* (Montagu, 1803) (→ Fig.14.)

**Comments:** This genus is in the Grossu's catalogue (Grossu, 1993) *Balea biplicata*. by Szekeres's opinion *Alinda biplicata*.

*Balea stabilis* (I. Pfeiffer, 1847) (→ Fig.8.)

**Comments:** This genus is in the Grossu's catalogue (Grossu, 1993) *Balea stabilis*. By Szekeres's view *Pseudalinda stabilis*.

*Pseudalinda falax* Westerlund, 1878

**Comments:** This species is found only at the Pasul Piatra Craiului (Bába & Kovács 1975). By our opinion *Pseudalinda stabilis*.

*Bulgarica vetusta* (Rossmässler, 1836) (→ Fig.9.)

**Comments:** In our thinkings, this genus is relatively common in the Western Charpathian Mountains, on the western part of Mții. Apuseni. (Domokos & Lenner, 2007)

*Bulgarica cana* (Held 1836) (→ Fig.5)

**Comments:** Rare in the area studied. It can be found only in the scum of the Brâglez brook (Fabrica) and in the inundation area of the Agrij brook, at bridge between the settlements Buciumi and Răstolț.

Familia Ferussaciidae Bruguière, 1883

*Cecilioides acicula* (O.F. Müller, 1774)

Familia Endodontidae Pilsbry, 1894

*Punctum pygmaeum* (Draparnaud, 1805)

Familia Helicodiscidae H. B. Baker, 1927

*Helicodiscus singleyanus* (Pilsbry, 1890)

**Comments:** Only from the scum of the Zalău brook at the settlement Bocșa. According to the CLECOM, its name is *Lucilla singleyana*. This species was published from Romania by Domokos and Lennert firstly (Domokos & Lennert 2007, Domokos & Majoros 2008).

## Familia Patulidae Tryon, 1866

*Discus perspectivus* (Mühlfeld, 1818)

**Comments:** This species is very rare in the area studied. Only from scum of the Zalău brook at the settlement Bocşa.

## Familia Arionidae Gray, 1841

*Arion ater* Linnaeus, 1758

**Comments:** In Munții Șesului. (Grossu 1983)

*Arion subfuscus* Draparnaud, 1801*Arion circumscriptus* Johnston, 1828

**Comments:** Both species are determined on the basis of the specimens's morphology and colour.

## Familia Vitrinidae Fitzinger, 1883

*Phenacolimax pellucida* (O.F. Müller, 1774)*Phenacolimax annularis* Studer, 1820

**Comments:** This species is known from references (Váncsa, 2006) and can be found in the malacological collection of Hungarian Natural History Museum (Budapest).

## Familia Zonitidae Mörch, 1864

*Zonitoides nitidus* (O.F. Müller, 1774)*Vitrea diaphana* (Studer, 1820)*Vitrea crystallina* (O.F. Müller, 1774)*Vitrea subrimata* (Reinhardt, 1871)*Nesovitrea hammonis* (Ström, 1765)*Aegopinella minor* (Stabile, 1864) (= *Retinella nitens* auct.)*Aegopinella epipedostoma* (Fagot, 1869) (= *Retinella nitidula* auct.)

**Comments:** In some instances (mobile, latency states of existence) this species was determined by help of anatomical investigation, with the aid of B. Páll-Gergely.

*Oxychilus draparnaudi* (Beck, 1837)

*Oxychilus glaber* (Westerlund, 1881)

*Oxychilus inopinatus* (Ulični, 1887)

**Comments:** Found only from scum because of collection methods.

*Oxychilus montivagus* (M. Kimakowicz, 1890)

*Oxychilus orientalis* (Clessin, 1887)

Familia Daudebardiidae Pilsbry, 1908

*Carpathica calophana* Westerlund, 1881

**Comments:** In a few instances, it was determined by G. Majoros by the help of anatomical investigation.

Familia Limacidae Rafinesque, 1815

*Limax maximus* Linnaeus, 1758

*Limax cinereoniger* Wolf, 1803

**Comments:** In Munții Șesului and Meseșului. (Grossu 1983)

*Lehmannia marginata* O: F. Müller, 1774

**Comments:** These species was determined anatomically by G. Majoros.  
In Munții Meseșului. (Grossu 1983)

*Bielzia coerulans* (M. Bielz, 1851)

**Comments:** Cited by Grossu (1983) from Munții Meseșului.

*Deroceras reticulatum* (O.F. Müller, 1758)

**Comments:** In the eastern Part of Sălaj county (Grossu 1983).



*Deroceras transcaucasicus* (Simroth, 1901)

**Comments:** In Munții Meseșului. (Grossu 1983)

*Deroceras transsylvanicus* Grossu, 1969

**Comments:** In Munții Șesului and Meseșului (Grossu 1983).

*Deroceras* sp.

**Comments:** *Deroceras* genus without anatomical investigations.

*Lytopelte occidentalis* Grossu et Lupu, 1966

**Comments:** In Munții Meseșului. (Grossu 1983)

Familia Euconulidae H. B. Baker, 1928

*Euconulus fulvus* (O.F. Müller, 1774)

**Comments:** Based on the CLECOM this species is *Euconulus praticola* (Reinhardt, 1883). According to Kerney et al.1983, it is *Euconulus alderi* (Gray, 1840) [syn.: *E.fulvus* var. *alderi* (Gray)]

Familia Bradybaenidae Pilsbry, 1939

*Bradybaena fruticum* (O.F. Müller, 1774) (→ Fig.24.)

**Comments:** Common in the studied area.

Familia Helicidae Refinesque, 1815

*Helicella obvia* (Menke, 1828)

*Monacha cartusiana* (O.F. Müller, 1774)

*Perforatella bidentata* Gmelin, 1788) (→ Fig.7.)

*Perforatella dibothrion* M. Kimakowicz, 1890) (→ Fig.13.)

*Monachoides vicina* (Rossmässler 1842) (→ Fig.20.)

**Comments:** This species is absent from the Munții Codru-Moma. (Domokos & Lennert 2007). The young *Monachoides vicina* individuals are easily mixed up with *Hygromia/Lozekia transsylvanica* (Westerlund, 1876) or *Hygromia kovacsi* Varga et Pintér, 1972 individuals (Fehér et al. 2008).

*Zenobiella rubiginosa* (A. Schmidt, 1853)

*Trichia bielzi* (A. Schmidt, 1860)

*Trichia hispida* (O.F. Müller, 1774) (→ Fig.16.)

*Euomphalia strigella* (Draparnaud, 1801) (→ Fig.23.)

*Lozekia transsylvanica* (Westerlund, 1876) or *Hygromia kovacsi* Varga et Pintér, 1972 (→ Fig.11.)

**Comments:** The racial affiliation is problematic [*Hygromia/Lozekia transsylvanica* (Westerlund, 1876) or *Hygromia kovacsi* Varga et Pintér, 1972, or rather *Kovacsia kovacsi* Falkner et al. 2001]. By our opinion, this genus is a second clad (k-2) of the *Kovacsia kovacsi* (Fehér et al. 2008), because *Kovacsia kovacsi* can be found in the Munții Pădurea Craiului, Munții Codru-Moma and Munții Zărand (Fehér et al. 2008).

*Isognomostoma isognomostoma* (Gmelin, 1788) (→ Fig.3.)

**Comments:** This species is very rare in the studied area. Only from the brook side of the Șoimuș at the settlement of Jibou.

*Helicigona banatica* (Rossmässler, 1838) (→ Fig.17.)

**Comments:** This species is generally received in the area studied and also in the Munții Apuseni (Domokos & Lennert, 2007). It can be found in Hungary (Deli & Farkas 2006), in the green corridor of the Szamos River, at the settlements of Olcsva (EU93?), Cégénydányád (FU10) and Komlódtótfalu (FU20).

*Campylea faustina* (Rossmässler, 1835) (→ Fig.6.)

*Cepaea vindobonensis* (Férussac, 1821)

*Helix pomatia* Linnaeus, 1758 (→ Fig.22.)

*Helix lutescens* (Rossmässler, 1837) (→ Fig.19.)

**Comment:** Common in the area studied. This species is absent in the Munții Codru-Moma (Domokos & Lennert 2007).

**Class Bivalvia****Subclass Palaeiheterodonta Newell, 1965**

Familia Unionidae Fleming, 1828

*Unio crassus* Philipsson, 1788**Comments:** In the Someş and Barcău Rivers (Sárkány-Kiss et al., 1997, 1999)*Anodonta cygnaea* Linné 1758**Comments:** In the Someş River (Sárkány-Kiss et al., 1999)**Subclass Heterodonta Newmayer, 1884**

Familia Pisidiidae Gray, 1857

*Pisidium* sp.**Dedication**

This paper is dedicated to the great Hungarian poet, Endre Ady (1877–1919) and to the malacologist Károly Bába (1935-2007).

Poet Endre Ady took his final examination at the Lutheran secondary school in Zilah/Zălau (1896). The titles of his physical thesis: a) Possibility of transmission of the heat; b) The snail.

Professor Dr. Károly Bába is one of the founders (1955) of the scientific research of the Tisza River Basin. Since 1991, he participated in the work of a multidisciplinary team coordinated by the 'Tisza Klub' (Szolnok, Hungary) and the 'Pro Europa Liga' (Târgu Mureş, Romania).

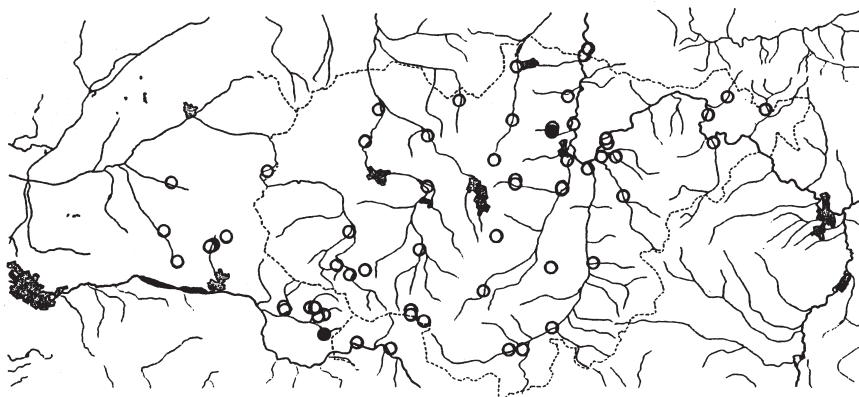
**Acknowledgement**

We wish to thank M. Szekeres, G. Majoros, Deli, T. and B. Páll-Gergely, who were generous in helping us to determine *Acicula*, *Aghardiella*, *Argna* species (D.T.), the Familia Clausiliidae (M.Sz.), Familia Daudebardiidae and Limacidae (G. M.) and *Aegopinella* species (P-GB). A great thank to Z. Fehér and I. Lányi for their powerful help. Last but not least, we gratefully thank M. Venczel for his comments on the manuscript, and for the editing work.

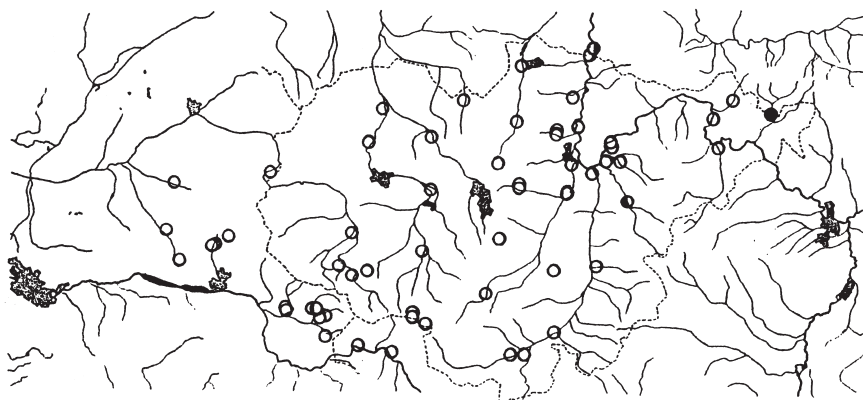
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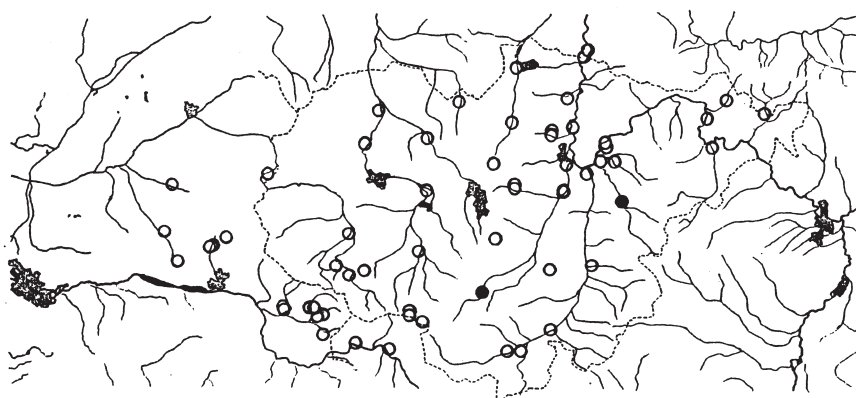
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**Fig. 3.** Distribution of *Isognomostoma isognomostoma* in Sălaj county and the western part of the Şesului/Plopişului Mts. (Full circles where *I.i.* was found.)



**Fig. 4.** Distribution of *Agardhiella lamellata* (semi-full circles / from left to right white and black) and the *Argna bielzi* (semi-full circles /from left to right black and white) in Sălaj county and the western part of the Șesului/Plopișului Mts. The co-presence is marked with full circles.



**Fig. 5.** Distribution of *Bulgarica cana* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *B.c.* was found.)

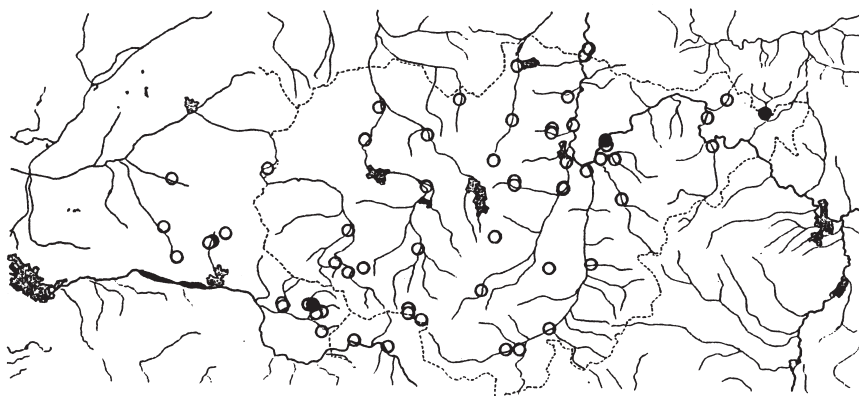


Fig. 6. Distribution of *Campylea faustina* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *C. f.* was found.)

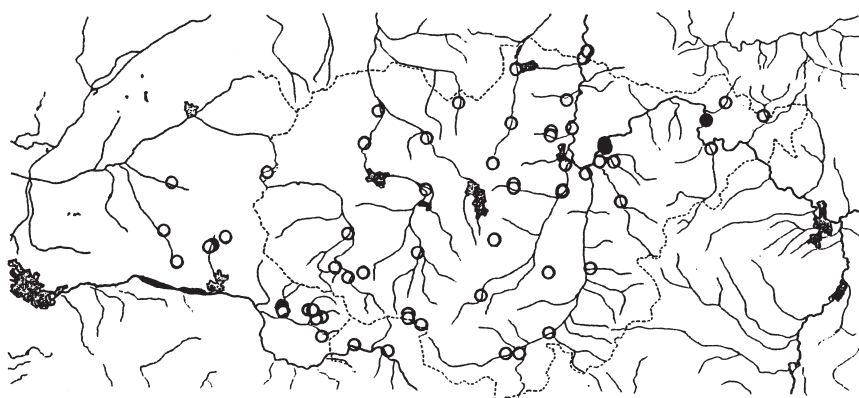


Fig. 7. Distribution of *Perforatella bidentata* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *P. b.* was found.)



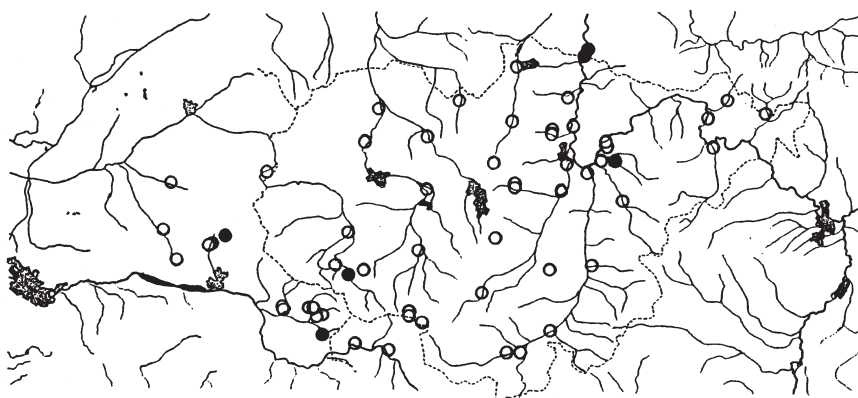


Fig. 8. Distribution of *Pseudalinda stabilis* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *P. s.* was found.)

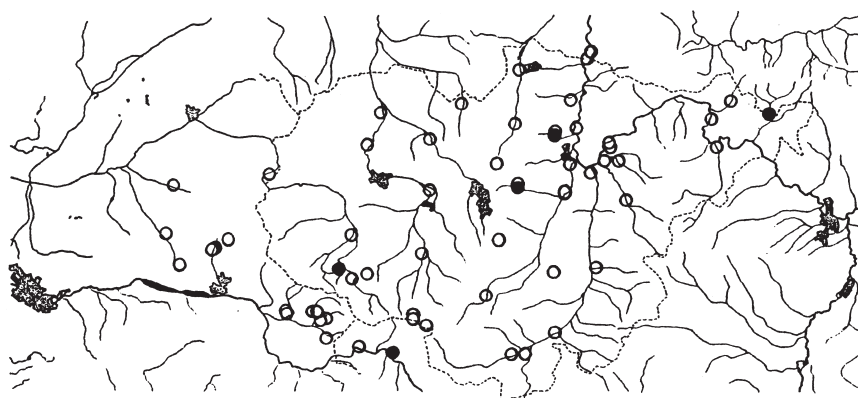


Fig. 9. Distribution of *Bulgarica vetusta* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *B. v.* was found.)

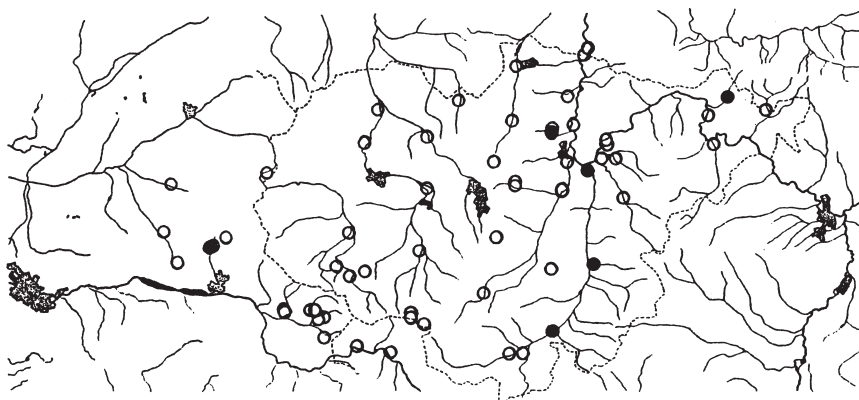


Fig.10. Distribution of *Clausilia pumila* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *C. p.* was found.)

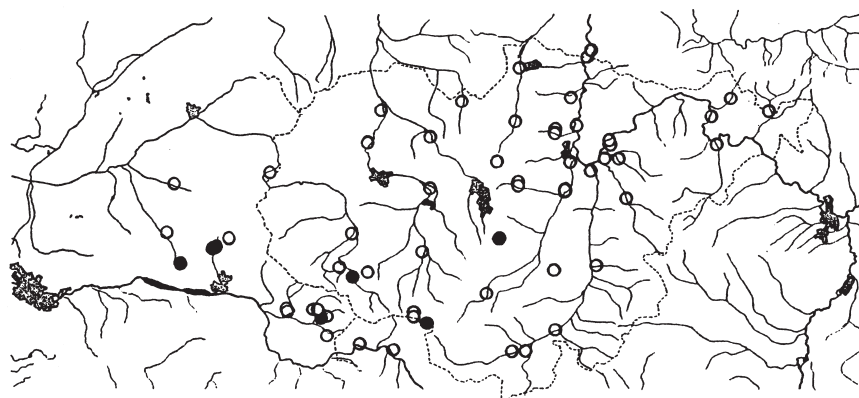


Fig.11. Distribution of *Kovacsia kovacsi* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *K. k.* was found.)

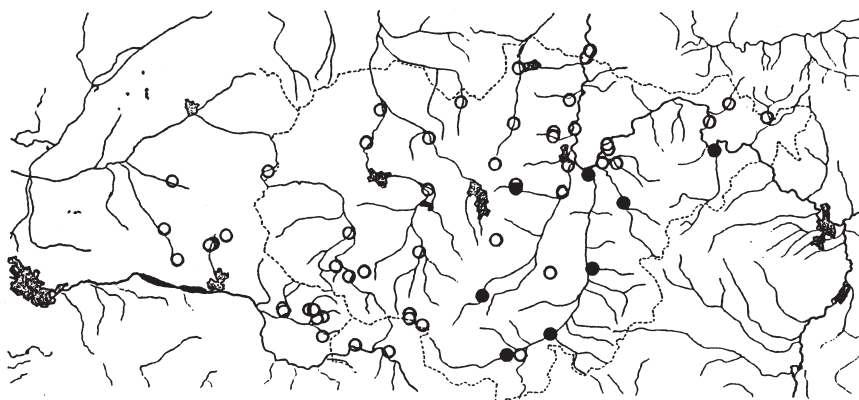


Fig.12. Distribution of *Macrogastrea borealis* in Sălaj county and the western part of the Şesului/Plopişului Mts. (Full circles where *M. b.* was found.)

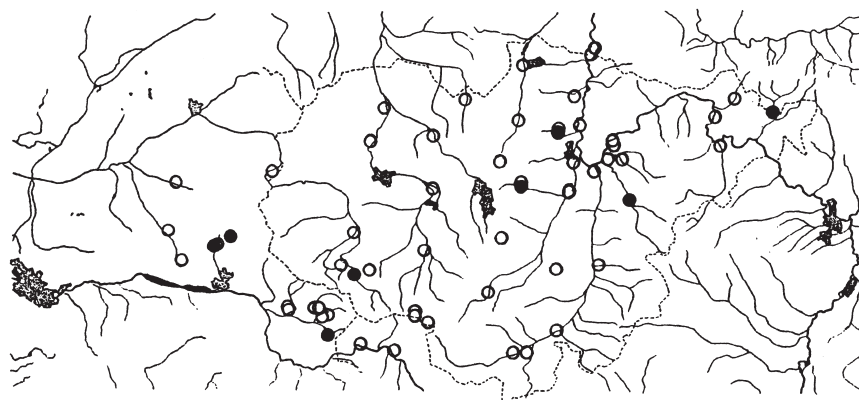


Fig.13. Distribution of *Perforatella dibothrion* in Sălaj county and the western part of the Şesului/Plopişului Mts. (Full circles where *P. d.* was found.)

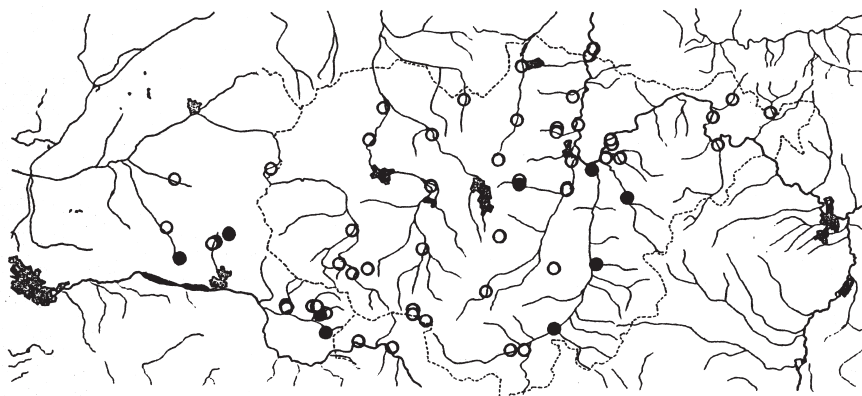


Fig.14. Distribution of *Alinda biplicata* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *A. b.* was found.)

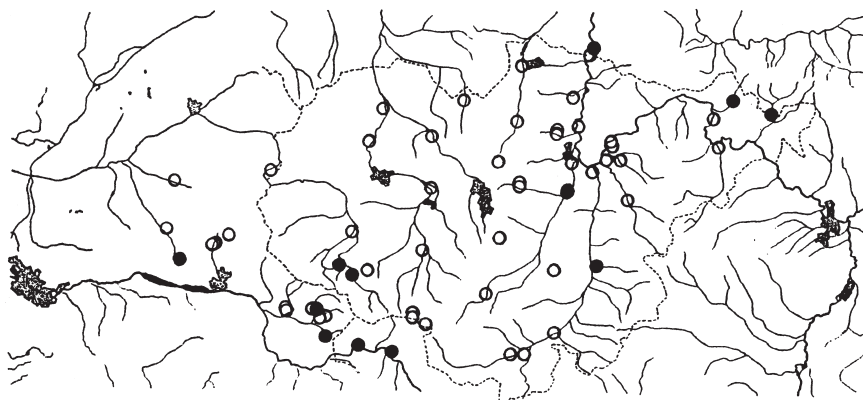


Fig.15. Distribution of *Ruthenica filograna* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *R. f.* was found.)

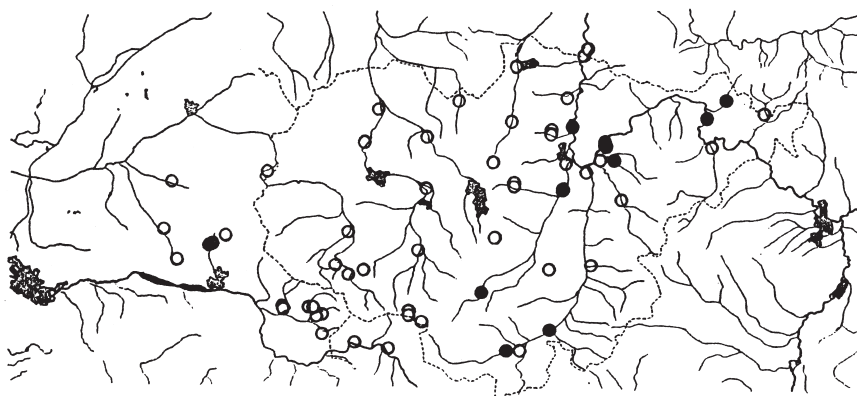


Fig. 16. Distribution of *Trichia hispida* in Sălaj county and the western part of the Șesului/Plopișului Mts.(Full circles where *T. h.* was found.)

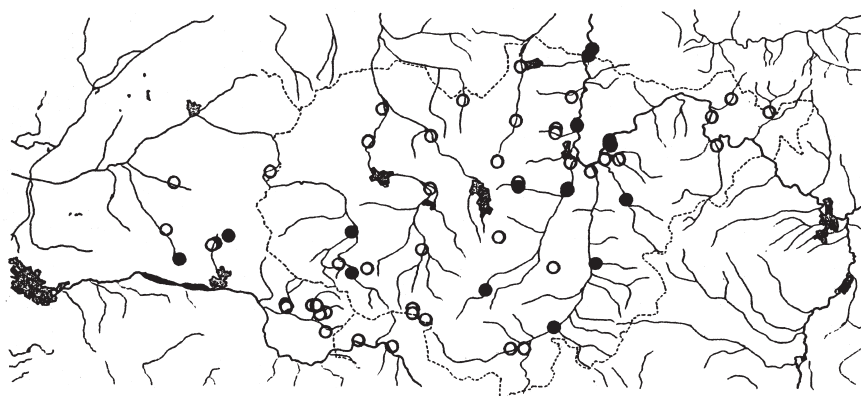


Fig. 17. Distribution of *Helicigona banatica* in Sălaj county and the western part of the Șesului/Plopișului Mts.(Full circles where *H. b.* was found.)

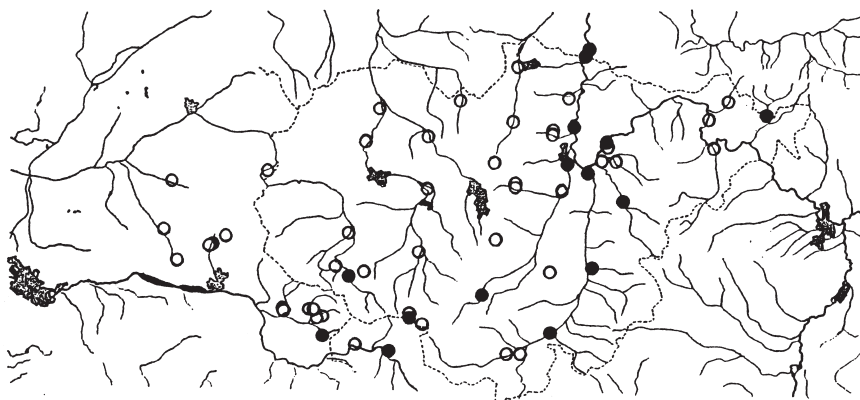


Fig. 18. Distribution of *Laciniaria plicata* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *L. p.* was found.)

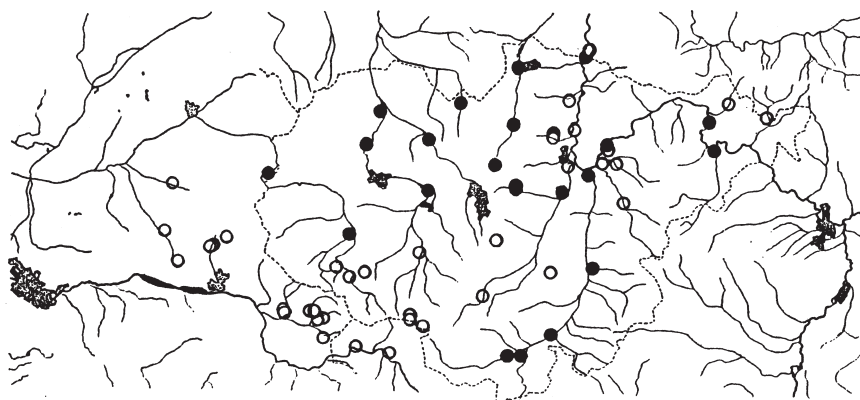


Fig. 19. Distribution of *Helix lutescens* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *H. l.* was found.)

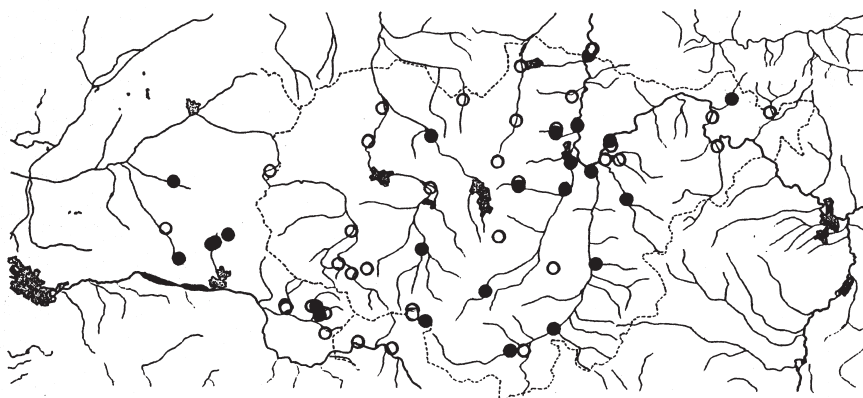


Fig. 20. Distribution of *Monachoides vicina* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *M. v.* was found.)

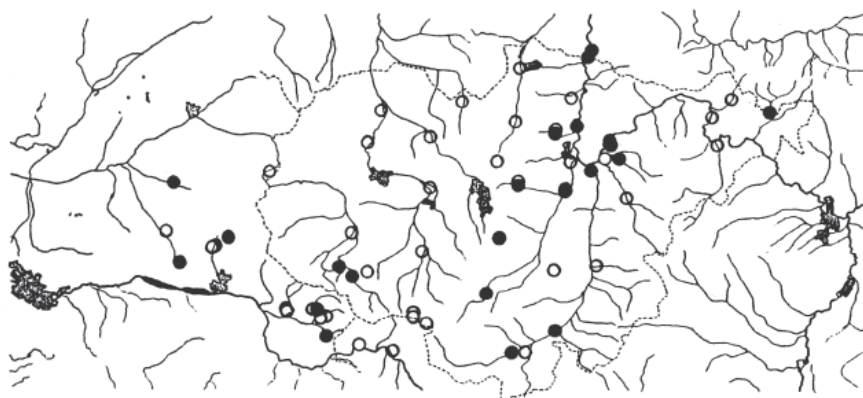


Fig. 21. Distribution of *Cochlodina laminata* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *C. l.* was found.)



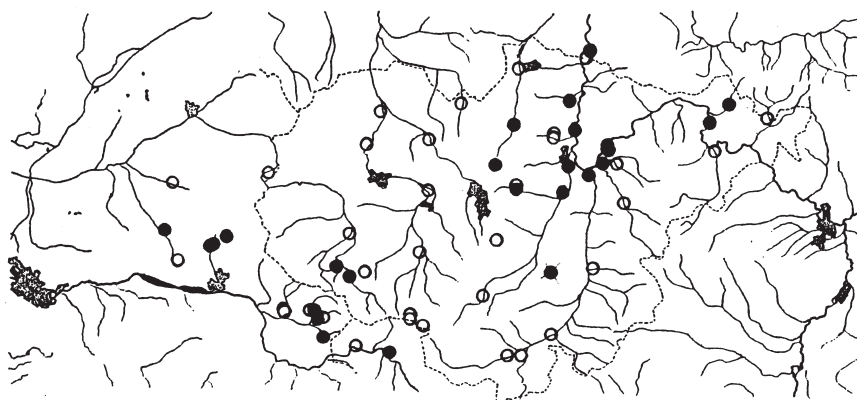


Fig. 22. Distribution of *Helix pomatia* in Sălaj county and the western part of the Plopișului Mts. (Full circles where *H. p.* was found.)

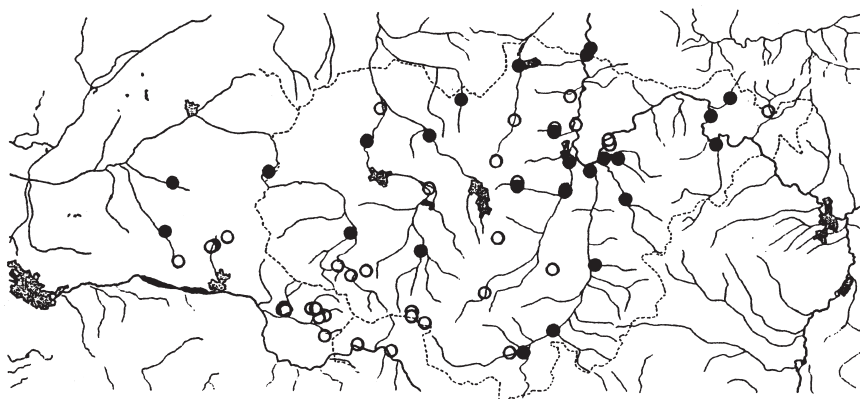


Fig. 23. Distribution of *Euomphalia strigella* in Sălaj county and the western part of the Șesului/Plopișului Mts. (Full circles where *E. s.* was found.)

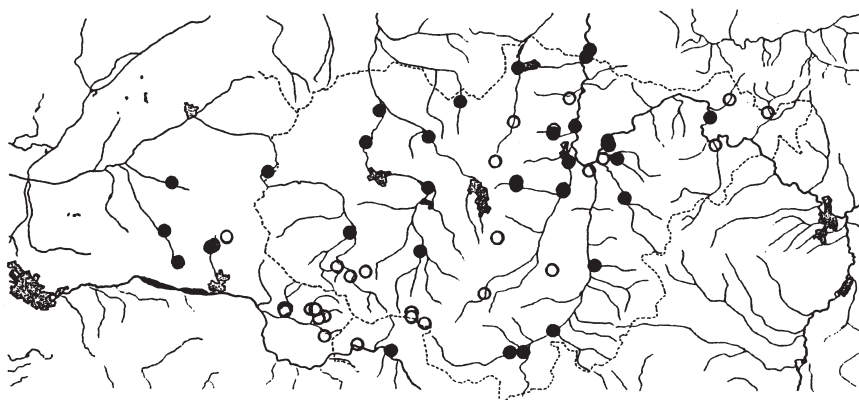


Fig. 24. Distribution of *Bradybaena fruticum* in Sălaj county and the western part of the Şesului/Plopişului Mts. (Full circles where *B. f.* was found.)

<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>207 - 216</b>	<b>Oradea, 2009</b>
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## **Catalog of the hoverflies (Diptera: Brachycera: Syrphidae) from the collection of Vladimir Brădescu deposited in Țării Crișurilor Museum, Oradea**

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adriangăgiu@rdslink.ro

**Abstract.** The present catalog includes data on the 45 species (92 specimens) of syrphids from the collection of the eminent Romanian dipterist Vladimir Brădescu (1915 – 2004) preserved in Țării Crișurilor Museum, Oradea, Romania.

### **Introduction**

Vladimir Brădescu (1915 – 2004) was arguably the most important Romanian syrphidologist. Always an investigative spirit, in his youth he was active in many fields, including music, literature and theater. But then, after working for almost 20 years as a paleographer and afterwards as a geologist, it was his late passion for dipterans which made him best remembered, due to the accuracy and seriousness of his work. He concentrated his field activity mainly in some of the most interesting and diverse ecosystems in Romania (mountainous Banat, Mt. Retezat and Dobruja), and his collected material entered the collections of many natural history museums, mainly the „Grigore Antipa” National Museum of Natural History in Bucharest and the „Brukenthal” National Museum in Sibiu, but also the

museums in Tulcea, Timișoara, Oradea, and Retezat National Park. He was the author of 10 new syrphid species and of more than 50 publications, mentioning hundreds of syrphid species new for the Romanian fauna and thus making a major contribution to the good level of knowledge concerning the country's syrphids (Pârvu 2004).

### Material and methods

In 1991, V. Brădescu sold to the Țării Crișurilor Museum 92 specimens from his syrphidological collection. For the present paper, the labels were transcribed and listed systematically, the specimens were sexed, revised and updated according to monographic and more recent publications (Suster 1959, Brădescu 1991, Ball & Morris 2000, Stănescu & Pârvu 2005, <http://www.hoverfly.org.uk>), and data on distribution and biology were included (Tóth 2008).

In collection data, specimen numbers and sex are mentioned in square brackets [ ] and district names abbreviations in capital letters within round brackets ( ). Flight periods are indicated with Roman numerals in round brackets.

**Abbreviations.** BV = Brașov, BZ = Buzău, CAs. = Central Asia, Ch. = China, CS = Caraș Severin, EAs. = East Asia, Eu. = Europe, GR = Giurgiu, IF = Ilfov, Ir. = Iran, Jp. = Japan, Kaz. = Kazakhstan, Ko. = Korea, L. = lake, Mo. = Mongolia, Mt. = mountains, NAF. = North Africa, PH = Prahova, Sb. = Siberia, SV = Suceava, TCa. = Transcaucasia, Tu. = Turkey, V. = valley, WAs. = West Asia;

### Catalog

#### Subfam. SYRPHINAE

#### Tribus Syrphini

##### *Dasysyrphus friuliensis* (van der Goot 1960)

Palearctic (Eu., Sb., EAs., Mo.), sylvicoline, in mountains, univoltine (V-VII), rare. Herculane (CS) 12 V 1990, leg. M. Brădescu [1 ♂]; Gemenele, Mt. Retezat 12 VII 1990 [1 ♀].

##### *Dasysyrphus pinastri* (De Geer 1776)

[syn. *D. lunulatus* (Meigen 1822)]

Holarctic (Eu., TCa., Sb., EAs., Mo.), sylvicoline, in hills and mountains, univoltine (IV-VII), frequent.

Vatra Dornei (SV) 30 V 1990, 1 VI 1990 [2: ♂, ♀].

*Dasysyrphus tricinctus* (Fallén 1817)

Palearctic (Eu., TCa., CAs., EAs., Sb., Mo., Jp.), sylvicoline, generally univoltine (IV-X), frequent.

Predeal (BV) 5 IX 1984 [1 ♂]; Herculan (CS) 3 V 1988 [1 ♀].

*Dasysyrphus venustus* (Meigen 1822)

Holarctic (Eu., TCa., Sb., EAs., Mo.), sylvicoline, univoltine (III-VIII), frequent.

Cheia (PH) 10 VI 1988 [1 ♀]; Herculan (CS) 12 V 1990, leg. M. Brădescu [1 ♂].

*Epistrophe* (s. str.) *eligans* (Harris 1780)

Palearctic (Eu., TCa., WAs., CAs., EAs.), sylvicoline, probably bivoltine (II-IX), frequent.

Herculan (CS), 800 m., 11 IV 1990 [1 ♂]; Gemele, 1750 m., Mt. Retezat 9 VII 1990 [1 ♀].

*Epistrophe* (s. str.) *grossulariae* (Meigen 1822)

Holarctic (Eu., TCa., Sb., EAs., Mo., Jp.), sylvicoline, univoltine (IV-IX), frequent.

L. Negru, Mt. Retezat 17 VIII 1981 [1 ♂]; Gemele, Mt. Retezat 31 VIII 1988 [2 ♀♀].

*Episyrphus balteatus* (De Geer 1776)

Probably cosmopolite, eurytopic, polyvoltine (I-XII), frequent.

Gemele, Mt. Retezat 17 VIII 1981 [1 ♀]; Herculan (CS) 20 VIII 1989 [1 ♂].

*Eriozona erratica* (L. 1758)

(labeled *Megasyrphus annulipes*)

Palearctic (Eu., TCa., Sb., WAs., EAs., Mo.), sylvicoline, probably bivoltine (IV-IX).

Mt. Făgăraș, V. Sâmbetei 900-1400 m., 14 VII 1988 [1 ♂]; Gemele, 1920 m., Mt. Retezat 10 VII 1990 [2 ♀♀].

*Eupeodes* (s. str.) *corollae* (Fabricius 1794)

(labeled *Metasyrphus corollae*)

Holarctic (Eu., Sb., WAs., EAs., Mo., Ch., Jp.), oriental, eurytopic, polyvoltine (I-XII), frequent.

V. Sâmbetei, 1400 m., Mt. Făgăraș 22 VII 1983 [1 ♀]; V. Sâmbetei, Mt. Făgăraș 7 VIII 1989 [1 ♂]; Vatra Dornei (SV) 7 VII 1991 [2: ♂, ♀].

*Eupeodes* (s. str.) *luniger* (Meigen 1822)

(labeled *Metasyrphus luniger*)

Holarctic (Eu., Sb., Kaz., Naf., Mo., Jp.), oriental, eurytopic, probably polyvoltine (III-XII), frequent.

Gemenele, 1920 m., Mt. Retezat 10 VII 1990 [1 ♂]; L. Știrbu, 2000 m., Mt. Retezat, 10 VII 1990 [1 ♀].

*Eupeodes (Lapposyrphus) lapponicus* (Zetterstedt, 1838)  
(labeled *Metasyrphus lapponicus*)

Palearctic (Eu., TCa., Sb., WAs., EAs., Mo.), sylvicoline, probably bivoltine (II-IX), frequent.

Gemenele, Mt. Retezat 17 VIII 1981 [1 ♂]; Predeal (BV) 22 VIII 1983 [1 ♂]; Herculane (CS), 800 m., 10 V 1990 [1 ♀]; Gemenele, 1750 m., Mt. Retezat 11 VII 1990 [1 ♀].

*Leucozona lucorum* (L. 1758)

Holarctic (Eu., WAs., EAs., Sb., Mo., Jp.), sylvicoline, univoltine (IV-VIII), frequent. Vatra Dornei (SV) 5 VII 1991 [1 ♀].

*Melangyna (s. str.) compositarum* (Verrall 1873)

Holarctic (Eu., TCa., Kaz., WAs., EAs., Sb., Mo., Jp.), probably sylvicoline, in hills and mountains, univoltine or possibly bivoltine (IV-IX), frequent.

Gemenele, Mt. Retezat 11 VII 1990 [1 ♀].

*Melangyna (s. str.) lasiophthalma* (Zetterstedt 1843)

Palearctic (Eu., TCa., WAs., EAs., Sb., Mo., Jp.), sylvicoline, in hills and mountains, univoltine (II-VI), frequent.

Herculane (CS) 1 V 1988 [2: ♂, ♀].

*Melangyna (Meligramma) cincta* (Fallén 1817)

Palearctic (Eu., TCa., WAs., EAs.), sylvicoline, in hills and mountains, probably bivoltine (IV-X), frequent.

Herculane (CS) 23 IV 1988 [1 ♂].

*Meliscaeva cinctella* (Zetterstedt 1843)

Holarctic (Eu., TCa., WAs., EAs., Sb., Mo., Jp.), oriental, sylvicoline, probably univoltine (IV-X), frequent.

Predeal (BV) 23 VII 1985 [1 ♂]; Vatra Dornei (SV) 5 VI 1990 [1 ♀].

*Parasyrphus lineolus* (Zetterstedt 1843)

Holarctic (Eu., Sb., EAs., Mo., Ch.), sylvicoline, bivoltine (IV-IX), frequent.

Vatra Dornei (SV) 5 VII 1990 [1 ♀].

*Parasyrphus punctulatus* (Verrall 1873)

Palaearctic (Eu., TCa., W Sb., EAs., Jp.), sylvicoline, univoltine (II-VII), frequent.  
Herculane (CS) 3 V 1988 [1 ♀]; Vatra Dornei (SV) 5 VII 1990 [1 ♂].

*Parasyrphus vittiger* (Zetterstedt 1843)

Palaearctic (Eu., TCa., E Sb., EAs., Mo.), sylvicoline, probably bivoltine or polyvoltine (III-X), frequent.

Gemelele, 1900 m., Mt. Retezat 6 VII 1990 [1 ♀]; L. Știrbu, 2000 m., Mt. Retezat, 10 VII 1990 [1 ♂].

*Scaeva pyrastris* (L. 1758)

Holarctic (Eu., TCa., Kaz., CAs., Sb., Naf., Mo., Northern Ch., Jp.), eurytopic, polyvoltine (I-XII), frequent.

Gemelele, Mt. Retezat 31 VIII 1988 [1 ♂]; Gemelele, 1900 m., Mt. Retezat 11 VII 1990 [1 ♀]; Vatra Dornei (SV) 5 VII 1991 [2: ♂, ♀].

*Scaeva selenitica* (Meigen 1822)

Palaearctic (Eu., TCa., WAs., CAs., EAs., Sb., Naf., Mo., Ch.), oriental, eurytopic, polyvoltine (I-XII), frequent.

Gemelele, Mt. Retezat 28 VIII 1988, 12 VII 1990 [2: ♂, ♀].

*Syrphus ribesii* (L. 1758)

Cosmopolite, eurytopic, bivoltine or polyvoltine (II-XI), frequent.

Predeal (BV) 22 VIII 1983 [1 ♀]; L. Negru, Mt. Retezat 30 VIII 1988 [1 ♂]; Herculane (CS) 20, 25 VIII 1989 [2 ♀♀].

*Syrphus torvus* Osten-Sacken 1875

Holarctic (Eu., Kaz., Sb., EAs., Mo., Ch., Jp.), sylvicoline, polyvoltine (II-XI), frequent.

Gemelele, Mt. Retezat 28 VIII 1988 [1 ♂]; Herculane (CS), 800 m., 13 V 1990 [1 ♀]; Vatra Dornei (SV) 30 V 1990 [1 ♂]; Gemelele, 1750 m., Mt. Retezat 9 VII 1990 [1 ♀].

*Syrphus vitripennis* Meigen 1822

Holarctic (Eu., Sb., CAs., EAs., Naf., Ch., Jp.), oriental, eurytopic, polyvoltine (II-XI), frequent.

Comana (GR) 11 IV 1974 [1 ♂]; L. Negru, Mt. Retezat 30 VIII 1988 [1 ♀].



*Xanthogramma citrofasciatum* (De Geer 1776)

Palearctic (Eu., TCa., Kaz., CAs., N Sb.), sylvicoline, univoltine (III-VI), frequent.  
Cernica (IF) 28 IV 1983, leg. V. Gheorghiu [1 ♂].

*Xanthogramma pedissequum* (Harris 1776)

Palearctic (Eu., TCa., Sb., CAs., EAs.), sylvicoline, probably polivoltine (III-X), frequent.  
Herculane (CS) 12 V 1990, leg. M. Brădescu [1 ♂].

## Tribus Chrysotoxini

*Chrysotoxum arcuatum* (L. 1758)

Palearctic (Eu., TCa., Kaz., Sb., CAs., EAs., Mo., Jp.), oriental, probably xerophilous, bivoltine (IV-X), frequent.  
V. Sâmbetei, Mt. Făgăraș 7 VIII 1989 [1 ♀]; Gemenele, Mt. Retezat 14 VII 1990 [1 ♂].

*Chrysotoxum bicinctum* (L. 1758)

Holarctic (Eu., TCa., Kaz., Sb., CAs., Mo.), sylvicoline, bivoltine (IV-X), frequent.  
Buzău, Crâng park (BZ) 20 VII 1981 [1 ♀].

*Chrysotoxum cautum* (Harris 1776)

Holarctic (Eu., TCa., Kaz., CAs., N Sb.), sylvicoline, bivoltine (IV-VIII), frequent.  
Cernica (IF) 28 IV 1983, leg. V. Gheorghiu [2: ♂, ♀].

## Tribus Melanostomini

*Melanostoma mellinum* (L. 1758)

Probably holarctic (Eu., N Af., Ir., Mo., Jp.), eurytopic, polyvoltine (III-XI), frequent.  
Predeal (BV) 23 VII 1985 [1 ♀]; Vatra Dornei (SV) 5 VI 1990 [1 ♂].

*Melanostoma scalare* (Fabricius 1794)

Probably cosmopolite (Eu., TCa., Kaz., Sb., CAs., EAs., N Af., Mo., Ch., Jp.), sylvicoline, probably polyvoltine (III-XI), frequent.  
Predeal (BV) 23 VII 1985 [1 ♂]; Herculane (CS) 13 V 1990 [1 ♀].

*Platycheirus albimanus* (Fabricius 1781)

Holarctic (Eu., TCa., Kaz., Sb., CAs., EAs., Mo.), oriental, eurytopic, probably bivoltine (II-X), frequent.  
Herculane (CS) 22 VIII 1989 [1 ♂]; Gemenele, 1750 m., Mt. Retezat 14 VII 1990 [1 ♀].

*Platycheirus clypeatus* (Meigen 1822)

Holarctic (Eu., TCa., CAs., EAs., Sb., Naf., Mo., Jp.), eurytopic, probably bivoltine (IV-X), frequent.

V. Sâmbetei, Mt. Făgăraș 4 VIII 1989 [1 ♀].

*Spazigaster ambulans* (Fabricius 1798)

Palearctic (Eu., TCa.), probably sylvicoline, bivoltine (V-IX), rare.

Vatra Dornei (SV) 5 VII 1991 [1 ♂].

## Subfam. MILESIINAE

## Tribus Cheilosini

*Cheilosia illustrata* (Harris 1780)

Palearctic (Eu., Kaz., CAs., Sb.), sylvicoline, in hills and mountains, bivoltine (IV-X), frequent.

Vatra Dornei (SV) 5 VII 1991 [2: ♂, ♀].

## Tribus Volucellini

*Volucella inflata* (Fabricius 1794)

Palearctic (Eu., TCa., Sb.), sylvicoline, univoltine (IV-VIII), frequent.

Bucharest, Băneasa forest 10 VII 1985, 11 VI 1991 [2: ♂, ♀].

*Volucella pellucens* (L. 1758)

Palearctic (Eu., TCa., Kaz., CAs., EAs., Sb., Mo., Ch., Ko., Jp.), oriental, mainly sylvicoline, bivoltine (IV-IX), frequent.

Comana (GR) 18 VII 1989 [1 ♀]; Vatra Dornei (SV) 5 VII 1991 [1 ♂].

*Volucella zonaria* (Poda 1761)

Palearctic (Eu., TCa., CAs., EAs., N Sb., Ir., Mo.), sylvicoline, mainly in hills and mountains, bivoltine or possibly polyvoltine (IV-X), frequent.

Bucharest, Băneasa forest 6 VI 1985 [1 ♂]; Comana (GR) 27 VII 1991 [1 ♀].

## Tribus Chrysogasterini

*Hammerschmidtia ferruginea* (Fallén 1817)

Palearctic (Eu.), sylvicoline, only in large European aspen (*Populus tremula*) or mixed woodlands, probably univoltine (VI-VIII), rare.

Gura Zlata, Mt. Retezat 17 VII 1990 [1 ♂].

## Tribus Sericomyiini

*Arctophila bombiforme* (Fallén 1810)

Palearctic (Eu., TCa.), sylvicoline, in hills and mountains, univoltine (V-VIII), rare.  
 Gemele, Mt. Retezat 31 VIII 1988 [1 ♂]; Gura Zlata, Mt. Retezat 1 IX 1988 [1 ♀].

*Sericomyia lappona* (L. 1758)

Palearctic (Eu.), sylvicoline, hygrophilous, probably univoltine (V-IX), rare.  
 Gemele, Mt. Retezat 14 VII 1990 [1 ♂]; Vatra Dornei (SV) 5 VII 1991 [1 ♀].

## Tribus Eumerini

*Merodon aberrans* Egger 1860

Palearctic (Eu., TCa., Tu.), xerophilous, mainly in hills and mountains, univoltine (V-VII), rare.  
 Comana (GR) 30 VII 1987 [1 ♂]; Bucharest, Băneasa forest 1 VIII 1991 [1 ♀].

*Merodon ruficornis* Meigen 1822

[syn. *M. recurvus* (Strobl 1898), labeled *M. strobli* Brădescu 1986 – see Discussion]  
 Palearctic (Eu., TCa.), sylvicoline, probably bivoltine (IV-IX), frequent.  
 Bucharest, Băneasa forest 21 V 1991 [2: ♂, ♀].

## Tribus Eristalini

*Myathropa florea* (L. 1758)

Palearctic (Eu., TCa., CAs., Sb., NAF.), eurytopic, probably polyvoltine (IV-XI), frequent.  
 Herculane (CS) 14 V 1990 [1 ♂]; Gemele, 1920 m., Mt. Retezat 10 VII 1990 [1].

## Tribus Milesiini

*Criorhina berberina* (Fabricius 1805)

Palearctic (Eu., TCa., Sb., Jp.), sylvicoline, mainly in hills and mountains, univoltine (IV-VI), frequent.  
 Vatra Dornei (SV) 6 VI 1989 [1 ♀]; Cheia (PH) 11 VI 1989 [1 ♂].

**Discussion**

All the material is from Romania and belongs for the most part to widespread European species. Unless otherwise mentioned, it was collected and first

determined by V. Brădescu himself, between 1974 and 1991, mainly in mountainous areas. A few exceptions were collected by his second wife Maria and the dipterist Victor Gheorghiu. 45 species from 24 genera are represented, and the collection comprises no species included in Red Lists for Romania, nor protected species. One should remark the specimens collected within Gemezele, the important scientific reserve in Mt. Retezat.

Remarkable species in the collection are *Eupeodes (Lapposyrphus) lapponicus* (Zetterstedt, 1838), a Scandinavian, migratory species (Falk 1991), and the rare *Arctophila bombiforme* (Fallén 1810), *Dasysyrphus friuliensis* (van der Goot 1960), *Hammerschmidtia ferruginea* (Fallén 1817), *Merodon aberrans* Egger 1860, *Sericomyia lappona* (L. 1758), and *Spazigaster ambulans* (Fabricius 1798).

The once thought Balkanic endemism *Merodon strobli* Brădescu 1986, distributed in southern, southwestern and western Romania, Serbia and Montenegro (Pape 2004, Stănescu & Pârvu 2005), is actually identical to *M. recurvus* (Strobl 1898) and both are synonyms of *M. ruficornis* Meigen 1822 (Dirickx 1994, quoted in Vujić & al. 2002; Radenković & al. 2002).

### Acknowledgements

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The present paper is dedicated to the commemoration of five years since the passing away of Vladimir Brădescu.

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<b>NYMPHAEA</b> Folia naturae Bihariae	<b>XXXVI</b>	<b>217 - 230</b>	<b>Oradea, 2009</b>
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## Proiectarea depozitelor de paleontologie/geologie în noua clădire a Muzeului Țării Crișurilor, Oradea

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**Abstract.** Țării Crișurilor Museum is in the process of relocation. The new location of the Museum is an architectural monument, built at the end of the 19th century. The biggest challenge in a conservator's life is to design new facilities for collection storages. The paleontology/geology storage of the Natural History Department was designed according to the latest standards for museums regarding: fire detection and anti-fire system, security and safety, access, environmental control and monitoring, museum storage systems and laboratories. The museum staff worked closely with the designers during the planning of the new building in order to reach consensus regarding conservation needs of the collections and to choose the best solutions and equipment in the new storages of the museum. Giving the size of the collections and the dynamic of collection growth the mobile, space saving, compact collection storage system was designed in order to increase the usable space. The stores are designed to give appropriate loading levels for floor and shelving. After relocation, not only the environmental conditions will be controlled, there will be an electronic log of persons entering the storage area.

### Introducere

Secția de Științele Naturii din cadrul Complexului Muzeul Țării Crișurilor are obiectiv fundamental cercetarea, conservarea și dezvoltarea colecțiilor de geologie, paleontologie și biologie. Bazele acestor colecții au fost puse de Tiberiu

Jurcsák și colaboratorii săi începând din 1950 și apoi îmbogățite de personalul științific al secției. Patrimoniul secției a crescut în mod constant, la ora actuală aceasta deținând un număr de peste 142.000 de obiecte de patrimoniu înregistrate, din care peste 84.000 din domeniul geologiei-paleontologiei și peste 48.000 din domeniul biologiei.

Colecțiile sunt structurate pe două domenii: primul reprezintă paleontologia și evoluția geologică a zonei de vest a României, remarcându-se vertebratele marine triasice, plantele fosile din Jurasicul inferior, dinozaurii din Cretacic și vertebratele din Pleistocen; al doilea domeniu este cel de **biologie**, cu colecții de botanică și zoologie: oologie, malacologie, entomologie, ornitologie și de mamifere.

Reorganizarea depozitelor sau mutarea colecțiilor sunt cele mai mari provocări din viața oricărui conservator. Complexul Muzeul Țării Crișurilor Oradea, în urma retrocedării actualului sediu – Palatul Baroc, este pus în situația de a participa la elaborarea proiectului de renovare și amenajare a depozitelor, laboratoarelor, spațiilor expoziționale din noul sediu - o clădire construită în stil eclectic la sfârșitul secolului XIX, proiectată de renumitul arhitect Alpár Ignác, inaugurată la data de 4 octombrie 1898 având ca destinație fosta Școală regală de cadeți. Școala de cadeți a funcționat până în 1944, iar în ultimele decenii clădirea a deservit Garnizoana Oradea.

Lucrarea de față își propune prezentarea proiectului de reamenajare a spațiilor destinate depozitelor de paleontologie/geologie.

### **Etapale premergătoare proiectării**

Prima etapă de dinaintea proiectării a fost cea de documentare și cercetare, atât teoretică – prin consultarea publicațiilor de specialitate (*Studies in Conservation, Journal of the American Institute for Conservation, Museum management and Curatorship, Collection Forum*), cât și practică – prin efectuarea unor vizite la câteva muzee europene de istorie naturală recent mutate sau recent renovate (Muzeul Național de Istorie Naturală Budapesta, Museum Mensch und Natur München, Muzeul de Paleontologie München, Naturkunde Museum Ulm, Senckenberg Naturmuseum Frankfurt, Muzeul de Istorie Naturală Viena).

A doua etapă a constituit-o studierea planurilor arhitecturale ale clădirii, pentru a ne familiariza cu caracteristicile tehnice ale acesteia, căile de acces, sursele de lumină naturală, sistemul de conducte de apă și canalizare etc, pentru a putea amplasa și proiecta spațiile destinate depozitelor și laboratoarelor conform celor mai înalte standarde (Fitzgerald, 1988; National Institute for the Conservation of Cultural Property, 1990; Hall, 1998; Cultural Resources and Planning (LORD), 1999; ICOM, 2004).



Înainte de a trece la faza de proiectare efectivă, s-a făcut inspecția clădirii la fața locului pentru a evalua starea de „sănătate” a clădirii: structura de rezistență, gradul de întreținere, starea zidăriei, gradul de umiditate, etc.

Experiența muzeelor moderne a demonstrat că rolul conservatorului este primordial în procesul de proiectare a spațiilor noi destinate depozitării colecțiilor, laboratoarelor și expozițiilor (Burmester, 2003). Conservatorul trebuie să conlucreze cu arhitecții și cu specialiștii muzeului (muzeografi, custozi de colecții, restauratori) pentru a se asigura că vor fi respectate toate cerințele de conservare încă din faza de proiectare: asigurarea măsurilor de securitate, a sistemelor de alarmă și stingere a incendiilor, asigurarea unui microclimat adecvat, precum și implementarea celor mai potrivite soluții tehnice pentru eliminarea eventualelor riscuri specifice fiecărei colecții, cerințe cu care, în cele mai multe cazuri, arhitecții nu sunt familiarizați.

### **Alegerea spațiilor destinate depozitelor de paleontologie/geologie**

După analiza planurilor clădirii și vizita la fața locului s-a trecut la alegerea spațiilor desemnate depozitelor, laboratoarelor și spațiilor expoziționale pentru cele patru secții ale muzeului. S-au avut în vedere următoarele considerente privind specificul colecțiilor de paleontologie/geologie:

- greutatea colecțiilor
- existența căilor de acces pentru evacuarea în caz de urgență
- asigurarea de spații pentru depozite primare în apropierea depozitului propriu-zis
- securitate
- sistem de alarmă și stingere incendiu
- microclimat corespunzător – izolare termică, controlul umidității, eliminarea surselor de praf/poluanți
- crearea laboratoarelor în vecinătatea depozitelor pentru a scurta drumul obiectelor care necesită lucrări de restaurare/conservare

Unul din considerentele evaluate a fost specificul colecțiilor de paleontologie/geologie, respectiv greutatea lor fizică. Este recunoscut faptul că aceste colecții pun problemele cele mai mari privind greutatea, sarcina exercitată asupra pardoselii și asupra întregii structuri ale clădirii. Din experiențele altor muzee cu colecții similare se cunoaște că la calculul capacității de încărcare a pardoselii unui spațiu de depozitare la greutatea obiectelor de paleontologie/geologie, se adaugă greutatea mobilierului, care de multe ori, în special în cazul mobilierului modern, suportă greutăți mult mai mari decât sarcina suportată pe metru pătrat de către

pardoseala clădirilor (Waddington, 1993). De asemenea, se ia în calcul și caracterul și densitatea de depozitare a colecției, precum și mobilierul ales împreună cu configurația acestuia. Se cunoaște faptul că mobilierul compact mobil, cu șinele și structura de bază aferente trebuie proiectate și instalate, astfel încât să se țină cont de capacitatea de încărcare a pardoselii.

La alegerea spațiului s-a ținut cont de gruparea celor două depozite, depozitul efectiv de paleontologie/geologie și al depozitului primar, necesar pentru izolarea pieselor noi sau a celor contaminate. Aproximarea celor două depozite asigură scurtarea drumului pe care trebuie să-l parcurgă obiectele muzeale. Din aceleași considerente, lângă depozitul primar s-a ales spațiul pentru laboratorul de paleontologie, unde se vor efectua lucrările de preparare și restaurare a pieselor din colecțiile de paleontologie/geologie.

Ținând cont de aceste considerente, pentru amenajarea depozitului de paleontologie/geologie, a depozitului primar de paleontologie și a laboratorului de paleontologie conservatorul Secției de Științe ale Naturii a solicitat trei spații situate la parter, spații pentru care există în apropiere o cale de acces pentru a asigura evacuarea în caz de urgență (Fig. 1).

### **Proiectarea facilităților pentru asigurarea principalelor elemente de depozitare și conservare a colecțiilor de paleontologie/geologie**

Infrastructura necesară asigurării condițiilor de siguranță (sistemul de alarmă), de stingerea incendiilor, sistemul de încălzire, ventilație și aer condiționat a fost proiectată de către firma SC PROIECT BIHOR SA, firma de arhitectură care a executat „Proiectul tehnic de renovare și reamenajare în noua clădire a Muzeului Țării Crișurilor”. În etapa de proiectare a infrastructurii, arhitectii și inginerii s-au consultat cu conservatorii și muzeografilor pentru a asigura cele mai moderne și cele mai potrivite soluții în infrastructura aleasă.

În procesul de proiectare s-a ținut cont de respectarea condițiilor de mediu specifice colecțiilor de paleontologie/geologie: temperatura, umiditate relativă, poluanți atmosferici, lumină. Conform standardelor internaționale temperatura pentru colecțiile de paleontologie trebuie să fie între 15-25 °C, iar umiditatea relativă trebuie să se încadreze între valorile de 45-55% (NPS Museum Handbook, Appendix U, 2005). În ceea ce privește standardele pentru lumină, speciile de geologie/mineralogie pot suferi decolorări la expunere de UV, iar în cazul celor de paleontologie mai sensibile sunt cele de paleobotanică și de vertebrate, expunerea la UV putând cauza fisurarea fosilelor sau deteriorarea soluțiilor de impregnare folosite. Conform proiectului, depozitele vor fi izolate termic, geamurile vor fi obturate pentru

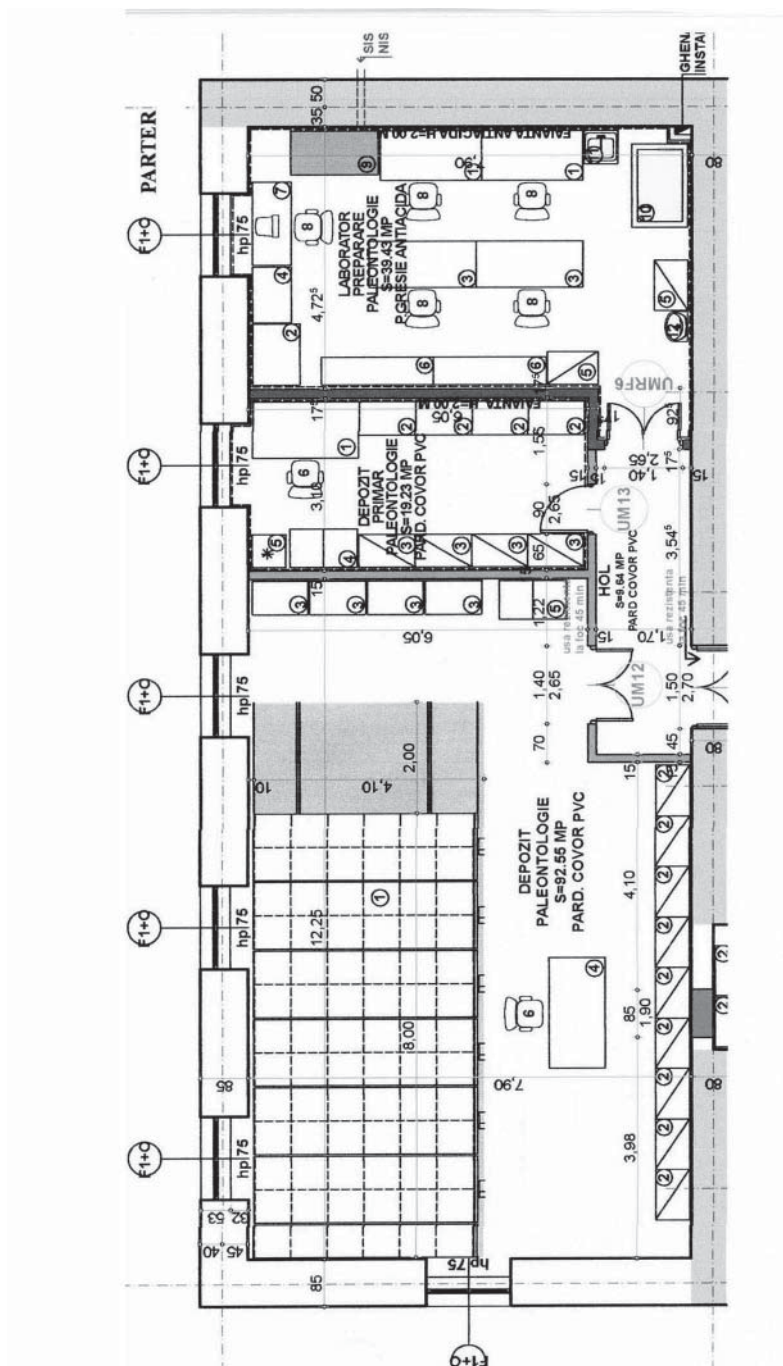


Fig. 1. Amplasarea depozitului de paleontologie/geologie

a elimina sursa de lumină naturală, depozitele vor fi prevăzute cu aparate de măsură a condițiilor microclimatice și cu aparate mobile de umidificare/dezumidificare.

Măsurile de securitate impun izolarea spațiilor de depozitare cu uși de acces ignifugate. Căile de acces și deschidere au fost corelate cu volumul și masa obiectelor, ambele fiind ridicate în cazul unor specimene de paleontologia vertebratelor și geologie (părți scheletice de proboscideni, eșantioane mari de mineralogie/petrografie). Pentru securitate, accesul în depozit se va face pe baza cartelor magnetice, pentru înregistrarea utilizatorului și a timpului petrecut în depozit.

### **Evaluarea spațiului de depozitare și a necesarului de mobilier în depozitul de paleontologie/geologie**

S-a făcut o analiză a dinamicii de dezvoltare a colecțiilor de geologie/paleontologie. Secția de Științele Naturii a Muzeului Țării Crișurilor a fost implicat în ultimele 4 decenii în numeroase proiecte de cercetare paleontologică ce au dus la o creștere semnificativă a colecțiilor, atât din punct de vedere calitativ cât și cantitativ. Criteriul de bază pe baza căruia se va face gruparea obiectelor în noul depozit va fi același ca în depozitul de paleontologie/geologie din vechiul sediu al muzeului orădean, respectiv colecțiile de: mineralogie/ petrografie, paleobotanică, paleontologia nevertebratelor, paleontologia vertebratelor grupate pe vârsta depozitelor de unde provin și pe șantiere paleontologice; paleozoologie. Obiectele din colecțiile de paleontologie/geologie variază mult ca dimensiune, de la resturi scheletice de mamifere mari, ce pot atinge lungimi de 1,5-2 m, până la micro-vertebrate, ce au dimensiuni de câțiva milimetri.

Pentru folosirea rațională a spațiului mobilierul propus pentru depozitarea acestor colecții este dulapul compact rulant tip Mobilex sau Dexion, cu deschidere mecanică, ce va duce la o densitate mai mare a obiectelor depozitate. Într-un spațiu astfel organizat capacitatea de depozitare crește cu 50-100%. Mobilierul compact va conține 13 module, fiecare modul fiind împărțit pe 6 tronsoane. Având tipo-dimensionarea în funcție de natura/dimensiunea obiectelor pentru fiecare tip de colecție, s-a optat pentru 5 tipuri de module A-E (Fig. 2), primul modul fiind fixat de perete, restul fiind module mobile.

Dimensiunea și numărul sertarelor pentru fiecare tronson s-au stabilit în urma corelării datelor privind dimensiunea obiectelor din fiecare tip de colecție. Astfel, colecțiile de petrografie/ nevertebrate și arheo-zoologie vor fi depozitate în același tip de modul (A), totalizând un număr de 20 tronsoane (Fig. 3), modulul B este o combinație între configurația modulului A și C, respectiv are în componență 2 tronsoane tip A și 4 tronsoane tip C (Fig. 4), modulul C – 35 tronsoane grupează



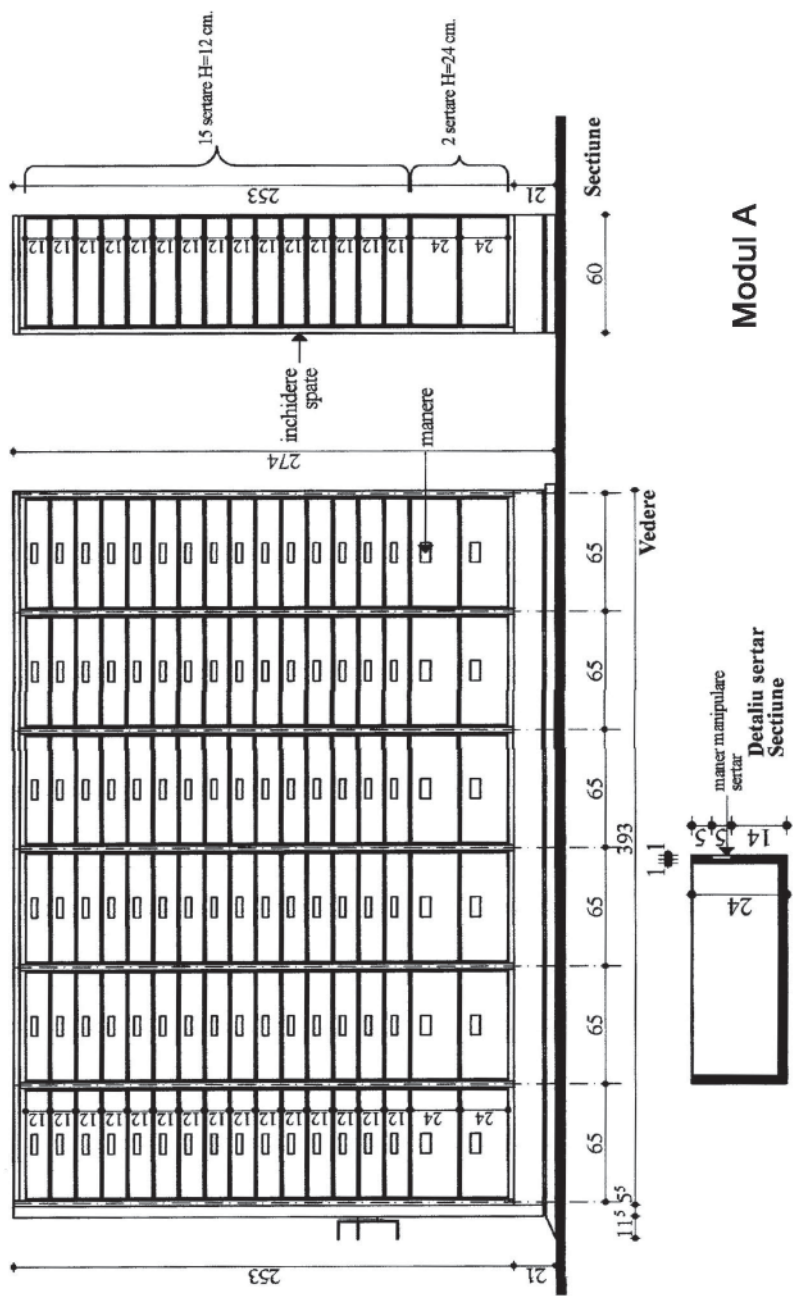


Fig. 3. Configurația tronsoanelor/sertarelor din Modulul A



colecțiile de paleobotanică și vertebrate din Mezozoic (Fig. 5), modulul D cuprinde 3 tronsoane cu sertare a căror înălțime este mai mică, pentru colecția de osteologie comparată (Fig. 6), modulul E – vertebrate din Cuaternar, 20 tronsoane (Fig. 7).

Având proiectul acestui mobilier pe module și tronsoane, se poate stabili locul exact unde va fi așezat obiectul din colecție, eliminându-se mișcările inutile de obiecte. După transportul obiectelor muzeale în noul sediu, obiectul va fi așezat în modulul/ tronsonul/ sertarul stabilit înainte, cu introducerea datelor în calculator, obținându-se astfel o modalitate practică de regăsire rapidă a obiectului respectiv.

Pe lângă dulapul de depozitare rulant/mobil compact, depozitul va fi dotat cu 9 rafturi metalice deschise cu 5 polițe rezistente fiecare (60 x 100 x H188) cm, pentru a depozita resturile scheletice de proboscideni, de mari dimensiuni, precum și cu un șir de dulapuri de lemn cu sertare și uși (100 x 200 x H104) cm, suprapuse două câte două. Accesul la sertarele superioare va fi facilitat de o scară mobilă.

Pentru facilitarea fazelor de lucru efectuate în colecțiile de paleontologie/geologie, depozitul va fi dotat cu o masă de lucru cu schelet metalic, blat rezistent, placat cu faianță antiacidă cu roți cu sistem de blocare.

Depozitul primar, poziționat în imediata apropiere a depozitului de paleontologie/geologie, ce va cuprinde patru rafturi metalice deschise cu 6 polițe rezistente (60 x 100 x H 200) cm, patru dulapuri din lemn cu 5 polițe și uși glisante, o masă de lucru mobilă, cu schelet metalic și blat rezistent, o scară mobilă și o ladă frigorifică. În depozitul primar se depozitează eșantioanele/pieșele paleontologice aflate în curs de preparare, cele care necesită restaurare și cele recent intrate în colecție și care trebuiesc izolate pe o perioadă de 3 luni pentru a le stabili și a monitoriza eventualele atacuri cu fungi, bacterii etc.

Laboratorul de paleontologie pentru restaurare și preparare, este poziționat la același nivel, lângă depozitul primar, pentru a reduce drumul obiectelor care necesită lucrări de restaurare/conservare și a celor proaspăt colectate care urmează a fi preparate și care sunt depozitate în depozitul primar până la prepararea lor.

Odată cu realizarea lucrărilor de renovare și amenajare a noului sediu al Muzeului Țării Crișurilor și cu mutarea obiectelor de patrimoniu în depozitele proiectate la standarde înalte, vor fi întrunite toate condițiile pentru conservarea, valorificarea științifică și expozițională a patrimoniului extrem de valoros al muzeului orădean.





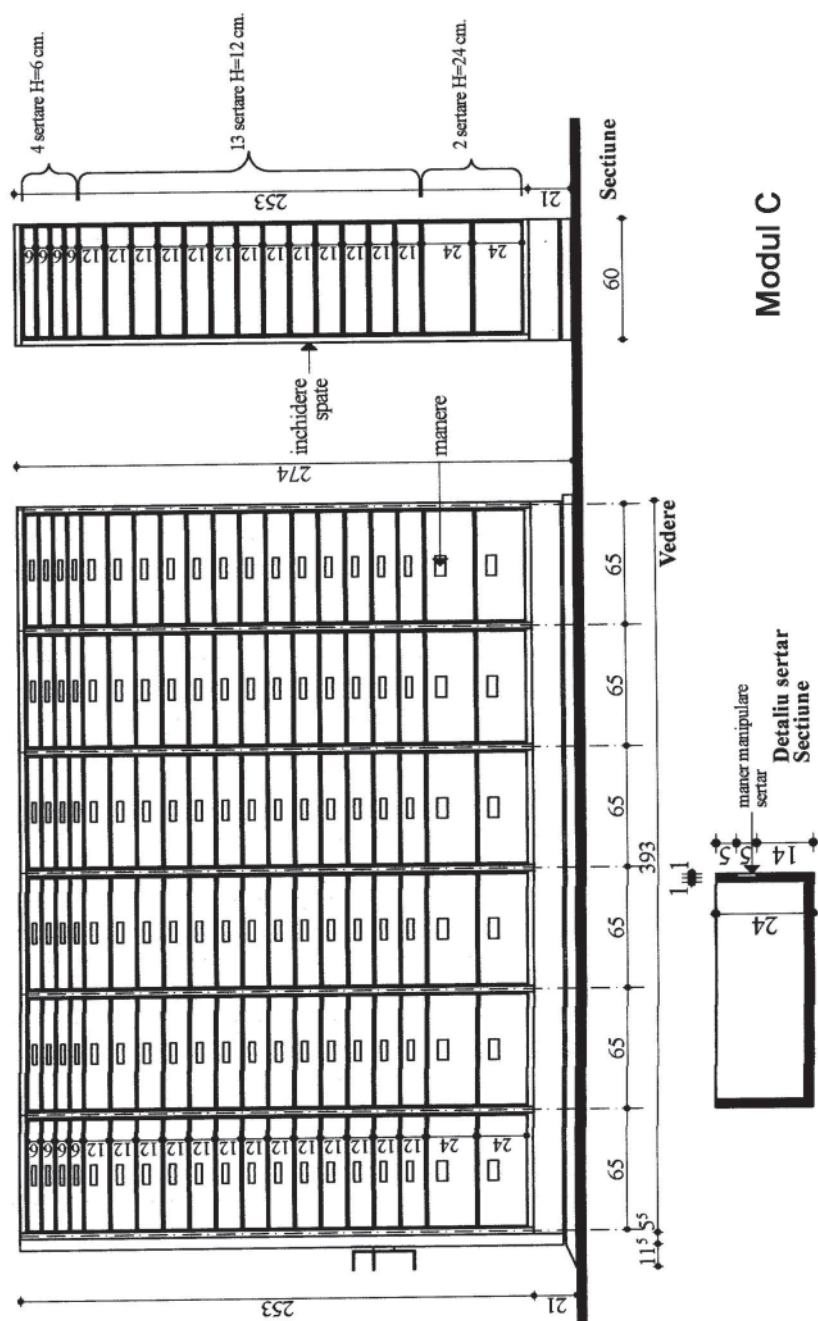


Fig. 5. Configurația tronsoanelor/sertarelor din Modulul C

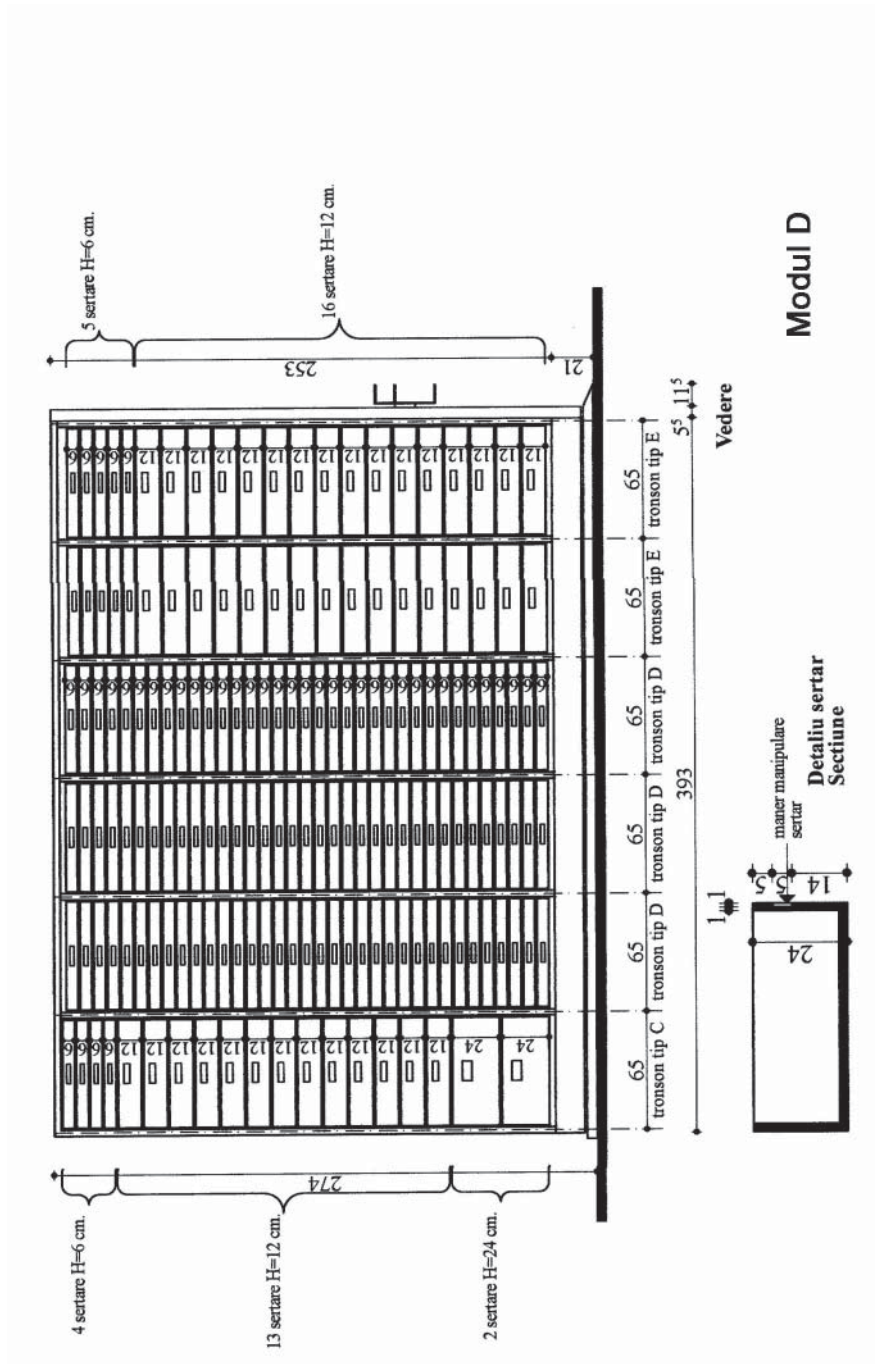


Fig. 6. Configurația tronsoanelorsertarelor din Modulul D

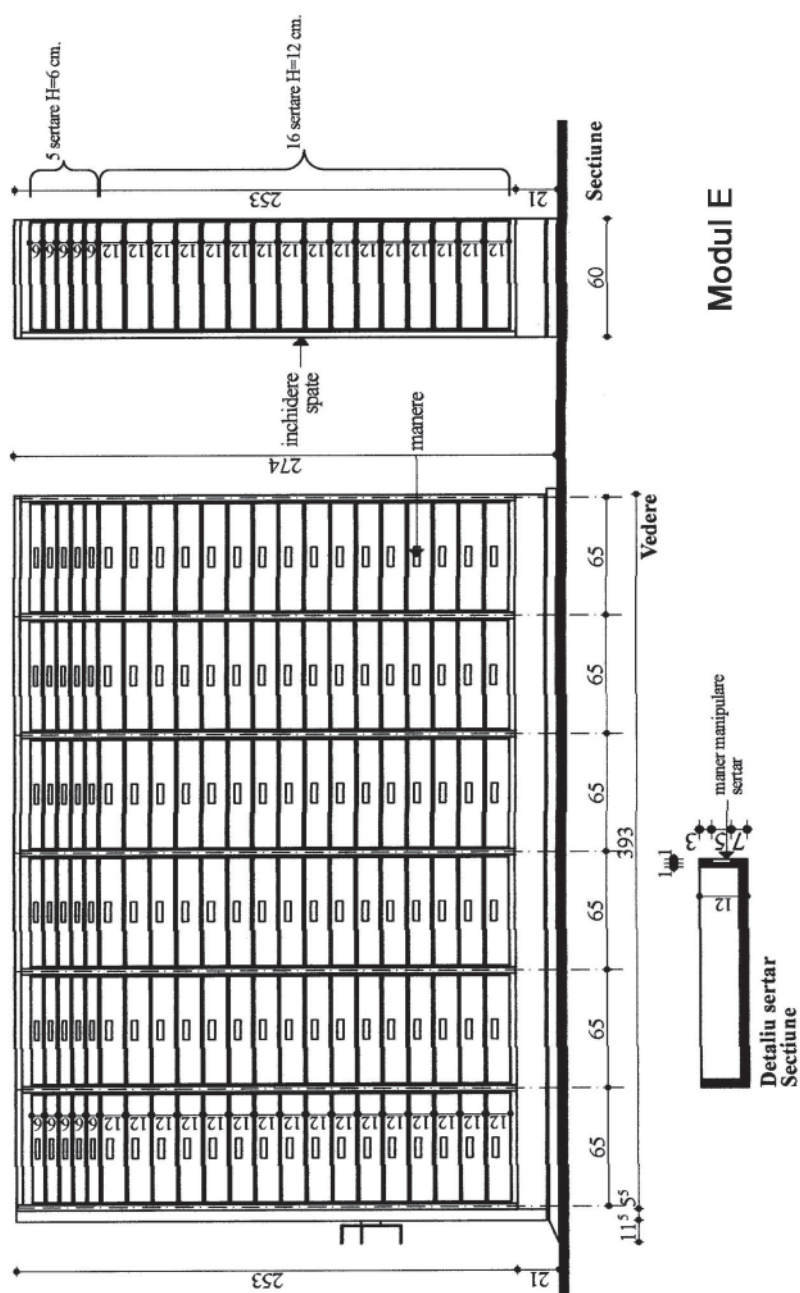


Fig. 7. Configurația tronsoanelor sertarelor din Modulul E

### Mulțumiri

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