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**RESEARCH ARTICLE****ALPINE AND SUBALPINE FLORA OF SHARR MOUNTAIN - (MACEDONIAN PART).**

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Abstract

In this scientific work will be presented partial data of four year scientific researcher work (2013, 2014, 2015, 2016), a phase which coincides with different phases of vegetation. This study has been done for the first time, especially about the Flora of Sharr Mountain. The study is concentrated in 20 station in the Sharr Mountain. The accumulation of the scientific material was conducted from early spring until late autumn, by preparing herbarium, accompanied by data for site-collection, date, biotope etc. During this study a rich material has been collected, of about 640 copies. From the previous floristic analysis so far, it results that the Flora of the Sharr Mountain is rich in types. The selected material consists of 58 families, 167 genders and 388 species.

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Introduction:-

The subalpine zone in Sharr Mountain - stretching from 1700 - 2100 m (rare 2200 m.) above sea level. There we can find pine forests or molika (*Pinus peuce*) a spruce (*Pinus abies*) and pines (*Pinus mugo*) and communities of *Bruckenthalia spiculifolia*, *Vaccinium myrtilus*, etc.

Sub alpine and alpine communities - stretching above the upper forest belt from 1600-2770 m., where climatic conditions are harsh (long winters, short summers and short vegetation period). Here are developed different communities in quite heterogeneous substrate (acidic soil, limestone substrate, mountain brooks, rocky substrate, etc.).

In Sharr Mountain are developed other types of vegetation community, such as the clearing of forest communities, ruderal communities, violated surfaces communities, communities of shrubs, etc.

Sharr Mountain is one of the most important Balkan and European centers and of most qualitative endemism including relicts, endemo and endemic relicts and types. In the Sharr Mountain there are around 200 taconic, endemic and sub-endemic plants, (species, sub-species and varieties), steno-endemic orofits (mountain species). These species are of tertian age and rarely from glacial. Such species require special care: *Silene schmuckeri*, *Dianthus scardicus*, *Bornmullera dieckii*, *Draba korabensis*, *Sedum flexuosum*, *Potentilla doerfleri*, *Crocus scardicus* and *Oxytropis korabensis*.

Tertian orofits (mountainous species of tertian age). Most of them are steno-endemic and sub-endemic species: *Pinus peuce*, *Pinus heldreichii*, *Silene Waldsteinii*, *Silene lerchenfeldiana*, *Silene asterias*, *Ptilotrichum rupestre*,

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2238

Shieverectia doerfleri, *Iberis sempervirens*, *Hesperis Dinarica*, *Saxifraga Androsaceae*, *Saxifraga glabella*, *Potentilla montenegrina*, *Anthyllus aurea*, *Acer heldreichii*, *Rhamnus pumilla*, *Viola Grisebachiana*, *Heacleum orphanidis*, *Soldanella dimonieii*, *Veronica satuireioides*, *Tozzia alpia*, *Ramonda serbica* and *Ramonda nathaliae*, *Nerthecium scardicum*, *Lilium albanicum*, *Gymnadenia frywaldsiana*, *Rhododendron ferrugineum* and *Linaria alpina*.

Glacial species with arctic alpine spreading (forms from the ice age). They are very rare in the Balkan Peninsula: *Selaginella Selaginoides*, *Diphysium alpinum*, *Cryptogramma crista*, *Salix herbaceae*, *Salix reticulata*, *Rumex nivalis*, *Silene rupestris*, *Rhodiola rosea*, *Saxifraga bryoides*, *Saxifraga androsaceae*, *Geum reptans*, *Epilobium anagallidifolium*, *Loiseleuria procumbens*, *Veronica alpina*, *Veronica aphylla*, *Pedicularis oederi*, *Erigeron uniflorus*, *Saussurea alpina*, *Carex foetida* [1].

Material and methods:-

Geographical position of Sharr Mountain:-

The geographical position of the massif of Shara is suitable and represents a sample of a mountain massif with clear morphoplastic differentiation. This mountain massif lies in the northwestern part of the Republic of Macedonia and is part of Polog region, ie it constitutes the western part [map. no. 1].



Location of the Sharr Mountain in R. Macedonian [Map no. 1].

The main elements of its geographical position are as follows: it is part of the Sharron-Pind mountain system, respectively it belongs to Dinarids; It is exposed to climatic influences of the Adriatic Sea and the Aegean Sea; located in the central part of the Balkan Peninsula.

The Sharr Mountain represents the largest mountain massif in Macedonia and lies in the geographical coordinates: between 42°41'43" and 42°16'34" geographical north latitude and between 20°34'51" and 21°16'00".

Unlike other mountains of the Balkan Peninsula that are stretched in northwest-southeast, Sharr has massive stretch in northeast-southwest. This mountain massif lies in the length of 80 km and a width of 10-20 km [2].

Geological aspects of the researched region

From the geological aspect (Менковић, 1978), in the creation of the mountains of the Sharr region, are schist rocks, but there is also limestone and magmatic rocks.

The magmatic rocks in the Sharr Mountain contain chrome, while in Bistra it contains iron. From non-metals there is a big surface of gypsum and qualitative marble surfaces near the town of Gostivar.

From the geological content aspect, dominate the Paleozoic plates mainly with a big quantity of lime and dolomite. The Bistra Mountain from the geological aspect consists of old Paleozoic rocks, with glacial relief as well, especially the circles [3].

Climate conditions:-

According to the geographic position (Rodić, 1987), the Republic of Macedonia is located in the Southern Europe with a meridian 41 and 42 passing through it in the northern geographic width, which means that it is closer to the Ecuador than Northern Pole. The geographic width affects directly in the intensity and extension of solar radiation

and this is lowered from south to north. The solar radiation extension and intensity is affected by the nearness sea as well.

From this point of view, the territory of the Republic of Macedonia even though it doesn't have direct cruise in the sea, is under the influence of side seas, because from the Aegean Sea in the south it is about 60 km far away (airline), and from the Adriatic Sea in west around 80 km. Generally it has Mediterranean mild climate. However, the influence of the Mediterranean climate does not enter in its depth, due to the high mountains in the west and south.

From the West there can be seen the influence of the Atlantic Ocean, although it is located very far. From there western winds blow bringing lots of air humidity during the whole year, and during the spring and autumn months, they bring rain. In the researched area, according to Lazarevski (Lazarevski, 2002) there are three main climate types:

Mountainous climate it is characteristic for mountains above 1000 m altitude. It has long and cold winters with snow and short and chilly summers. Here, the spring is colder than autumn. This climate is more present than the others, because the majority of the researched part of the region has high mountain terrains [4].

Table no. 1. Expedition realized

No.	Date	Location
1.	26. 05. 2013	Upper Palcist
2.	16. 06. 2013	Lisec
3.	26. 05., 02. 06., 07. 07., 04. 08. 2013	Selca's baths
4.	06. 10. 2013	Kodra e Diellit (Popova Sapka).
5.	24. 05. 2013	Lajthiza (Leshnica)
6.	01. 10. 2013	Maja e Diellit (Titov Vrv)
7.	02. 09. 2014	Rogaçeva
8.	10. 10. 2014	Luboten
9.	11. 11. 2014	Veshalla
10.	25. 05. 2015	Gajre
11.	24. 05. 2015	Maja e Diellit (Titov Vrv)
12.	06. 06. 2015	Teqe e Shipkovicës
13.	07. 06. 2015	Jellovjan
14.	23. 06. 2015	Jellak, Cerepashin
15.	27. 06. 2015	Jellovjan- Mazraça- liqeni i Rakovecit
16.	09. 07. 2015	v. Brest, three waters above village Tearce.
17.	1. 8. 2015	mountain above the village Bozofc.
18.	9. 08. 2015	Lakavica village, Serrnova (Gostivar). Altitude 780 m.
19.	30. 08. 2015	Maja e Diellit (Titov Vrv)
20.	12. 09. 2015	v. Varvara
21.	24. 05. 2016	Bogovina's lacke
22.	04. 06. 2016	Black lake
23.	22. 06. 2016	Kodra e diellit, Maja e diellit (Popova Sapka, Titov vrv)
24.	22. 06. 2016	Kodra e diellit, Maja e diellit (Popova sapka, Titov vrv)
25.	10. 07. 2016	Xhinibeg

Results of the study:-

In publications of domestic and foreign authors the number of taxa described in Flora of Shara reaches at 590 taxa while in this scientific research the total number of plant species reaches up to 650, of which 381 taxa are found in the alpine and subalpine zone. Species of the family Compositae and class Monocotiledona that are in flora of Sharr Mountain are not addressed by domestic and foreign researchers and so during this scientific research total number of species in flora Sharr Mountain reaches up to 650. These data provide evidence for a rich flora of the massif of Sarr.

By analyzing and comparing our current material with what is known to date for Sharr Mountain is observed pronounced similarity and large number of endemic plants.

The family of plants with larger number of taxa in the flora of Sharr Mountain is: Ranunculaceae, Caryophyllaceae, Cruciferae, Rosaceae, Leguminosae, Umbelliferae.

During the scientific research within the flora of Sharr Mountain were found about 20 plant species which belongs to monocotyledonae (seeds contain only one embryonic leaf, or cotyledon) and the material collected so far in Flora of Sharr Mountain noted significant number of monocotyledon plants, which belongs to 8 families, 16 genders. A significant number of monocotyledon species, are important for further studies in the Sharr Mountain vegetation.

Tax treated hierarchy:-

The following is a summarized ranking taxonomic [species of subalpine zone 1700- 2100 m rarely 2,200 m. and alpine zone of-2770 m.] which is followed in this study, and which is based on the nomenclature of Hill et al. (2006). Next to each species it is given the type of substrate and the altitude at which certain species is collected [6,7,8,9].

1. Lycopodiaceae

1. Huperzia Bernh. 1. *Huperzia Selago* (L.); 2. *Diphasium* C. Presl. 2. *Diphasium alpinum* L. [Silicate substrate, Sharr Mountain].

2. Ophyoglossaceae

3. *Botrychium* L. Swartz. 3. *Botrychium lunaria* [Mountain meadows and pastures. 1000-2650 m.].

3. Cryptogrammeae

4. *Cryptogramma* R.Br. Sh 4. *Cryptogramma crispa* L. [Stony silicate for 1800-2400 m.].

4. Aspleniaceae

5. *Asplenium* L. 5. *Asplenium viride*. [Silicate rocks crevices. 1500-2600 m.]; 6. *Asplenium ruta-muraria* [Limestone rock's crevices. 2300 m.].

5. Athyriaceae

6. *Athyrium* Roth. 7. *Athyrium filix-femina*. [Wet alpes, area alpes 2200 m.].

6. Pinaceae

7. *Abies*. Miller. 8. *Abies borisi-regis*. [1000-1800 m.].

8. *Picea*. A. Dietr. 9. *Picea abies* [Vraca. 1400-2100 m.].

9. *Pinus* L. 10. *Pinus nigra* [100-1800 m.]. 11. *Pinus sylvestris* [1000-1800 m.]. 12. *Pinus peuce* Grisebach [Usually grows on silicate, but can be seen on limestone too; serpentine 1400-2200 m.].

7. Cupressaceae

10. *Juniperus* L. 13. *Juniperus communis* [Meadows, scrubs and forest]; 14. *Juniperus nana* [area Alps 1600-1900 m.].

8. Taxaceae

11. *Taxus* L. 15. *Taxus bacata* [fores with fagus and abies].

9. Ranunculaceae

12. *Trollius* L. 16. *Trollius europaeus* L. [pastures and meadows in wet area alpes].

13. *Actaea* L. 17. *Actaea spicata* [forest with fagus].

14. *Caltha* L. 18. *Caltha palustris* [wet meadows; wetlands; along streams].

15. *Aconitum* L. 19. *Aconitum lamarckivar.* Macedonicum [alpine pastures].

16. *Anemone* L. 20. *Anemone nemorosa* [Mainly in deciduous forests and near streams]. 21. *Anemone narcissiflora* [Alpine pastures].

17. *Clematis* L. 22. *Clematis vitalba* [grows in riparian forests, along water flows, mainly in the range from lowlands to foothills].

18. *Ranunculus* L. 23. *Ranunculus repens* [wet meadows, wetlands, along streams]; 24. *Ranunculus acris* L. [wet places in forests]; 25. *Ranunculus serbicus* Vis. [Wet meadows, wetlands, along streams]; 26. *Ranunculus illyricus* [Në zonën e pyjeve me ah në vende të thata dhe kullosa]. 27. *Ranunculus degeni* [Wet meadows, wetlands, along streams]; 28. *Ranunculus crenatus* Waldst. [Wet meadows and stony]; 29. *Ranunculus platanifolius* L. [Wet meadows, wetlands, along streams, in the of beach, fir-beach]; 30. *Ranunculus montenegrinus* (Hal.) Lindt. [Maja e Diellit 2450 m. (Titov Vrv)].

19. *Thalictrum* L. 31. *Thalictrum alpinum* L. [alpine pastures].

10. Fumariaceae

20. *Corydalis* Vent 32. *Corydalis solida* [alpine pastures 1700-2700 m.].

11. Urticaceae

21. *Urtica* L. 33. *Urtica dioica* [Near the house, woods. 2000m. highest. 34. *Urtica parietaria* 2000 m. highest).

12. Fagaceae

22. *Fagus* L. 35. *Fagus sylvatica* [to 800-2000 m. highest].

13. Betullaceae

23. *Betula* L. 36. *Betula pendula* [Street Lisec- Kodra e diellit (Popova Sapka) 300-1900m highest].

24. *Corylus* 37. *Corylus avellana* [in the scrub forests 1200-1700m.].

14. Caryophyllaceae

25. *Arenaria* L. 38. *Arenaria biflora* [alpine pastures. 1400-2400 m.].

26. *Minuartia* L. 39. *Minuartia setacea* Thuill. [Në gurishta gëlqerore, vende gurërore, nga ultësira deri 2000 m.];

40. *Minuartia recurve* [Në kullosa të zonës alpike dhe vende me gurërore. 1700-2750 m.].

27. *Stellaria* L. 41. *Stellaria nemorum* [Wet meadows, weatlands, along streams 800-2000 m.]; 42. *Stellaria alsine* [Wet meadows, weatlands, along streams 1200-2000 m.]; 43. *Stellaria graminea* [alpine pastures. 2200 m.].

28. *Cerastium* L. 44. *Cerastium lanatum* [Area alpine . From 1300-2650 m.].

29. *Moenchia* Ehrh. 45. *Moenchia mantica* L. [pastures from 1800 m.].

30. *Sagina* L. 46. *Sagina subulata* (Séartz). [alpine pastures and limestone screes from 1800 to 2300 m.]. 47. *Sagina procumbens* L. [wet areas to 2000 m.].

31. *Scleranthus* L. 48. *Scleranthus perennis* L. [Në gurishta, kullosa të zonës alpike, përreth rrugëve deri 1800 m.].

49. *Scleranthus annuus* L. [2000 m.].

32. *Paronychia* Miller 50. *Paronychia chionaea* [on limestone rocky, for 750-2500 m.]. 51. *Paronychia albanica* [limestone rocky. Luboten 2500 m.].

33. *Herniaria* L. 52. *Herniaria glabra* [pastures, to 2100m.].

34. *Spergularia* (Pers.) 53. *Spergularia rubra* [rocky and alpine pastures, to 2200 m.].

35. *Lychnis* L. 54. *Lychnis viscaria* [limestone rocky 2500 m.].

36. *Silene* L. 55. *Silene bupleroides* [pastures and rocky places, for 500-2500 m.]; 56. *Silene sendmeri* [pastures, for 1500-2500 m.]; 57. *Silene multicaulis* Guss. limestone rocky and rocky places, for 1300-2300 m.]; 58. *Silene waldsteini* Griseb. [Silicate rocky, pastures and rocky places, for 1700-2200 m.]; 59. *Silene ciliate* Pourret. [on limestone rocky and pastures, for 1000-2300 m.]; 60. *Silene acaulis* L. [on limestone rocky and pastures 2000-2700 m.]; 61. *Silene lerchenfeldiana* Baumg. [Silicate rocky crevices, for 800-2100 m.]; 62. *Silene heuffelii* Soo. Feddes Repert. [Pyje me ah, area alpine and subalpines].

37. *Drypis* L. 63. *Drypis spinosa* L. [on limestone rocky, for 1400-2500 m.].

38. *Saponaria* L. 64. *Saponaria bellidifolia* Sm. [on limestone rocky and pastures, for 500-2000 m].

39. *Dianthus* L. 65. *Dianthus scardicus* Wettst. [Endemic, Luboten, for 1900-2700 m.]; 66. *Dianthus minutiflorus* (Borbas) [1500-2500 m.]; 67. *Dianthus superbus* Ellak [endemic, 2000 m.]; 68. *Dianthus deltoids* L. [Luboten]; 69. *Dianthus degeni* Bald. [for 1300-2700 m]; 70. *Dianthus cruentus* Griseb., [900-2500 m]; 71. *Dianthus hyalolepis* Acht. Et Lindtner. [Kodra e diellit-Leshnica 1650 m.].

15. Polygonaceae

40. *Polygonum* L 72. *Polygonum arenastrum* [Tetovo to 1650 m.]; 73. *Polygonum bistorta* [Sharr Mountain 1600 m.]; 74. *Polygonum alpinum* [Sharr mountain-Vraca, area subalpine].

41. *Oxiria* Hill 75. *Oxiria digyna* [Sharr Mountain, Livadica].

42. *Rumex* L. 76. *Rumex acetosella* [Sharr Mountain]; 77. *Rumex scutatus* [Sharr Mountain 2000 m.]. 78. *Rumex nivalis* [2000-2650 m.]; 79. *Rumex arifolius* [deri 2000 m.]; 80. *Rumex alpinus* L. [1.500-2.450]; 81. *Rumex acetosa* [2200 m.].

16. Plumbaginaceae

43. *Armeria* Willd. 82. *Armeria canescens* [Cerepashina, Maja e Diellit (Titov vrv), Luboten, 1.500-2.500 m.]; 83. *Armeria rumelica* [deri 2.200 m.].

17. Hypericaceae

44. *Hypericum* L. 84. *Hypericum barbatum* [2100 m.]; 85. *Hypericum maculatum* [Popova Sapka (Popova Shapka), Cerepashina, 2200 m.]; 86. *Hypericum perforatum* [2000 m.].

18. Violaceae

45. *Viola* L. 87. *Viola odorata* [1.600 m.]; 88. *Viola reichenbachiana* Jordan ex Boreau [2.000 m.]; 89. *Viola grisebachiana* [2.500 m.]; 90. *Viola ivonis* [1.800-2.100 m.]; 91. *Viola chelmea* [Cerepashina, Maja e Diellit (Titov Vrv), Luboten, 2100-2500 m.]; 92. *Viola schariensis* [1700- 2400 m.]; 93. *Viola elegantula* [1200-2000 m.]; 94. *Viola latiseptala* [1200-2400 m.]; 95. *Viola macedonica* [800-2000 m.]; 96. *Viola orphanidis* Boiss. [1.300- 2000 m.]; 97. *Viola gracilis* Sibth [1.300-2.050 m.]; 98. *Viola kosanini* (Degen) Hayek. [700-2.100 m.].

19. Cistaceae

46. *Helianthemum* Miller. 99. *Helianthemum nummularium* [2.500 m.]; 100. *Helianthemum oelandicum* (L.); 101. *Helianthemum canum* (L.) [area alpine].

20. **Cruciferae**

47. *Arabidopsis* (DC) Heynh 102. *Arabidopsis thaliana* [1700 m.].

48. *Erysimum* L. 103. *Erysimum comatum* [2100 m.]; 104. *Erysimum korabense* Kumm. [bimë e zonës alpike]; 105. *Erysimum kuemmerlei* [area alpinus].

49. *Malcolmia* R.Br. 106. *Malcolmia angulifolia* [2000 m.].

50. *Barbarea* R. 107. *Barbarea bracteosa* [1300-2000 m.]; 108. *Barbarea balcana* [1300-2000 m.].

51. *Roripa* Scop. 109. *Roripa pyrenaica* [Kodra e diellit (Popova Shapka) Cerepashina, Luboten 600-2.500 m.].

52. *Cardamine* L. 110. *Cardamine bulbifera* (L.) [Jellak, Leshnica]; 111. *Cardamine acris* Griseb.[Kodra e diellit (Popova Shapka), Cerepashin, Luboten 1200-2.650 m.]; 112. *Cardamine glauca* Sprengel[Kobilica 1000-2600 m.];

113. *Cardamine impatiens* (L.) [Leshnica, Luboten 5.50-1.700 m.]; 114. *Cardamine flexuosa* With. [River Luboten].

53. *Arabis* L. 115. *Arabis sagittata* (Bertol.) [to 2000m.]; 116. *Arabis allionii* [1500-2700 m.]; 117. *Arabis muralis* Bertol.[2100 m.]; 118. *Arabis turrata* L.[1.800 m.]; 119. *Arabis alpina* L.[2700 m.]; 120. *Arabis glabra* L.[200-2000 m.].

54. *Aubrieta* Adanson 121. *Aubrieta scardica* (Wettst.)[2.700 m.]; 122. *Aubrieta gracilis* Spruner ex Boiss. [Luboten, area alpine and subalp.].

55. *Lunaria* L. 122. *Lunaria rediviva* [2000 m.].

56. *Alyssum* L. 123. *Alyssum scardicum* [2000-2.764 m.].

57. *Ptilotrichum* C. A. Meyer 124. *Ptilotrichum rupestre* [Luboten, Kobilica].

58. *Draba* L. [1.500-2.700 m.]; 125. *Draba lasiocarpa* Rochel, Sched, Pl, Hung. [Luboten]; 126. *Draba laccaitae* Boiss., Fl. Or.[Cerepashina, 2.500 m.]; 127. *Draba doerfleri* Wettst. [Ripin alpike]; 128. *Draba muralis* L., Sp., Pl., [1.700 m.].

59. *Thlaspi* L. 129. *Thlaspi microphyllum* Boiss. [2.700 m.]; 130. *Thlaspi praecox* Wulfen in Jack. [2.700 m.]; 131. *Thlaspi bellidifolium* Grisch., [2.700 m.].

60. *Iberis* L. 132. *Iberis sempervirens* L., Sp., Pl. [1.000-2.300 m.].

21. **Salicaceae**

61. *Populus* L. 133. *Populus tremula* L. [2.000].

62. *Salix* L. 134. *Salix reticulata* L.[Vende me gurishta, on limestone rocky 2000-2300 m.]; 135. *Salix retusa* L., Syst., Nat. [Në shkëmbinj dhe plasaritje të shkëmbinjve. 1900-2500 m. Alpike]; 136. *Salix alpina* Scop. [1700-2700 m.]; 137. *Salix silesiaca* Wild., Sp., Pl. [Ellak, Leshnica, 1.650 m.]; 138. *Salix caprea* L., Sp., Pl.[2000 m.]; 139. *Salix waldsteiniana* Wild. Sp. Pl. [1700 m. Trip for Leshnica].

22. **Ericaceae**

63. *Bruckenthalia* Reichenb. 140. *Bruckenthalia spiculifolia* [Heats, alpine pastures, on silicate substrate or deep soil usually in subalpine belt].

64. *Rhododendron* L. 141. *Rhododendron ferrugineum* L., Sp. Pl. [Stony slopes near Livadica Lake 2200-2400m.].

65. *Arctostaphylos* Adanson. 142. *Arctostaphylos uva ursi* (L) Sprengel, Syst. [area subalpine mbi gurishta gëlqeror. 1650-2200 m.].

66. *Vaccinium* L. 143. *Vaccinium myrtillus*. L. Sp. Pl. [Heats, alpine pastures 1000-2200 m. Cosm.].

23. **Pyrolaceae**

67. *Pyrola* L. 144. *Pyrola minor* L. [1900 m.]. 145. *Pyrola media* Swartz, Kungl. Svenska Vet. [1900 m.].

68. *Moneses* Salisb. 146. *Moneses uniflora* (L.) A. Gray. Man. Bot. [1.400-2.000 m.].

24. **Monotropaceae**

69. *Monotropa* L. 147. *Monotropa hypopitys* L., Sp. Pl. [1000-2000 m.].

25. **Empetraceae**

70. *Empetrum* L. 148. *Empetrum nigrum* L., Sp. Pl. [area alpine and subalpine.].

26. **Primulaceae,**

71. *Primula* L. 149. *Primula elatior* (L.) Hill, Veg. Syst. [Sharr mountain 1.700-2.700 m.]; 150. *Primula veris* L. Sp. Pl. [2.400 m.]; 151. *Primula halleri* Gmelin, Onomat. Bot. Compl.[Sharr mountain 1.600-2.700 m.]; 152. *Primula minima* L., Sp. Pl.

72. *Androsaceae* L. 153. *Androsacea hedraeantha* Griseb., Spic. Fl. Rumel.[Nëpër barishte deri 2700 m.]. 154. *Androsaceae villosa* L. Sp. Pl.[1800-2700 m.];

73. *Soldanella* L. 155. *Soldanella pindicola* Hausskn., Mittel. Georg. Ges. Jena. [mbi 1.500 m.]; 156. *Soldanella macedonica* Meyer F. K. [mbi 1.700 m.].

27. **Tiliaceae**

74. *Tilia* L. 157. *Tilia platyphyllos* Scop., Fl. Carn. [Luboten, Leshnica, deri 1.650 m.].

28. **Malvaceae**

75. *Malva* L. 158. *Malva moschata* [deri 2000 m.]; 159. *Malva neglecta* [deri 2.200 m.].

29. **Euphorbiaceae**

76. *Euphorbia* L. 160. *Euphorbia stricta* L. [to 2.000 m. Cerepasina]; 161. *Euphorbia cyparissias* L., Sp. Pl. [to 2.200m.]; 162. *Euphorbia epithymoides* [Ellak, Leshnica].

30. **Thymelaceae**

77. *Daphne* L. 164. *Daphne mezereum* L. [1200.2300 m.]; 165. *Daphne oleoides* L., [1200-2000 m.].

31. **Rosaceae**

78. *Aruncus* Adans. 166. *Aruncus vulgaris* Rafin., Sylva Tellur. [for 1.000-1.700 m.].

79. *Rubus* L. 167. *Rubus idaeus* L., Sp. Pl. [1200-2000 m.].

80. *Rosa* L. 168. *Rosa canina* L. [Sharr Mountain]; 169. *Rosa glauca* Pourret. [1200-2000 m.]; 170. *Rosa pindulina* L., Sp., Pl. [1200-2000 m.]; 171. *Rosa dumalis* Sharr mountain; 172. *Rosa corymbifera* Borkh., Vers. Forstbot Beschr. Holzart.[Sharr mountain]; 173. *Rosa tomentosa* Sm., Fl. Brit.[300-2300 m.]; 174. *Rosa villosa* L. 1000-1.600 m.]; 175. *Rosa orientalis* Dupont ex Ser. In., DC., Prodr. [1.500-2000 m.];

81. *Sanguisorba* L. 176. *Sanguisorba officinalis* L. [1200-2500 m.]; 177. *Sanguisorba minor* L., Sp. Pl. [to 2000 m.].

82. *Dryas* L. 178. *Dryas octopetala* [1700-2500 m.].

83. *Geum* L. 179. *Geum reptans* [to 2750 m.]; 180. *Geum urbanum* [1600 m.]; 181. *Geum montanum* L. [to 2760 m.]; 182. *Geum rivale* L.[1500-2400 m.]; 183. *Geum coccineum* L. [1000-2300 m.].

84. *Potentilla* L. 184. *Potentilla argentea* L.[2000 m.]; 185. *Potentilla inclinata* Vill., Hist. Pl. Dauph. [to 2000 m.]; 186. *Potentilla astracanica* Jacq., Misc. Austr. Bot. [1.600 m.]; 187. *Potentilla pedata* Nestler, Monogr. Potent. [to 2.000 m.]; 188. *Potentilla obscura* Wild., Sp. Pl. Ed. [to 2200 m.]; 189. *Potentilla sulphurea* Lam., Fr. Ed. [1.800 m.]; 190. *Potentilla balcanica* Wolf Micevski [to 2.200 m.]; 191. *Potentilla aurea* L. [1.600-2.700 m.]; 192. *Potentilla speciose* Willd., Sp. Pl. [1400-2100 m.].

85. *Fragaria* L. 193. *Fragaria vesca* [to 2000 m.]; 194. *Fragaria moschata* L. [Sharr Mountain].

86. *Alchemilla* L. 195. *Alchemilla acutata* Buser, Algem. Bot. Zeit. [2.450 m.]; 196. *Alchemilla bulgarica* Rothm. Feddes Repet [2.370 m.]; 197. *Alchemilla flabellate* Buser, Not. Alchim [-2.500 m. Kobilica, Luboten]; 198. *Alchemilla glaucescens* Wallr., Linnaea [1.950 m. Luboten]; 199. *Alchemilla pirinica* Pawl., Bull. Int. Acad. Polon. [2.662 m. Rudoka, Cerepashina, Luboten, Leshnica]; 200. *Alchemilla serbica* (Fritsch) Pawl., Acta Bot. Pol.[to2.120 m. Cerepashina]; 201. *Alchemilla acutiloba* Opiz, Fl. Bohm [2.120 m. Gajre, Jellak, Cerepashina]; 202. *Alchemilla crinite* Buser, Scrin. Fl. Select. Magnier [to 2.320 m. Cerepashina, Kobilica]; 203. *Alchemilla gracilis* Opiz, Fl. Bohm [to 1.890 m. Gajre, Kodra e diellit (Popova Sapka)]; 204. *Alchemilla heterophylla* Rothm., Feddes Repert. [to 2.520 m. Leshnica, Cerepashina]; 205. *Alchemilla monticolla* Opiz, Fl. Bohm[to 2.560 m. Pllōça-Sharr mountain]; 206. *Alchemilla xanthochlora* Rothm., Feddes Repert. [to 2.330 m.]; 207. *Alchemilla connivens* Buser, Bull. Herb. Boiss. [Majen e Lubotenit 2.300 m.]; 208. *Alchemilla effuse* Buser Alchim Walais [to 2000 m.]; 209. *Alchemilla reniformis* Buser Alchim Walais [to 2.400 m.]; 210. *Alchemilla heterotricha* Roth; Feddes Repert. [to 2.200 m. Kobilica, Luboten]; 211. *Alchemilla fissa* Gunther & Schumnel, Sched. Cend. Siles. Exsicc. [to 2200 m. Luboten].

87. *Pyrus* L. 212. *Pyrus pyraister* Burgsd., Anleit Holzart. [to 1.600 m Sharr mountain].

88. *Malus* Miller 213. *Malus sylvestris* Miller, Gard. Dict. Ed [to 1.600 m.].

89. *Sorbus* L. 214. *Sorbus semipinnata* (Roth. Hedlund, Monogr.Gatt. Sorbus [1200-1850 m. Cerepashina, Leshnica]; 215. *Sorbus chamaemespillus* L. [area subalpine, Sharr mountain].

90. *Amelanchier* Medicus 216. *Amelanchier ovalis* Medicus [2.100 m. Sharr mountain].

91. *Cotoneaster* Medicus 217. *Cotoneaster integerrimus* Medicus [to 2.200 m.Sharr mountain]. 218. *Cotoneaster nebrodensis* (Guss.) [to 2000 m. Sharr mountain].

92. *Crataegus* L. 219. *Crataegus sericeus* Dzhekov [1.000-1.600m.].

93. *Prunus* L. 220. *Prunus cerasifera* Ehrh., Beitr. Naturk. [to 1.750 m.]. 221. *Prunus cocomilia* Ten., Flnap [Luboten to 1.750 m.]; 222. *Prunus avium* L. [1.800 m.].

32. **Grossulariaceae**

94. *Ribes* L. 223. *Ribes uva-crispa* [1.200-1.800 m].

33. **Crassulaceae**

95. *Sempervivum* L. 224. *Sempervivum thompsonianum* Wale, Quart. Bull. Alp. Gard. Soc. [2.100-2.200 m.]; 225. *Sempervivum kosaninii* Praeger Inst. Univ. Beograd [Sharr mountain]; 226. *Sempervivum marmoreum* Griseb. Spicil. Fl. Rumel. [Sharr mountain].

96. *Sedum* L. 227. *Sedum acre* L. [2.300 m.]. 228. *Sedum sartorianum* Boiss., Diagn. Pl. Or. Nov. [alpike, subalpike, to 1.800 m.]; 229. *Sedum alpestre* Wild., Prosp. Pl. Dauph. [Sharr mountain]; 230. *Sedum erythraeum* Griseb. Spicil. Fl. Rumel[2.000 m.]; 231. *Sedum flexuosum* Wettst. [Sharr mountain]; 232. *Sedum album* L. [to 2.300 m.]; 233. *Sedum dasyphyllum* L [to 2.500 m.]; 234. *Sedum magelense* Ten., Prodr. Fl. Nap. [1.000-2.500 m.];

235. *Sedum atratum* L. [2.500 m.]; 236. *Sedum annuum* L. [2.500 m. Sharr Mountain]; 237. *Sedum hispanicum* L. [1.800 m.].

34. Saxifragaceae

97. *Saxifraga* L. 238. *Saxifraga rotundifolia* L., Sp. Pl. [to 2.700 m.]; 239. *Saxifraga bryoides* L., Sp. Pl. [2.200-2.600 m.]; 240. *Saxifraga tridactylites* L., Sp. Pl. [to 1.700 m.]; 241. *Saxifraga adscendens* L., Sp. Pl. [area alpine]; 242. *Saxifraga aizoides* L., Sp. Pl. [Luboten]; 243. *Saxifraga glabella* Bertol., Gior. Arcan. Sci. [Sharr mountain]; 244. *Saxifraga pedemontana* Al., Fl. Peden [Sharr Mountain, Maja e zezë (Crn Vrv) Sharr mountain]; 245. *Saxifraga androsaceae* L., Sp. Pl. [Sharr mountain 1.700-2.500 m.]; 246. *Saxifraga bulbifera* 1700 m.]; 247. *Saxifraga exarata* Wild., Prosp.Pl. Dauph [Sharr mountain, alpines area]; 248. *Saxifraga bulbifera* L. Sp. Pl. [to 1.700-1.800 m.]; 249. *Saxifraga oppositifolia* L., Sp. Pl. [alpines area]; 250. *Saxifraga marginata* Sternb., Revis. Saxifr. Su. Pl [alpinus and subalpinus area]; 251. *Saxifraga scardica* Griseb. Spicil. Fl. Rumel [Sharr mountain].

252. *Saxifraga paniculata* Miller [400-2.700 m.];

98. *Chrysosplenium* L. 253. *Chrysosplenium alternifolium* [Sharr Mountain].

35. Leguminosae

99. *Cytisus* L. 254. *Cytisus nigricans* Sp. Pl. [Luboten].

100. *Chamaecytisus* Link. 255. *Chamaecytisus triflorus* (Link) [2.000 m.].

101. *Genista* L. 256. *Genista depressa* M. B., Fl. Taur.-Caucas. [2.700 m. Sharr mountain].

102. *Astragalus* L. 257. *Astragalus depressus* [700-2.400 m. R. M.]; 258. *Astragalus australis* (L.) Lam., Fl. Fr. [2.200-2.650 m.].

103. *Oxytropis* DC. 259. *Oxytropis lapponica* (Wahlenb.) Gay, Flora [Cerepashin, Bargdan, Maja e diellit (Popova Sapka) 2.000-2.7600 m.]; 260. *Oxytropis campestris* (L) DC., Astrag. [1.560-2.400m. Cerepashin, Luboten]; 261. *Oxytropis dinarica* (Murb.) Wettst., Bibl. Bot. [1.700-2.650 m. Kodra e diellit (Popova Sapka), Ellak, Cerepashin, Maja e Diellit]; 262. *Oxytropis halleri* Bunge ex Koch [Maja e Diellit (Maja e Titos)].

104. *Vicia* L. 263. *Vicia icana* Gouan, Fl. Monspl. [to 2.300 m.]; 264. *Vicia sylvatica* L. Sp. Pl. [800-2.000 m., Leshnica]; 265. *Vicia tetrasperma* (L.) Schreb., Spic. [to 1.600 m. Rogaçeva]; 266. *Vicia sepium* L. Sp. Pl. [700-1.750 m.]; 267. *Vicia lathyroides* L. Sp. Pl. [to 1.600 m.];

105. *Lathyrus* L. 268. *Lathyrus laxiflorus* (Desf.) O. Kuntze, Acta Horti Petrop. [to 1.600 m.]; 269. *Lathyrus Nissolia* L., Sp. Pl. [to 1.700 m.];

106. *Trifolium* L., Sp. Pl. 270. *Trifolium repens* L., Sp. Pl. [to alpines area]; 271. *Trifolium pallescens* Schreber in Sturm, Deutschl. Fl. Ab. L, Bd. 4 H. [mbi 2.000 m.]; 272. *Trifolium badium* Schreber in Sturm, Deutschl. Fl. Ab. L, Bd. 4 H. 273. *Trifolium velenovskyi* Vand., Sitz.-Ber. Bohm. Ges. Wiss. (Math.-Nat. Kl.) [1.000-2.000 m. Sh.M.]; 274. *Trifolium noricum* Wulfen, Arch. Bot. (Roemer) [1.650-2.700 m.-endemike]; 275. *Trifolium medium* L., Amoen. Acad. [700-2.100 m. R.M.]; 276. *Trifolium pignantii* Fauche & Chaub. In Bory. Exped. Sci. Moree [to 2.000 m.]; 277. *Trifolium alpestre* L., Sp. Pl. ed. [to 2.000 m.]; 278. *Trifolium ochroleucon* Hudson, Fl. Angl. [to 1.700 m.].

107. *Dorycnium* Miller 279. *Dorycnium herbaceum* Will., Prosp. Pl. Dauph. [Luboten]; 280. *Dorycnium hirsutum* L.

108. *Lotus* L. 281. *Lotus corniculatus* L. var. *alpinus* Ser. In Dc., Prodr. [alpinus area-Kodra e diellit (Popova Sapka)].

109. *Anthyllis* L. 282. *Anthyllis aurea* Welden in Host, Fl. Aust. [700-2.000 m. Kodra e Diellit (Popova Sapka) Cerepashina]; 283. *Anthyllis vulneraria* L. SP. Pl. var. *albana* [Kodra e Diellit (Popova Sapka) Cerepashina 2.50-2.650 m.].

110. *Hippocrepis* L. 284. *Hippocrepis comosa* L. SP. Pl. [2.200 m. Sharr Mountain].

111. *Onobrychis* Miller 285. *Onobrychis montana* Dc. in Lam. Et Dc., Fl. Fr. ed. subsp. *scardica* (Griseb) Ball, Feddes repert. [Sharr Mountain].

36. Onagraceae

112. *Circea* L. 286. *Circea lutetiana* L. SP. Pl. [2.000 m. Luboten].

113. *Epilobium* L. 287. *Epilobium angustifolium* L. SP. Pl. [Rocky grounds; waste areas; mountain paths; forest edges and cuttings]; 288. *Epilobium parviflorum* Scrb., Spicil. Fl. Lips. [Sharr Mountain-Vejce]; 289. *Epilobium montanum* L., Sp. Pl. [Sharr Mountain]; 290. *Epilobium collinum* Gmelin, Fl. Bad. [Sharr Mountain]; 291. *Epilobium lanceolatum* Sebastini & Mauri, Fl. Rom. [Sharr Mountain to 1.600 m.]; 292. *Epilobium obscurum* Schreber, Spic. [Sharr Mountain-Luboten].

37. Aceracea

114. *Acer* L. 293. *Acer platanoides* L. SP. Pl. [Mali Sharr-Luboten, Leshnica]; 294. *Acer campestre* L. SP. Pl.; 295. *Acer pseudoplatanus* L. SP. Pl. [900.-1.700 m. Tetova-Lisec]; 296. *Acer heldreichii* Orph. In Boiss.; Diagn. Pl. Orient. [1.400-2.000 m. Leshnica, Kodra e Dielli, Lisec]; 297. *Acer obtusatum* Waldst. & Kit. In Wild., Sp. Pl. [600-

1.300 (1700 m.); 298. *Acer hyrcanum* Fischer & C. A. Meyer, Ind. Sem. Hort. Petrop. [to 1.600 m.]; 299. *Acer monspessulanum* L. SP. Pl. [Tetova-Lisec].

38. Linaceae

115. *Linum*. 300. *Linum perenne* L. SP. Pl. subsp. *extraaxillare* [to 1.800 m.]; 301. *Linum catharticum* L. SP. Pl. [to 2.200 m.].

39. Oxalidaceae

299. *Oxalis acetosalla* L. SP. Pl. [Sharr mountain].

40. Geraniaceae

116. *Geranium* L. 302. *Geranium macrorrhizum* L. SP. Pl. [Sharr Mountain]; 303. *Geranium cinereum* Cav., Monad. Class. Diss. Dec. subsp. *subcaulescens* [for 1.200-2.700 m.]; 304. *Geranium sylvaticum* L. SP. Pl. [to 2.100 m. Sharr mountain]; 305. *Geranium reflexum* L., Mantissa Alt. [Sharr mountain 1.800 m.]; 306. *Geranium aristatum* Freyn & Sint., Bull. Herb. Boiss [1.000-2.650 m. Sharr Mountain]; 307. *Geranium pyrenaiicum* Burm. Fil., Spec. Bot. Geran. [to 2.200 m. Sharr Mountain]; 308. *Geranium molle* L. SP. Pl. [Sharr Mountain]; 309. *Geranium robertianum* L. SP. Pl. [2.000 m. Sh.M.].

41. Polygalaceae

117. *Polygala* L. 310. *Polygala major* Jack., Fl. Austr. [2.000 m. Rogaçeva, Sharr Mountain]; 311. *Polygala comosa* Schkuhr, Handb. [1.800 m. Kodra e Diellit, Luboten-1.800 m.]; 312. *Polygala vulgaris* L. SP. Pl. [Sharr mountain, to 2.500 m.]; 313. *Polygala alpestris* Reichenb., Ic. Bt Pl. Crit [to 2.000 m.].

42. Umbelliferae

118. *Sanicula* L. 314. *Sanicula europaea* L., Sp. Pl. [to 1.800 m.].

119. *Astrantia* L. 315. *Astrantia major* L., Sp. Pl. [Kodra e Diellit-Leshnica].

120. *Chaerophyllum* L. 316. *Chaerophyllum hirsutum* L., Sp. Pl. [Sharr Mountain]; 317. *Chaerophyllum aureum* L., Sp. Pl. [Sharr Mountain-Luboten, to 2.000 m.].

121. *Huetia* Boiss 318. *Huetia Cynapioides* (Guss.) P.W.Wall, Feddes Repert. [to 2.000 m.].

122. *Pimpinella* L. 319. *Pimpinella major* (L.) Hudson, Fl. Angl. [900-1.700 m.]; 320. *Pimpinella saxifraga* L., Sp. Pl. [1.400-2.200 m. Sharr Mountain-Luboten].

123. *Aegopodium* L. 321. *Aegopodium* sp. L., Sp. Pl. [to 1.800 (2.000 m.)];

124. *Seseli* L. 322. *Seseli peucedanoides* (Bieb.) Kos.-Pol., Bull. Soc. Nat. Moscou, Nova ser. [to 2.200 m.].

125. *Athamanta* L. 323. *Athamanta haynaldi* Borb. & Uechtr. Bot. Zeitschr. [to 2.000 m.].

126. *Meum* Miller 324. *Meum athamanticum* Jack., Fl. Austr. [1.500-2.500 m.].

127. *Bupleurum* L. 325. *Bupleurum ranunculoides* L., Sp. Pl. [Sharr Mountain-Luboten]; 326. *Bupleurum falcatum* L., Sp. Pl. [to 2.100 m.].

128. *Trinia* Hoffm. 327. *Trinia glauca* (L.) Dumort., Fl. Belg. subsp. *carniolica* [Cerepashina, Ellak, Luboten, Maja e Diellit, Kodra e Diellit]; 328. *Trinia dalechampii* (Ten.) Janchen, Oster. Bot. Zeitschr. [Sharr Mountain-Luboten].

129. *Carum* L. 329. *Carum multiflorum* (Sm) Boiss., Fl. Or. [to 2.000 m.];

130. *Cnidium* Cusson 330. *Cnidium silaifolium* (Jack.) Simonkai, Enum. Fl. Transs. [to 1.700 m.].

131. *Peucedanum* L. 331. *Peucedanum oligophyllum* (Griseb.) Vandas, Magyar Bot. Lapok [Sharr Mountain, 1.500 m.]; 332. *Peucedanum aegopodioides* (Boiss.) Vandas, Sitz. Ber. Bohm. Ges. Wiss. (Math.- Nat. Kl.). [Luboten].

132. *Pastinaca* L. 333. *Pastinaca sativa* L., Sp. Pl. subsp. *urens* [Lisec].

133. *Heracleum* L. 334. *Heracleum sphondylium* L., L., Sp. Pl. subsp. *pyrenaicum* (Lam.) Bonnier & Layens, Fl. Fr. [Luboten].

43. Celastraceae

134. *Evonymus* L. 335. *Evonymus latifolius* (L.) Miller, Gard. Dict. [Sharr Mountain, Leshnica, Luboten].

44. Rhamnaceae

135. *Rhamnus* L. 336. *Rhamnus alpine* L., L., Sp. Pl. subsp. *fallax* (Boiss.) Maire & Petitmenegin, Bull. Soc. Sci. Nancy [Sharr Mountain]; 337. *Rhamnus pumila* Turra, Giorn. Ital. Sci. Agric. Arti Commerc [Lisec, Kodra e Diellit, Cerepashin, Ellak, Leshnica].

45. Santalaceae

136. *Thesium* L. 338. *Thesium parnassi* A. DC., Prodr. [Cerepashina, Bargdan, Leshnica, Luboten,]; 339. *Thesium alpinum* L., Sp. Pl. [1.600-2.000 m., Sharr Mountain-Kodra e Diellit, Ellak, Leshnica].

46. Caprifoliaceae

137. *Knautia* L. 340. *Knautia arvensis* [Sharr Mountain].

138. *Sambucus* L. 341. *Sambucus nigra* L. [Sharr Mountain]; 342. *Sambucus ebulus* L. [Sharr Mountain]; 343. *Sambucus racemose* [deciduous and coniferous forests; shrubby areas, in ravines- Ellak, tre ujëra (Tri vodi) 1400-1900 m.].

47. Gentianaceae

139. Centaurium Hill 344. *Centaurium erythraea* Rafn, Danm. Holst. [Sharr Mountain-Luboten].
140. Gentiana L. 345. *Gentiana lutea* L., Sp. Pl. [1.300-2.200 m.]; 346. *Gentiana punctata* L., Sp. Pl. [1.800-2.550 m. Sharr Mountain- Vraca]. 347. *Gentiana asclepiadea* L., Sp. Pl. [for 1200-2000 m.]; 348. *Gentiana cruciata* L., Sp. Pl. [700-1700 m.]; 349. *Gentiana verna* L., Sp. Pl. subsp. *balcanica* Pritchard., [1500-2700 m.]; 350. *Gentiana utriculosa* L., Sp. Pl. [Sharr Mountain].
141. Gentianella Moench. 351. *Gentianella ciliate* (L.) Borkh., Arch. Bot. (Roemer), [Sharr Mountain-Kodra e Diellit]; 352. *Gentianella bulgarica* (Vel.) J. Holub, folia geobot, Phytotax. (Praha) [Sharr Mountain- Kodra e Diellit (Popova Sapka)].
- 48. Convolvulaceae**
142. Cuscuta L 353. *Cuscuta approximate* Bab., Ann. Mag. Nat. Hist. [Sharr Mountain-Kobilica].
143. Calystegia R. Br. 354. *Calystegia sylvatica* (Kit.) Griseb., Spic. Fl. Rumel. [Sharr Mountain].
- 49. Boraginaceae**
144. Cerinthe L. 355. *Cerinthe glabra* Miller, Gard. Dict. ed. [Ellak-Leshnica 1600-2650 m.].
145. Alkana Tausch 356. *Alkana scardica* [Ellak-Leshnica, Kobilica, 1600-1900 m.].
146. Echium L. 357. *Echium vulgare* L., Sp. Pl. [Tetova-Lisec, to 1700 m.].
147. Symphytum L. 358. *Symphytum tuberosum* L., Sp. Pl. subsp. *angustifolia* (A. Kerner) [Lisec-Kodra e Diellit (Popova Sapka) to 2250 m].
148. Anchusa L. 359. *Anchusa officinalis* L., Sp. Pl. [Tetovë-Lisec, to 1700 m.]; 360. *Anchusa cretica* [M. Sh. to area alpine].
149. Myosotis L. 361. *Myosotis stricta* [Link ex Roemer & Schultes, Syst, Veg. [for 200-1700 m. Lisec-Kodra e Diellit]; 362. *Myosotis sylvatica* Hoffm., Deutschl. Fl. [for 700-2650 m. Luboten]; 363. *Myosotis suaveolens* Wald. & Kit. Ex Wild., Enum. Pl. Hort. Berol. [Luboten, (1000) 1600-2600 m.]; 364. *Myositis scorpioides* L., Sp. Pl. [Sharr Mountain-Lisec, Kodra e Diellit].
150. Cynoglossum L. 365. *Cynoglossum* sp. L., Sp. Pl. [to 1800 m. Sharr Mountain-Lisec, Kodra e Diellit].
- 50. Scrophulariaceae**
151. Linaria L. 366. *Linaria vulgaris* Miller [Buzë pyjesh me ah].
152. Digitalis L. 367. *Digitalis ferruginea* L. [Sharr Mountain]; 368. *Digitalis grandiflora* L. [Sharr Mountain].
- 51. Plantaginaceae**
153. Plantago L. 369. *Plantago major* L. [Sharr Mountain]; 370. *Plantago lanceolata* L. [Sharr Mountain]; 371. *Plantago media* L. [Sharr Mountain].
- 52. Lamiaceae**
154. Sideritis 372. *Sideriti scardica* [Luboten, 1200-2200 m.].
155. Thymus 373. *Thymus striatus* Vahl. [Sharr Mountain].
- 53. Campanulaceae**
156. Edraianthus A. DC. 374. *Edraianthus graminiflorus* Dc. [Luboten, 1500-2300 m.]. 54.
- ASTERACEAE (COMPOSITAE)**
157. Erigeron L. 375. *Erigeron alpinus* [Sharr mountain].
158. Matricaria L. 376. *Matricaria chamomilla* [Sharr Mountain].
159. Bellis L. 377. *Bellis annua* L. [Sharr mountain].
160. Leucanthemum Mill. 378. *Leucanthemum vulgare* [Sharr Mountain].
161. Cichorium 379. *Cichorium intybus* [Shar Mountain].
162. Achillea L. 380. *Achillea clypeolata* [Sharr Mountain]; 381. *Achillea millefolium* L. [Shar Mountain].
- 55. Amaryllidaceae**
163. Galanthus L. 382. *Galanthus nivalis* L. [area subalpina].
- 56. Xanthorrhoeaceae**
164. Asphodelus L. 383 . *Asphodelus albus* Wild. [area subalpina]
- 57. Iridaceae**
165. Crocus L. 384. *Crocus bulbs* L. [Kodra e Diellit (Popova Shapka), 1750 m.]; 385. *Crocus scardicus* Kosanin [area alpina, 1800-2500 m.]. 386. *Crocus chrysanthus* Herb., 387. *Crocus vernus* (L.) Hill. [area subalpina].
- 58. Liliaceae**
166. Fritillaria L. 388. *Fritillaria macedonica* Bornm. [Bogovina's lake];
167. Lilium L. 389. *Lilium albanicum* Griseb. [Bogovina's lake]; 390. *Lilium martagon* L. [Sharr Mountain-Luboten, area subalpina].
- 59. Asparagaceae**
169. Scilla 392. *Scilla bifolia* L. [Sharr Mountain- Kodra e Diellit (Popova Sapka)].
- 60. Alliioideae**

170. *Allium* L. 393. *Allium roseum* L. [Bogovia's Lake, area alpina].

61. **Juncaceae**

171. *Juncus* L. 394. *Juncus effuses* L. [Luboten, area subalpina]

62. **Melanthiaceae**

172. *Veratrum* L. 395. *Veratrum album* L. [area alpina]; 396. *Veratrum nigrum* L. [area alpina];

173. *Nartheicum* Huds 397. *Nartheicum scardicum* Kosanini [Xhinbeg, area alpina].

Table number. 2. The total number of families, genus and species in Sharr Mountain

No	families	genus	species
1.	LYCOPODIACEAE	2	2
2.	OPHYOGLOSSACEAE	1	1
3.	CRYPTOGRAMMACEAE	1	1
4.	ASPLENIACEAE	1	2
5.	ATHYRIACEAE	1	1
6.	PINACEAE	3	4
7.	CUPRESACEAE	1	2
8.	TAXACEAE	1	1
9.	RANUNCULACEAE	8	16
10.	FUMARIACEAE	1	1
11.	URTICACEAE	1	2
12.	FAGACEAE	1	1
13.	BETULLACEAE	2	2
14.	CARYOPHYLLACEAE	15	34
15.	POLYGONACEAE	3	10
16.	PLUMBAGINACEAE	1	2
17.	HYPERICACEAE	1	3
18.	VIOLACEAE	1	12
19.	CISTACEAE	1	3
20.	CRUCIFERAE	14	32
21.	SALICACEAE	2	7
22.	ERICACEAE	4	4
23.	PYROLACEAE	2	3
24.	MONOTROPACEAE	1	1
25.	EMPETRACEAE	1	1
26.	PRIMULACEAE	3	8
27.	TILIACEAE	1	1
28.	MALVACEAE	1	1
29.	EUPHORBIACEAE	1	3
30.	THYMELACEAE	1	2
31.	ROSACEAE	16	57
32.	GROSSULARIACEAE	1	1
33.	CRASSULACEAE	2	14
34.	SAXIFRAGACEAE	2	16
35.	LEGUMINOSAE	13	31
36.	ONAGRACEAE	2	7
37.	ACERACEAE	1	7
38.	LINACEAE	1	2
39.	OXALIDACEAE	1	1
40.	GERANIACEAE	1	8
41.	POLYGALACEAE	16	4
42.	UMBELLIFERAE	1	21
43.	CELASTRACEAE	1	1
44.	RHAMNACEAE	1	2

45.	SANTALACEAE	2	2
46.	CAPRIFOLIACEAE	3	4
47.	GENTIANACEAE	2	9
48.	CONVOLVULACEAE	7	2
49.	BORAGINACEAE	1	11
50.	SCROPHULARIACEAE	1	3
51.	PLANTAGINACEAE	2	3
52.	LAMIACEAE	1	2
53.	CAMPANULACEAE	6	1
54.	ASTERACEAE (COMPOSITAE)	6	7
55.	AMARYLLIDACEAE	1	1
56.	XANTHORRHOACEAE	1	1
57.	IRIDACEAE	1	4
58.	LILIACEAE	2	3
59.	MELANTHIACEAE	1	1
60.	ASPARAGACEAE	1	1
61.	ALLIOIDEAE	1	1
62.	JUNCACEAE	1	1
63.	MELANTHIACEAE	2	3
	Total: families= 63	173 genus	397 species

Conclusion:-

In editions of domestic and foreign authors, it is said that there are about 2000 species in the flora of Sharr Mountain.

The current partial processing of collected materials consists of 590 species, belonging to 216 genus and 63 families. These data testify a rich flora of the massif of Sharr.

By analyzing and comparing our current material with what is known to date for Macedonia, it is noticed a significant similarity and high numbers of endemic plants.

Wide Areal have family species in all heights of Shara: Ranunculaceae, Caryophyllaceae, Crucifer, Rosaceae, Leguminosae, Umbelliferae.

Also it is noted the used literature that there is no data on family “plants and plants Composite, Monocotyledonae” and a large number of families with a smaller number of plants.

Further elaboration of material of flora in Shara in the study will fill the number of species prevalent in flora in the Shara.

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