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Analysis of the flora of Rogozna Mountain in Southwestern Serbia

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***Abstract*:**

Papović, O., Miljković, M., Ranđelović, N., Ranđelović, V.: ***Analysis of the flora of Rogozna Mountain in Southwestern Serbia. Biologica Nyssana, 5 (1), September 2014: 17-30.***

As a result of the two-year investigation of the Rogozna Mt. flora, 795 plant taxa (species and subspecies) belonging to 337 genera and 77 families were recorded. Floristic analysis of investigated area was performed in comparison to the floristic data of Serbia, Balkan peninsula and neighboring region of Rogozna Mt. (Ibar river valley and high mountain region of Kopaonik Mt).

Key words: flora, floristic analysis, floristic spectrum.

***Apstrakt*:**

Papović, O., Miljković, M., Ranđelović, N., Ranđelović, V.: ***Analiza flore planine Rogozne u jugozapadnoj Srbiji.. Biologica Nyssana, 5 (1), September 2014: 17-30.***

Kao rezultat dvogodišnjih istraživanja flore planine Rogozne utvrđeno je 795 biljnih taksona (vrsta i podvrsta) iz 337 rodova i 77 familija. Floristička analiza istraživanog područja je sprovedena u poređenju sa floističkim podacima koji postoje za Srbiju, Balkansko poluostrvo i susedna područja planine Rogozne (dolina reke Ibar i visokoplaninski region Kopaonika).

Ključne reči: flora, floristička analiza, floristički spektar.

Introduction

Rogozna Mt. is situated in southwestern Serbia in the triangle between the cities of Kosovska Mitrovica, Raška and Novi Pazar. It is elongated in the northwestern-southeastern direction, bordered by the Golija Mt. massif on the northwest, slopes of the Mokra Mt. on the south, a great massif of Kopaonik Mt. on the east and northeast and Stari Kolašin on the west. On the south, east and northeast, Rogozna Mt. is mostly bordered by the Ibar River, while on the northwest and west by Raška and Jošanica River. The main ridge of the mountain is slightly sinuous and starts from the highest mountain peak Crni vrh (1479 m)

Figure 1. Geographical position of investigated area

followed by Čador (1354 m), Ravna glava (1369 m), Smilov laza (1302), Kašalj (1081 m), Šanac (1292 m), Bar (1207 m), Zminjac (1111 m) and Vinorog (1225 m). The geological structure of Rogozna Mt. is mostly represented by serpentine and eruptive stones. The pedological substrate consists of loamy soil. The climate of this area is between temperate and subalpine (Božanić, 2006). Up to date, Rogozna Mt. has not been well investigated and therefore, this paper gives a significant contribution to the knowledge of the flora of this mountain and Serbia in general.

Material and methods

Herbarium specimens collected during the two-year investigation are deposited at the Herbarium of Faculty of Science and Mathematics, University of Niš (HMN).

Identification of the collected plants was performed according to Flora Europaea (Tutin *et al.*, 1964-1980) and the regional floras relevant for the investigated area (Josifović, ed., 1970-1977, Velchev, ed., 1982-1989).

The nomenclature follows Med-Checklist (Greuter *et al*., 1984-1989), Flora Europaea (Tutin *et al*., 1964-1980), and International Organization for Plant Information (IOPI) (http://plantnet.rbgsyd.nsw.gov.au/iopi/iopihome.htm).

Taxonomic structure of the Rogozna Mt. flora was compared to the flora of the Balkan Peninsula (Turrill, 1929), Serbia (Stevanović et al. 1994), Kopaonik Mt. (Lakušić, 1993) and Ibar river valley (Prodanović, 2007).

Generic coefficient was calculated using the formula Ng/Ns x 100, where Ng is the number of genera and Ns the number of species (Jaccard, 1912, Алёхин, 1944, Janković, 1985).

Results and Discussion

List of the recorded vascular flora of Rogozna Mt

Equisetopsida
Equisetaceae

Equisetum arvense L.
Equisetum telmateia Ehrh.

Polypodiopsida
Aspidiaceae

Dryopteris filix-mas (L.) Schott
Polystichum setiferum (Forskål) Woynar

Polypodiaceae

Polypodium vulgare L.

Adiantaceae

Notholaena maranthae (L.) Desv.

Aspleniaceae

Asplenium adiantum-nigrum L.
Asplenium ceterach L.
Asplenium cuneifolium Viv.
Asplenium ruta-muraria L.
Asplenium trichomanes L.
Asplenium septentrionale (L.) Hoffm.

Woodsiaceae

Cystopteris fragilis (L.) Bernh.

Pinopsida
Cupressaceae

Juniperus communis L.

Magnoliopsida
Aristolochiaceae

Asarum europaeum L.

Ranunculaceae

Anemone nemorosa L.
Clematis vitalba L.
Consolida regalis S. F. Gray
Helleborus odorus Waldst. & Kit.
Helleborus serbicus Adamović
Hepatica nobilis Schreber
Ranunculus acris L.
Ranunculus bulbosus L.
Ranunculus illyricus L.
Ranunculus platanifolius L.
Ranunculus polyanthemos L.
Ranunculus repens L.
Ranunculus sardous Crantz
Ranunculus strigulosus Schur
Thalictrum aquilegiifolium L.

Berberidaceae

Epimedium alpinum L.

Papaveraceae

Fumaria officinalis L.
Papaver dubium L.
Papaver rhoeas L.

Ulmaceae

Ulmus glabra Hudson

Fagaceae

Fagus sylvatica L.
Quercus cerris L.
Quercus petraea (Mattuschka) Liebl. subsp. *medwediewii* (A. Camus) Menitsky
Quercus petraea (Mattuschka) Liebl. subsp. *petraea*
Quercus pubescens Willd.

Betulaceae

Alnus alnobetula (Ehrh.) Hartig

Corylaceae

Carpinus betulus L.
Carpinus orientalis Miller

Corylus avellana L.
Corylus colurna L.
Ostrya carpinifolia Scop.

Caryophyllaceae

Agrostemma githago L.
Arenaria leptoclados (Reichenb.) Guss.
Arenaria serpyllifolia L.
Atocion armeria Fourr.
Cerastium brachypetalum Pers.
Cerastium decalvans Schlosser & Vuk.
Cerastium decalvans Schlosser & Vuk.
Cerastium fontanum Baumg. subsp. *vulgare (Hartm.)* Greuter & Burdet
Cerastium grandiflorum Waldst. & Kit.
Cerastium transsilvanicum Schur
Cerastium sylvaticum Waldst. & Kit.
Dianthus armeria L.
Dianthus carthusianorum L.
Dianthus carthusianorum L.
Dianthus ciliatus Guss.
Dianthus cruentus Griseb.
Dianthus petraeus Waldst. & Kit.
Dianthus pinifolius Sibth. & Sm. subsp. *pinifolius*
Dianthus pinifolius Sibth. & Sm. subsp. *serbicus* Wettst.
Dianthus serotinus Waldst. & Kit.
Dianthus sylvestris Wulfen
Herniaria glabra L.
Herniaria hirsuta L.
Lychnis coronaria (L.) Desr.
Lychnis flos-cuculi L.
Minuartia graminifolia (Ard.) Ják.
Minuartia hirsuta (Bieb.) Hand.-Mazz. subsp. *falcata* (Griseb.) Mattf.
Minuartia montana L.
Minuartia verna (L.) Hiern.
Minuartia viscosa (Schreber) Schinz & Thell.
Misopates orontium (L.) Rafin.
Moehringia trinervia (L.) Clairv.
Moenchia mantica (L.) Bartl.
Paronychia cephalotes (Bieb.) Besser
Petrorhagia illyrica (Ard.) P. W. Ball & Heywood
Petrorhagia saxifraga (L.) Link
Sagina saginoides (L.) Karsten
Saponaria glutinosa Bieb.
Scleranthus annuus L.
Scleranthus perennis L. subsp. *perennis*
Scleranthus perennis L. subsp. *dichotomus* (Schur) Nyman
Scleranthus polycarpos L.
*Silene bellidifolia*Jacq.
Silene bupleuroides L. subsp. *bupleuroides*
Silene bupleuroides L. subsp. *staticifolia* (Sibth. & Sm.) Chowdhuri
Silene conica L.
Silene gallinyi Heuffel ex Reichenb.
Silene italica (L.) Pers.
Silene noctiflora L.
Silene otites (L.) Wibel
Silene paradoxa L.
Silene sendtneri Boiss.
Silene viridiflora L.
Silene vulgaris (Moench) Garcke
Stellaria graminea L.
Stellaria holostea L.
Stellaria media (L.) Vill.
Viscaria vulgaris Bernh.

Amaranthaceae

Amaranthus crispus (Lesp. & Thév.) N. Terracc.

Chenopodiaceae

Bassia prostrata (L.) A. J. Scott
Chenopodium album L.
Chenopodium botrys L.
Chenopodium hybridum L.
Chenopodium polyspermum L.
Chenopodium vulvaria L.

Polygonaceae

Fallopia convolvulus (L.) Å. Löve
Fallopia dumetorum (L.) J. Holub
Persicaria maculosa S. F. Gray
Polygonum arenarium Waldst. & Kit.
Polygonum aviculare L.
Rumex acetosella L.

Plumbaginaceae

Goniolimon incanum (L.) Hepper
Limonium gmelinii (Willd.) O. Kuntze

Hypericaceae

Hypericum annulatum Moris
Hypericum barbatum Jacq.
Hypericum elegans Stephan ex Willd.
Hypericum hirsutum L.
Hypericum humifusum L.
Hypericum montanum L.
Hypericum perforatum L.

Violaceae

Viola aetolica Boiss. & Heldr. subsp. *kopaonikensis* Pančić ex Tomović & Niketić, ined.
Viola arvensis Murray
Viola canina L.
Viola kitaibeliana Schultes
Viola mirabilis L.
Viola sylvestris Lam.
Viola tricolor L.

Cistaceae

Fumana bonapartei Maire & Petitmengin
Helianthemum alpestre (Jacq.) DC.
Helianthemum canum(L.) Baumg.
Helianthemum nummularium (L.) Miller

Brassicaceae

Aethionema saxatile (L.) R. Br. subsp. g*raecum* (Boiss. & Spruner) Hayek
Alyssum alyssoides (L.) L.
Alyssum bertolonii Desv.
Alyssum markgrafii O. E. Schulz ex Markgraf
Alyssum montanum L. subsp. serbicum Novák
Alyssum murale Waldst. & Kit. subsp. *murale*
Alyssum repens Baumg.
Arabis alpina L. subsp. *caucasica* (Willd. ex Schlecht.) Briq.
Arabis turrita L.
Aurinia saxatilis (L.) Desv.
Aurinia saxatilis (L.) Desv. subsp. orientalis (Ard.) T. R. Dudley
Berteroa incana (L.) DC.
Berteroa mutabilis (Vent.) DC.
Calepina irregularis (Asso) Thell.
Capsella bursa-pastoris (L.) Medicus
Cardamine bulbifera (L.) Crantz
Cardamine hirsuta L.
Cardamine resedifolia L.
Draba muralis L.
Erophila verna (L.) Chevall.
Erucastrum gallicum (Willd.) O. E. Schulz
Erysimum carniolicum Dolliner
Erysimum cuspidatum (Bieb.) DC.
Erysimum diffusum Ehrh.
Erysimum kuemmerlei Ják.
Fibigia clypeata (L.) Medicus
Lepidium draba L.
Rorippa pyrenaica (All.) Reichenb.
Rorippa sylvestris (L.) Besser
Thlaspi alliaceum L.
Thlaspi arvense L.
Thlaspi perfoliatum L.

Resedaceae

Reseda lutea L. subsp. *lutea*

Salicaceae

Populus tremula L.
Salix fragilis L.
Salix purpurea L.
Salix viminalis L.

Ericaceae

Andromeda polifolia L.
Bruckenthalia spiculifolia (Salisb.) Reichenb.

Primulaceae

Anagallis arvensis L.
Anagallis foemina Miller
Lysimachia nemorum L.
Lysimachia nummularia L.

Tiliaceae

Tilia platyphyllos Scop.
Tilia tomentosa Moench

Malvaceae

Malva moschata L.

Euphorbiaceae

Euphorbia barrelieri Savi subsp. *thessala* (Form.) Bornm.
Euphorbia cyparissias L.
Euphorbia epithymoides L.
Euphorbia falcata L.
Euphorbia glabriflora Vis.
Euphorbia helioscopia L.
Euphorbia salicifolia Host
Euphorbia stricta L.
Euphorbia subhastata Vis. & Pančić
Euphorbia taurinensis All.
Euphorbia waldsteinii (Soják) A. R. Sm.
Mercurialis ovata Sternb. & Hoppe
Mercurialis perennis L.

Rosaceae

Agrimonia eupatoria Ledeb.
Amelanchier ovalis Medicus
Aremonia agrimonoides (L.) DC.
Cotoneaster tomentosus Lindley
Crataegus monogyna Jacq.
Cydonia oblonga Miller
Filipendula ulmaria (L.) Maxim.
Filipendula vulgaris Moench
Fragaria vesca L.
Geum urbanum L.
Potentilla argentea L.
Potentilla erecta (L.) Räuschel
Potentilla heptaphylla L. subsp. *australis* (Krašan ex Nyman) Gams
Potentilla hirta L.
Potentilla incana P. Gaertner, B. Meyer & Scherb.
Potentilla leucopolitana P. J. Mueller
Potentilla recta L.
Potentilla reptans L.
Potentilla tommasiniana F. W. Schultz
Potentilla visianii Pančić
Prunus avium L.
Prunus spinosa L.
Pyrus communis L.
Rosa canina L.

Rosa pendulina L.
Rosa spinosissima L.
Rubus hirtus Waldst. & Kit.
Rubus idaeus L.
Rubus ulmifolius Schott
Sanguisorba minor Scop.
Sanguisorba officinalis L.
Sorbus aria (L.) Crantz
Sorbus graeca (Spach) Kotschy
Sorbus torminalis (L.) Crantz
Spiraea cana Waldst. & Kit.
Spiraea media Franz Schmidt

Crassulaceae

Hylotelephium maximum (L.) Holub
Sedum acre L. subsp. *acre*
Sedum hispanicum L.
Sedum ochroleucum Chaix
Sedum rupestre L.
Sedum sartorianum Boiss.
Sedum serpentini Janchen
Sempervivum heuffelii Schott
Sempervivum marmoreum Griseb.

Saxifragaceae

Saxifraga rotundifolia L.

Parnassiaceae

Parnassia palustris L.

Fabaceae

Anthyllis vulneraria L.
Astragalus glycyphyllos L.
Astragalus onobrychis L.
Astragalus onobrychis L.
Colutea arborescens L.
Cytisus hirsutus L. subsp. *ciliatus* (Wahlenb.) Ascherson & Graebner
Cytisus hirsutus subsp. *hirsutus*
Cytisus jankae Velen.
Cytisus nigricans (Schur) Nyman
Cytisus pseudoprocumbens Markgraf
Cytisus supinus L.
Dorycnium germanicum (Gremli) Rikli
Dorycnium herbaceum Vill.
Genista depressa Bieb.
Genista germanica L.
Genista januensis Viv.
Genista ovata Waldst. & Kit.
Hippocrepis comosa L.
Hippocrepis emeroides (Boiss. & Spruner) Czerep.
Lathyrus hallersteinii Baumg.
Lathyrus latifolius L.
Lathyrus niger (L.) Bernh.
Lathyrus nissolia L.
Lathyrus pratensis L.
Lathyrus sphaericus Retz.
Lathyrus sylvestris L.
Lathyrus venetus (Miller) Wohlf.
Lathyrus vernus (L.) Bernh.
Lens nigricans (Bieb.) Godron
Lotus corniculatus L.
Medicago arabica (L.) Hudson
Medicago carstiensis Jacq.
Medicago falcata L.
Medicago lupulina L.
Medicago minima (L.) Bartal.
Medicago prostrata Jacq.
Medicago sativa L.
Melilotus officinalis (L.) Pallas
Onobrychis alba (Waldst. & Kit.) Desv.
Onobrychis arenaria (Kit.) DC.
Onobrychis viciifolia Scop.
Ononis spinosa L.
Securigera elegans (Pančić) Lassen
Securigera varia (L.) Lassen
Trifolium alpestre L.
Trifolium arvense L.
Trifolium aureum Pollich
Trifolium badium Schreber
Trifolium campestre Schreber
Trifolium dalmaticum Vis.
Trifolium diffusum Ehrh.
Trifolium hirtum All.
Trifolium medium L. subsp. *balcanicum* Velen.
Trifolium montanum L.
Trifolium ochroleucon Hudson
Trifolium pannonicum Jacq.
Trifolium pignantii Fauché & Chaub.
Trifolium pratense L. subsp. *pratense*
Trifolium pratense L. subsp. *serotinum* (Witte) Holub
Trifolium repens L.
Trifolium scabrum L.
Trifolium striatum L.
Trifolium sylvaticum Gerard sec. C. Visioso
Trifolium trichopterum Pančić
Trifolium velenovskyi Vandas
Vicia cassubica L.
Vicia cracca L. subsp. *cracca*
Vicia cracca L. subsp. *incana* (Gouan) Rouy
Vicia dumetorum L.
Vicia lathyroides L.
Vicia pannonica Crantz
Vicia pisiformis L.
Vicia sativa L. subsp. *sativa*
Vicia sativa L. subsp. *nigra* (L.) Ehrh.
Vicia sepium L.
Vicia tetrasperma (L.) Schreber

Lythraceae

Lythrum salicaria L.

Oenotheraceae

Circaea lutetiana L.
Epilobium angustifolium L.
Epilobium palustre L.
Epilobium dodonaei Vill.
Epilobium hirsutum L.
Epilobium lanceolatum Sebastiani & Mauri
Epilobium montanum L.
Epilobium parviflorum Schreber
Epilobium roseum Schreber

Anacardiaceae

Cotinus coggygria Scop.

Rutaceae

Dictamnus albus L.
Haplophyllum boissieranum Vis. & Pančić

Aceraceae

Acer campestre L.
Acer heldreichii Orph. ex Boiss. subsp. v*isianii* K. Malý
Acer hyrcanum Fischer & C. A. Meyer subsp. *Intermedium* (Pančić) Bornm.
Acer platanoides L.
Acer pseudoplatanus L.
Acer tataricum L.

Linaceae

Linum austriacum L.
Linum catharticum L.
Linum flavum L.
Linum hirsutum L.
Linum hologynum Reichenb.
Linum tauricum Willd. subsp. *serbicum (Podp.) Petrova*
Linum tenuifolium L.

Balsaminaceae

Impatiens noli-tangere L.

Geraniaceae

Geranium columbinum L.
Geranium dissectum L.
Geranium lucidum L.
Geranium phaeum L.
Geranium purpureum Vill.
Geranium pyrenaicum Burm. fil.
Geranium robertianum L.
Geranium sanguineum L.
Geranium sylvaticum L.

Polygalaceae

Polygala alpestris Reichenb.
Polygala comosa Schkuhr
Polygala major Jacq.
Polygala supina Schreber

Cornaceae

Cornus mas L.
Cornus sanguinea L.

Apiaceae

Aegopodium podagraria L.
Angelica verticilaris L.
Astrantia major L.
Bifora radians Bieb.
Bupleurum apiculatum Friv.
Bupleurum falcatum L. subsp. c*ernuum* (Ten.) Arcangeli
Bupleurum falcatum L. subsp. *falcatum*
Bupleurum praealtum L.
Bupleurum rotundifolium L.
Bupleurum veronense L.
Carum carvi L.
Cervaria rivinii Gaertner
Chaerophyllum aureum L.
Chaerophyllum hirsutum L.
Daucus carota L.
Eryngium palmatum Pančić & Vis.
Eryngium serbicum Pančić
Falcaria vulgaris Bernh.
Ferulago sylvatica (Besser) Reichenb.
Geocaryum cynapioides (Guss.) L. Engstrand
Hacquetia epipactis (Scop.) DC.
Holandrea carvifolia (Vill.) Reduron, Charpin & Pimenov
Laserpitium siler L.
Orlaya daucoides (L.) Greuter
Orlaya grandiflora (L.) Hoffm.
Pastinaca hirsuta Pančić
Peucedanum austriacum (Jacq.) Koch
Peucedanum officinale L.
Peucedanum oreoselinum (L.) Moench
Physospermum cornubiense (L.) DC.
Pimpinella saxifraga L.
Pimpinella serbica (Vis.) Bentham & Hooker fil. ex Drude
Sanicula europaea L.
Smyrnium perfoliatum L.
Tordylium apulum L.
Tordylium maximum L.
Torilis japonica (Houtt.) DC.
Trinia glauca (L.) Dumort.
Trinia ramosissima (Fischer ex Trev.) Koch

Celastraceae

Evonymus europaeus L.
Evonymus verrucosus Scop.

Rhamnaceae

Frangula dodonei Ard.

Rhamnus saxatilis Jacq.

Salntalaceae

Thesium arvense Horvátovszky
Thesium bavarum Schrank
Thesium divaricatum Jan. ex Mert. & Koch
Thesium linophyllon L.

Asclepiadaceae

Vincetoxicum hirundinaria Medicus

Gentianaceae

Centaurium erythraea Rafin.
Gentiana asclepiadea L.
Gentiana cruciata L.
Gentiana lutea L.
Gentiana pneumonanthe L.
Gentiana utriculosa L.

Oleaceae

Fraxinus ornus L.

Rubiaceae

Asperula cynanchica L.
Asperula hungarorum Borbás
Asperula purpurea (L.) Ehrend. *subsp. apiculata* (Sibth. & Sm.) Ehrend.
Asperula purpurea (L.) Ehrend. subsp. *purpurea*
Crucianella angustifolia L.
Cruciata laevipes Opiz
Cruciata laevipes Opiz
Cruciata pedemontana (Bellardii) Ehrend.
Galium album Miller
Galium aparine L.
Galium mollugo L.
Galium odoratum (L.) Scop.
Galium rivale (Sibth. & Sm.) Griseb.
Galium rubrum L.
Galium sylvaticum L.
Galium verum L.
Rubia tinctorum L.

Caprifoliaceae

Lonicera caprifolium L.
Sambucus ebulus L.
Sambucus nigra L.

Valerianaceae

Valeriana officinalis L.

Dipsacaceae

Cephalaria laevigata (Waldst. & Kit.) Schrader
Cephalaria leucantha (L.) Roemer & Schultes
Knautia dinarica (Murb.) Borbás
Knautia dipsacifolia Kreutzer subsp. *lancifolia* (Heuffel) Ehrend.
Knautia drymeia Heuffel
Scabiosa argentea L.
Scabiosa columbaria L.
Scabiosa fumarioides Vis. & Pančić
Scabiosa ochroleuca L.
Succisa pratensis Moench

Convolvulaceae

Convolvulus arvensis L.
Convolvulus cantabricus L.
Cuscuta epithymum (L.) L.

Boraginaceae

Anchusa officinalis L.
Cerinthe minor L.
Echium vulgare L.
Halacsya sendtneri (Boiss.) Dörfler
Lithospermum purpureocaeruleum L.
Myosotis arvensis (L.) Hill
Myosotis nemorosa Besser
Myosotis scorpioides L.
Myosotis sparsiflora Mikan ex Pohl
Myosotis sylvatica Hoffm.
Onosma echioides L.
Pulmonaria officinalis L.
Symphytum tuberosum L.

Solanaceae

Atropa bella-donna L.
Physalis alkekengi L.
Solanum nigrum L.

Scrophulariaceae

Chaenorhinum minus (L.) Lange
Digitalis ferruginea L.
Digitalis grandiflora Miller
Digitalis laevigata Waldst. & Kit.
Digitalis lanata Ehrh.
Euphrasia picta subsp. *kerneri* (Wettst). Yeo
Euphrasia stricta D. Wolff ex J. F. Lehm.
Euphrasia tatarica Fischer ex Sprengel
Kickxia elatine(L.) Dumort.
Linaria genistifolia (L.) Miller
Linaria genistifolia (L.) Miller subsp. *sofiana (Velen.) Chater & D. A. Webb*
Linaria rubioides Vis. & Pančić
Linaria vulgaris Miller
Melampyrum arvense L.
Melampyrum bihariense A. Kerner
Melampyrum cristatum L.
Melampyrum fimbriatum Vandas
Melampyrum heracleoticum Boiss. & Orph.
Melampyrum hoermannianum K. Malý
Melampyrum nemorosum L.
Melampyrum pratense L.
Melampyrum scardicum Wettst.

Odontites luteus (L.) Clairv.
Odontites vernus (Bellardi) Dumort.
Pedicularis comosa L.
Rhinanthus angustifolius C. C. Gmelin
Scrophularia canina L.
Scrophularia nodosa L.
Scrophularia scopolii Hoppe ex Pers.
Scrophularia tristis (K. Malý) Šilić
Verbascum banaticum Schrader
Verbascum lychnitis L.
Verbascum phlomoides L.
Verbascum thapsus L.
Veronica anagalloides Guss.
Veronica austriaca L.
Veronica beccabunga L.
Veronica chamaedrys L.
Veronica cymbalaria Bodard.
Veronica incana L.
Veronica jacquinii Baumg.
Veronica officinalis L.
Veronica spicata L.

Orobanchaceae

Orobanche nowackiana Markgraf
Orobanche reticulata Wallr.

Acanthaceae

Acanthus hungaricus (Borbás) Baenitz

Plantaginaceae

Plantago altissima L.
Plantago argentea Chaix subsp. *liburnica* V. Ravnik
Plantago holosteum Scop. subsp. *holosteum*
Plantago media L.

Verbenaceae

Verbena officinalis L.

Lamiaceae

Acinos alpinus (L.) Moench subsp. *albanicus* (Kümmerle & Jáv.) Niketić
Acinos arvensis (Lam.) Dandy
Acinos hungaricus (Simonkai) Šilić
Ajuga genevensis L.
Ajuga laxmannii (L.) Bentham
Ballota nigra L.
Calamintha officinalis Moench
Clinopodium menthifolium Merino
Clinopodium thymifolium (Scop.) Kuntze
Clinopodium vulgare L.
Galeopsis speciosa Miller
Glechoma hirsuta Waldst. & Kit.
Lamium galeobdolon (L.) L.
Lamium garganicum L.
Lamium maculatum L.
Lamium purpureum L.
Leonurus cardiaca L.
Lycopus europaeus L.
Melittis melissophyllum L. subsp. *albida* (Guss.) P. W. Ball
Mentha × *piperita* L.
Mentha aquatica L
Mentha longifolia (L.) Hudson
Nepeta cataria L.
Origanum vulgare L.
Prunella laciniata (L.) L.
Prunella vulgaris L.
Salvia glutinosa L.
Salvia nemorosa L.
Salvia sclarea L.
Salvia verticillata L.
Scutellaria altissima L.
Scutellaria columnae All.
Scutellaria galericulata L.
Sideritis montana L.
Stachys alpina L.
Stachys alpina L. subsp. *dinarica* Murb.
Stachys cretica L. subsp. *cassia* (Boiss.) Rech. Fil.
Stachys officinalis (L.) Trevisan
Stachys recta L.
Stachys recta L. subsp. *baldaccii* (K. Malý) Haye
Stachys recta L.
Stachys scardica (Griseb.) Hayek
Teucrium chamaedrys L.
Teucrium montanum L.
Thymus glabrescens Willd.
Thymus lykae Degen
Thymus praecox Opiz subsp. *jankae* (Čelak.) Jalas
Thymus pulegioides L.
Ziziphora capitata L.

Campanulaceae

Asyneuma anthericoides (Janka) Bornm.
Asyneuma limonifolium (L.) Janchen
Campanula bononiensis L.
Campanula cervicaria L.
Campanula glomerata L.
Campanula grossekii Heuffel
Campanula lingulata Waldst. & Kit.
Campanula moesiaca Velen.
Campanula patula L.
Campanula persicifolia L.
Campanula rapunculoides L.
Campanula rapunculus L.
Campanula sparsa Friv.
Campanula sparsa Friv. subsp. *sphaerothrix* (Griseb.) Hayek
Campanula trachelium L.
Legousia speculum-veneris (L.) Chaix
Phyteuma orbiculare L.

Asteraceae

Achillea crithmifolia Waldst. & Kit.
Achillea distans Waldst. & Kit. ex Willd.
Achillea grandifolia Friv.
Achillea millefolium L.
Anthemis arvensis L.
Anthemis ruthenica Bieb.
Arctium lappa L.
Artemisia alba Turra
*Artemisia vulgaris*L.
Aster alpinus L.
Aster amellus L.
Bidens cernua L.
Bidens tripartita L.
Bombycilaena erecta (L.) Smolj.
Carduus candicans Waldst. & Kit.
Carduus personata (L.) Jacq.
Carlina vulgaris L.
Centaurea jacea L.
Centaurea jacea L. subsp. *angustifolia* (DC.) Gremli
Centaurea phrygia L.
Centaurea phrygia L. subsp. *stenolepis* A. Kerner
Centaurea scabiosa L.
Centaurea stoebe L. subsp. *australis* (A. Kerner) Greuter
Centaurea stoebe L. subsp. *stoebe*
Cichorium intybus L. subsp. *intybus*
Cirsium arvense (L.) Scop.
Cirsium eriophorum (L.) Scop.
Cirsium grecescui Rouy
Cirsium vulgare (Savi) Ten.
Cota austriaca (Jacq.) Schultz-Bip.
Cota tinctoria (L.) J. Gay
Crepis biennis L.
Crepis foetida L. subsp. *rhoeadifolia*
Crepis pulchra L.
Crepis sancta (L.) Bornm.
Crepis setosa Haller fil.
Crepis vesicaria L. subsp. *taraxacifolia* (Thuill.) Thell.
Crupina vulgaris Cass.
Cyanus triumfettii (All.) Á. Löve & D. Löve
Doronicum columnae Ten.
Echinops exaltatus Schrader
Echinops ritro L. subsp. *ruthenicus* (Bieb.) Nyman
Erigeron acris L. subsp. *acris*
Erigeron annuus (L.) Desf.
Erigeron canadensis L.
Eupatorium cannabinum L.
Filago arvensis L.
Filago minima (Sm.) Pers.
Galatella albanica Degen
Galatella linosyris (L.) Bernh.
Gnaphalium sylvaticum L.
Gnaphalium uliginosum L.
Hieracium bifidum Hornem.
Hieracium murorum L.
Hieracium racemosum Willd.
Hieracium sabaudum L.
Hieracium tommasinianum K. Malý
Hypochaeris illyrica K. Malý
Hypochaeris maculata L.
Hypochaeris radicata L.
Inula britannica L.
Inula conyzae DC.
Inula ensifolia L.
Inula hirta L.
Inula oculus-christi L.
Inula salicina L.
Jurinea mollis (L.) Reichenb.
Lactuca muralis (L.) Gaertner
Lactuca saligna L.
Lactuca viminea (L.) J. Presl & C. Presl
Lapsana communis L.
Leontodon biscutellifolius DC.
Leontodon crispus Vill.
Leontodon hispidus L.
Leucanthemum vulgare Lam.
Picris hieracioides L.
Pilosella bauhinii (Schultes) Arv.-Touv.
Pilosella sabina (Sebastiani & Mauri) F. W. Schultz & Schultz Bip. fratt.
Pilosella cymosa (L.) F. W. Schultz & Schultz Bip. fratt.
Pilosella hoppeana (Schultes) F. W. Schultz & Schultz Bip. fratt.
Pilosella officinarum F. W. Schultz & Schultz Bip. fratt.
Podospermum canum C. A. Meyer
Podospermum laciniatum (L.) DC.
Prenanthes purpurea L.
Pulicaria dysenterica (L.) Bernh.
Reichardia dichotoma (DC.) Freyn
Scorzonera austriaca Willd.
Scorzonera hispanica L.
Senecio leucanthemifolius Poiret subsp. *vernalis* (Waldst. & Kit.) Greuter
Senecio squalidus L. subsp. *squalidus*
Senecio squalidus L. subsp. *rupestris* (Waldst. & Kit.) Greuter ined.
Senecio vulgaris L.
Serratula tinctoria L.
Solidago virgaurea L.
Tanacetum corymbosum (L.) Schultz Bip.
Tanacetum macrophyllum (Waldst. & Kit.) Schultz-Bip.
Tanacetum parthenium (L.) Schultz-Bip.
Taraxacum officinale Weber
Tephroseris crassifolia (Schultes) Griseb. & Schenk

Tephroseris papposa (Reichenb.) Schur
Tragopogon dubius Scop.
Tragopogon pterodes Pančić ex Petrović
Tripleurospermum inodorum (L.) Schultz-Bip.
Tripleurospermum tenuifolium (Kit.) Freyn
Xeranthemum annuum L.

LILIOPSIDA

Liliaceae

Anthericum liliago L.
Anthericum ramosum L.
Colchicum autumnale L.
Convallaria majalis L.
Lilium martagon L.
Ornithogalum gussonei Ten.
Paris quadrifolia L.
Polygonatum multiflorum (L.) All.
Polygonatum odoratum (Miller) Druce
Allium carinatum L. subsp. pulchellum Bonnier & Layens
Allium flavum L.
Allium moschatum L.
Allium paniculatum L.
Allium scorodoprasum L.
Allium senescens L. subsp. *montanum* (F. W. Schmidt) Holub
Allium sphaerocephalon L.
Tulipa scardica Bornm.
Tulipa serbica Tatić & Krivošej

Iridaceae

Iris graminea L.

Dioscoreaceae

Tamus communis L.

Orchidaceae

Cephalanthera damasonium (Miller) Druce
Cephalanthera longifolia (L.) Fritsch
Epipactis helleborine (L.) Crantz
Epipactis microphylla (Ehrh.) Swartz
Gymnadenia conopsea (L.) R. Br.
Gymnadenia odoratissima (L.) L. C. M. Richard
Neottia nidus-avis (L.) L. C. M. Richard
Orchis ustulata L.
Platanthera bifolia (L.) L. C. M. Richard

Juncaceae

Juncus articulatus L.
Juncus atratus Krocker
Juncus bufonius L.
Juncus conglomeratus L.
Juncus effusus L.
Juncus inflexus L.
Juncus thomasii Ten.
Luzula campestris (L.) DC.
Luzula luzuloides (Lam.) Dandy & Wilmott
Luzula pilosa (L.) Willd.
Luzula sylvatica (Hudson) Gaudin

Cyperaceae

Carex digitata L.
Carex distans L.
Carex divisa Hudson
Carex divulsa Stokes
Carex echinata Murray
Carex hirta L.
Carex ovalis Good.
Carex pairae F. W. Schultz
Carex pallescens L.
Carex spicata Hudson
Carex vulpina L.
Cyperus fuscus L.
Eleocharis palustris (L.) Roemer & Schultes
Scirpus sylvaticus L.

Poaceae

Achnatherum calamagrostis (L.) Beauv.
Agropyron cristatum (L.) Gaertner
Agrostis capillaris L.
Alopecurus pratensis L.
Apera spica-venti (L.) Beauv.
Bothriochloa ischaemum (L.) Keng
Brachypodium pinnatum (L.) Beauv.
Brachypodium sylvaticum (Hudson) Beauv.
Bromus commutatus Schrader
Bromus hordeaceus L.
Bromus pannonicus Kummer & Sendtner
Bromus ramosus Hudson
Bromus riparius Rehmann
Bromus squarrosus L.
Bromus sterilis L.
Calamagrostis epigejos (L.) Roth
Chrysopogon gryllus (L.) Trin.
Cynosurus cristatus L.
Cynosurus echinatus L.
Dactylis glomerata L.
Danthonia alpina Vest.
Dasypyrum villosum (L.) P. Candargy
Elymus repens (L.) Gould
Festuca pratensis Hudson
Festuca valesiaca Schleicher ex Gaudin
Festuca valesiaca Schleicher ex Gaudin subsp. *parviflora (Hack.) Tracey*
Glyceria notata Chevall.
Holcus lanatus L.
Koeleria glauca (Schrader) DC.
Lolium perenne L.
Melica ciliata L.
Melica uniflora Retz.

Molinia arundinacea Schrank
Phleum bertolonii DC.
Phleum montanum C. Koch
Phleum phleoides (L.) Karsten
Phleum pratense L.
Piptatherum virescens (Trin.) Boiss.
Poa badensis Haenke ex Willd.
Poa bulbosa L.
Poa bulbosa L. subsp. *pseudoconcinna* (Schur) Domin
Poa compressa L.
Poa nemoralis L.
Poa pratensis L.
Setaria viridis (L.) Beauv.
Stipa pennata L.
Stipa pulcherrima C. Koch
Trisetum flavescens (L.) Beauv.

Araceae

Arum maculatum L.

Taxonomic diversity

Flora of investigated area contains even 24.30% of the plant species recorded for the territory of Serbia. Significant quantitative indicator of floristic richness and taxonomic diversity is generic coefficient (42.51%). This value indicates a relatively low diversity of habitats on one hand, and relatively low level of autochthonous florogenesis tendency on the other hand. This phenomenon is a consequence of a pretty uniform geological structure and relatively small size of the investigated area.

The most abundant family of the investigated area is, as expected, the most abundant family of the Holarctic kingdom (in both species and genera), family Asteraceae. At the investigated area, 106 species from 47 genera were recorded, which represents 13.33% of the total flora. Beside the Asteraceae family, the most numerous families considering the number of the species were *Fabaceae* (75), *Caryophyllaceae* (59), *Lamiaceae* (49), *Poaceae* (48) and *Scrophulariaceae* (44), together with *Apiaceae* (39), *Rosaceae* (36) and *Brassicaceae* (33)**.** Regarding the number of genera, the most numerous was, once again, family *Asteraceae*, followed by *Poaceae* (28), *Apiaceae* (26), *Lamiaceae* (22), *Caryophyllaceae* (29), *Fabaceae* (17) and *Rosaceae* (17).

Floristic spectrum of the Rogozna Mt. deviates somewhat from the spectra of Serbia and Balkan peninsula (Tab.1). The increased presence of the boreal and arctic families *Rosaceae* and *Poaceae* indicates a significant impact of these two horions on the Rogozna Mt. flora genesis. The presence of the families characteristic for mediterannean-submediterannean region (Fabaceae, Caryophyllaceae) is increased. This can be explained by the geographical position of investigated area, floristic and florogenetic mediterranean impacts and the relatively low average elevation of the Rogozna Mt. The flora of Rogozna Mt. is differentiated from the flora of Serbia by centraleuropean and temperate-boreal elements owing to reduced percentage of the families *Brassicace* and *Poaceae* **(Fig.2)**.

Table 1. Comparative review of taxonomical structure of the most abundant families of Rogozna Mt., Serbia (Stevanović et al., 1995) and the Balkan Peninsula (Turill, 1929)

	Rogozna Mt.		Serbia		Balkan peninsula	
Family	**N**	**%**	**N**	**%**	**N**	**%**
Asteraceae	106	13.33	366	11.19	913	13.52
Fabaceae	75	9.43	250	7.64	545	8.07
Caryophyllaceae	59	7.42	205	6.27	418	6.19
Lamiaceae	49	6.16	148	4.52	371	5.49
Poaceae	48	6.04	250	7.64	358	5.30
Scrophulariaceae	44	5.53	161	4.92	311	4.65
Apiaceae	39	4.91	142	4.34	334	4.95
Rosaceae	36	4.53	111	3.39	188	2.78
Brassicaceae	33	4.15	194	5.93	344	5.09
Rubiaceae	18	2.26	49	1.50	129	1.91

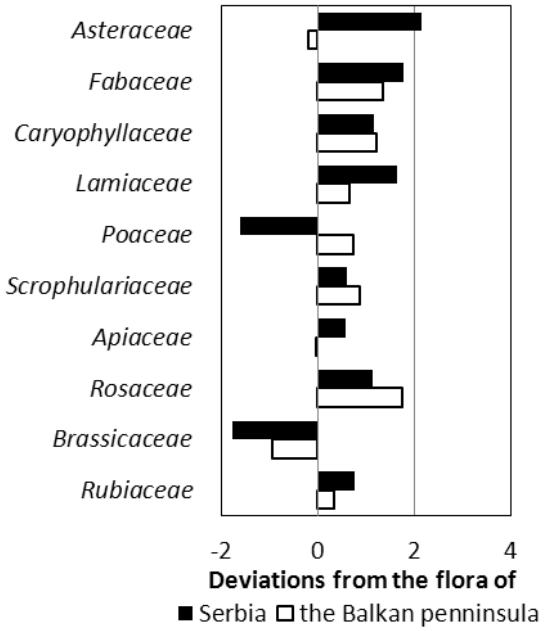

Figure 2. Percentage deviation of the most abundant families in the flora of Rogozna Mt. from the families spectra of Serbia and the Balkan Peninsula.

Taxonomical spectrum of the Rogozna Mt. flora was compared with spectra of neighboring Kosovo's part of Ibar river valley (Prodanović, 2007) and the high mountain flora of Kopaonik (Lakušić, 1993). Altitudinal range of the Ibar river valley investigation area was 500-900 m and of the Rogozna Mt. was 800-1473, where similarity reflected in almost identical schedule of the 9 most abundant families is obvious (**Fig. 3**). Just like on Rogozna Mt., mediterranean impacts are more pronounced in Ibar river valley in contrast to the high mountain area of Kopaonik. On Kopaonik, the second place in taxonomical spectrum belongs to the family of arctic and boreal regions, *Poaceae* (9.34%) (Lakušić, 1993), which is another proof of weaker mediteranian impact.

Investigation of the taxonomical spectrum showed that *Trifolium* genera is the most abundant with 21 species (2.71%), followed by *Campanula* with 13 species, *Dianthus* and *Silene* with 12 species, *Carex*, *Euphorbia*, *Potentilla*, *Vicia* with 11 species, *Melampyrum* with 10 species, *Geranium*, *Lathyrus* and *Veronica* with 9 species **(Tab. 2).** The dominance of the genera *Trifolium* is probably caused by the increased presence of xerothermic meadows and pastures. *Hieracium*, the most abundant genera on the Balkan peninsula, is even on the 33rd place in the Rogozna Mt. taxonomical spectrum, which can only be explained by insufficient taxonomical research of this genera (Jaccard, 1912).

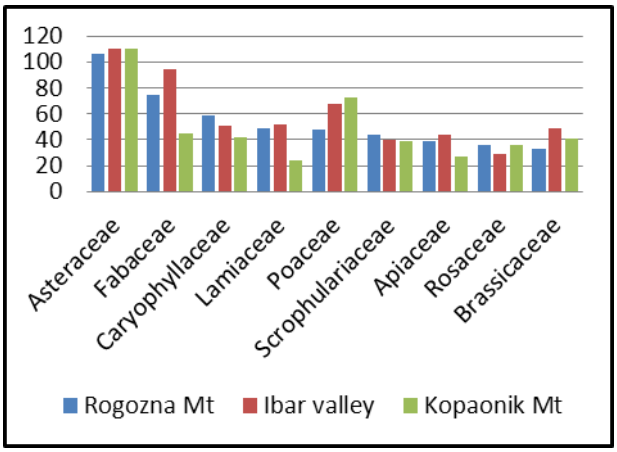

Figure 3. Overview of the most abundant families on the Rogozna Mt. and neighboring regions

Table 2. Taxonomic structure of the most abundant genera in the flora of Rogozna Mt.

Genera	Species N°	%
Trifolium	21	2.71
Campanula	13	1.68
Dianthus	12	1.55
Silene	12	1.55
Carex	11	1.42
Euphorbia	11	1.42
Potentilla	11	1.42
Vicia	11	1.42
Melampyrum	10	1.29
Geranium	9	1.16
Lathyrus	9	1.16
Veronica	9	1.16
Centaurea	8	1.03
Epilobium	8	1.03
Galium	8	1.03
Ranunculus	8	1.03
Stachys	8	1.03

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