

Werner Greuter<sup>1</sup> (with contributions by Patrizia Campisi, Gianniantonio Domina, Ermelinda Gjeta, Mattia Letizia Marino & Francesco M. Raimondo)<sup>2</sup>

## Results of OPTIMA's Thirteenth "Iter Mediterraneum" through Albania, 22 June to 3 July 2022

### Abstract

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The revision of plant material collected during the Iter Mediterraneum XIII of OPTIMA in Albania in 2017 was completed in 2022. The vascular plant material comprises ca. 1750 gatherings, each with 0 to 32 (or in one case 44) duplicates, summing up to a total of ca. 13650 specimens, collected in 112 numbered localities. The number of taxa represented is 957. One of the taxa collected turned out not to have been previously described, which is here treated as a new species named *Hypericum ermelindarum*. One new combination, at the rank of subspecies, in *Aubrieta*, is published.

The bryophytes material encompasses 61 taxa (14 liverworts and 47 mosses). For 38 of these taxa, the data provided extend their distribution to additional prefectures across the country. *Plagiochila asplenoides*, *Hylocomiadelphus triquetrus*, *Hymenoloma crispulum*, *Rhynchostegium riparioides*, and *Schistidium apocarpum* had not been recorded in Albania for over 50 years.

*Key words:* Flora of Albania, Itinera Mediterranea, OPTIMA, new species, new combination, *Aubrieta*, *Hypericum*, Bryophytes.

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### 1. Planning and logistics

by GIANNIANTONIO DOMINA

The Iter to Albania was planned by Alfred Mullaj, with support from Ermelinda Gjeta, Ermelinda Mahmutaj, Marjol Meco, Ajola Mesiti, and Oresta Saliqaj, under the supervision of Gianniantonio Domina. This 13-day field expedition included 11 full days of collecting. The circuit began in Tirana and utilized bases in Librazhd, Korça, Berat, Kukës, and Valbona to systematically explore the mountain regions of Albania's south, center, and north.

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<sup>1</sup>Foundation Herbarium Greuter, Via Lincoln 12, 90123 Palermo, Italy. E-mail: w.greuter@bo.berlin

<sup>2</sup>See addresses at the end, p. 82.

### *The team*

The expedition team included five Albanian botanists, who took turns leading the group, and ten foreign participants (two junior and eight senior members, as detailed below). The team was complemented by Attilio Carapezza, an entomologist from Palermo, whose participation added significant scientific and social value to the group (Figs. 1-2). The collecting group thus, while variously composed as mentioned on the individual labels, consisted of 13 members on every day.

### *Albanian participants*

Ermelinda Gjeta; Ermelinda Mahmutaj (21-24 June); Marjol Meco (25 June to 3 July); Ajola Mesiti (28 June to 3 July); Oresta Saliq (21-27 June).

### *Foreign participants*

Salvatore Cambria (junior participant, Catania); Davide Dagnino (junior participant, Genova); Gianniantonio Domina (senior participant, Palermo); Werner Greuter (senior participant, Palermo); Edda Lattanzi† (senior participant, Roma); Simonetta Peccenini (Genova); Eckhard von Raab- Straube† (senior participant, Berlin); Francesco Maria Raimondo (senior participant, Palermo); Giovanni Scafidi (senior participant, Palermo); Ernst Vitek (senior participant, Wien).



Fig. 1. Group photograph at Tomorri mountain, 27 June. From left: G. Domina, D. Dagnino, P. Danellari, O. Saliq, M. Meco, W. Greuter, G. Scafidi, A. Carapezza, S. Cambria, E. Lattanzi, F.M. Raimondo.



Fig. 2. Group photograph on the ferry, crossing Lake Koman, 3 July. Standing from left: G. Domina, G. Scafidi, M. Meco, E. Gjeta, E. von Raab-Straube, D. Dagnino, E. Vitek, S. Peccenini; sitting from left: W. Greuter, E. Lattanzi, A. Carapezza, F. M. Raimondo.

### *Collecting localities*

A list of collecting localities has been carefully maintained and was used as the basis for labelling. The localities themselves were verified, and the coordinates confirmed or refined, with the aid of the Google Earth map system of Google Inc. Habitat indications associated with each locality are generalised and do not necessarily characterise the habitat of the individual collected plant.

The localities (Figs. 3-5), in chronological order, are enumerated in Table 1. In order to convey a quick, general picture of the distribution patterns that emerge from the collected material, the collecting localities have been grouped in  $8 \pm$  natural territorial units, each designated by a capital letter. The territorial units are shown in the overview map (Fig. 3). They are as follows:

- A:** Shebenik-Jabllanicë National Park, Jabllanicë Mountain (localities 1-9 and 17-33; elev. 1075-2010 m; 22 and 24 June; ##0001-0285a and 0366-0574);
- B:** Polis Mountains (localities 10-16; elev. 560-1695 m; 23 June; ##0286-0365);
- C:** Area S of Korça (localities 34-38; elev. 1085-1475 m; 25 June; ##0575-0702);
- D:** Devolli river valley, scattered stops during the transfer from Korça to Berat (localities 39-43; elev. 160-790 m; 26 June; ##0703-0859);
- E:** Tomorri Mountains (localities 44-51; alt. 1230-2345 m; 27 June; ##0860-0980);
- F:** Pashtriku Mountain, N slopes of main range (localities 52-64; elev. 450 and 795-1810 m; 28-29 June; ##0981-1276);
- G:** Area E of Valbona (localities 65-68; elev. 370-700 m; ##1277-1371);
- H:** Valbona area (localities 69-112; elev. 1180-2000 m; 1-2 July; ##1372-1691).

Table 1. Collecting localities of Iter Mediterraneum XIII: From left: General area (see text), locality number, date, district, locality as on labels, habitat, altitude, latitude, longitude, gathering numbers.

Area	Loc.	Date	Prefecture ( ar )	Locality	Habitat	Alt. (m)	Lat.	Long. E	Gath.
A	1	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Mountain pastures	2000	41°12 51	20°27 31	0001-0031
A	2	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Mountain pastures	1740-2010	41°12 59 41°12 51	20°26 58 20°27 30	0032-0119g
A	3	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Mountain forest and meadows	1640	41°13 04	20°26 33	0120-0134
A	4	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Mountain forest and meadows	1550	41°12 46	20°25 28	0135-0145b
A	5	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Mountain forest	1275	41°13 41	20°24 03	0146-0146a
A	6	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Bog in mountain forest and surroundings	1250	41°13 02	20°24 30	0147-0189
A	7	22 June	Elbasan	Area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës	Roadside	1075	41°13 17	20°23 01	0190
A	8	23 June	Elbasan	Area S of Librazhd, mountains of Polis, high valley E of Faqja e Madhe	Mountain meadows	1685	41°05 32	20°19 49	0191-0203a
A	9	23 June	Elbasan	Area S of Librazhd, mountains of Polis, slopes E of Faqja e Madhe	Mountain meadows and rocks	1685-1880	41°05 32 41°05 16	20°19 48 20°19 06	0204-0285a
B	10	23 June	Elbasan	Area S of Librazhd, mountains of Polis, high valley E of Faqja e Madhe	Bog and humid meadow	1695	41°05 16	20°19 54	0286-0309
B	11	23 June	Elbasan	Area S of Librazhd, mountains of Polis, track from Dardhë in direction Faqja e Madhe	Forest with meadows in-between	1630	41°06 25	20°19 17	0310-0341
B	12	23 June	Elbasan	Area S of Librazhd, mountains of Polis, track from Dardhë in direction Faqja e Madhe	Semi-ruderal meadow	1550	41°06 39	20°19 27	0342-0344
B	13	23 June	Elbasan	Area S of Librazhd, mountains of Polis, track from Dardhë in direction Faqja e Madhe	Rocks in forest	1360	41°07 16	20°20 07	0345-0352
B	14	23 June	Elbasan	Area S of Librazhd, mountains of Polis, track from Dardhë in direction Faqja e Madhe	Forest	1275	41°07 08	20°20 24	0353-0357
B	15	23 June	Elbasan	Area S of Librazhd, mountains of Polis, track	Meadows and edge of forest	1250	41°06 55	20°20 28	0358-0364

Table 1. continued

				from Dardhë in direction Faqja e Madhe					
<b>B</b>	16	23 June	Elbasan	Area S of Librazhd, in village Dardhë	Ruderal	560	41°08 24	20°21 55	0365
<b>A</b>	17	24 June	Dibra	Area NNE of Librazhd, 1.7 km ENE of Fushë Studë, at crossroad to Steblevë	Roadside	1190	41°19 33	20°25 06	0366-0367
<b>A</b>	18	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Forest and meadows with rocks in-between, limestone	1515- 1545	41°16 28 41°16 30	20°28 29 20°28 43	0368-0374
<b>A</b>	19	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Forest and meadows with rocks in-between, limestone	1515- 1600	41°16 28 41°16 30	20°28 29 20°29 19	0375-0405a
<b>A</b>	20	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Forest, meadows and ruderal at parking	1515	41°16 28	20°28 29	0406-0410
<b>A</b>	21	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Grazed meadows with forest islands	1675- 1775	41°15 58 41°16 12	20°29 13 20°28 41	0411-0418
<b>A</b>	22	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Limestone rocks	1710	41°15 59	20°29 17	0419-0444
<b>A</b>	23	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Limestone rocks	1670	41°16 11	20°28 59	0445-0455
<b>A</b>	24	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Limestone rocks in the forest	1525	41°16 25	20°28 27	0456-0461
<b>A</b>	25	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Limestone rocks and forest	1690	41°16 00	20°29 15	0462-0468
<b>A</b>	26	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Limestone scree and forest	1670	41°15 37	20°29 05	0469-0478
<b>A</b>	27	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Forest	1525	41°16 28	20°28 21	0479
<b>A</b>	28	24 June	Elbasan	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	Lake, bog and surrounding meadows	1655	41°16 53	20°27 04	0480-0521a
<b>A</b>	29	24 June	Dibra	Area ENE of Librazhd, SE of Fushë Studë, NE- part of Jabllanica Mountains	<i>Fagus</i> forest	1530	41°17 33	20°26 13	0522
<b>A</b>	30	24 June	Dibra	Area ENE of Librazhd, ESE of Fushë Studë, NE- part of Jabllanica Mountains	Grazed meadow	1300	41°18 24	20°26 32	0523
<b>A</b>	31	24 June	Dibra	Area ENE of Librazhd, ESE of Fushë Studë, NE- part of Jabllanica Mountains	Rivulet and surrounding boggy meadows and forest	1265	41°18 30	20°26 34	0524-0559

Table 1. continued

A	32	24 June	Dibra	Area NNE of Librazhd, 2.7 km E of Fushë Studë, road to Steblevë	Meadow at roadside	1275	41°19 18	20°25 51	0560-0569
A	33	24 June	Dibra	Area ENE of Librazhd, ESE of Fushë Studë, NE-part of Jabllanica Mountains	Meadow and scrub at roadside	1250	41°18 48	20°26 38	0570-0574
C	34	24 June	Dibra	Area ENE of Librazhd, E of Fushë Studë, NE-part of Jabllanica	Scrub at roadside	1250	41°19 14	20°26 48	0575
C	35	25 June	Korça	Area S of Korça, road Boboshticë to Dardhë, gorge 1.3 km SE Boboshticë	Rocks, screes and riverside	1085	40°32 44	20°46 34	0576-0652
C	36	25 June	Korça	Area S of Korça, road Boboshticë to Dardhë, 1.8 km WNW of Dardhë	<i>Fagus</i> forest, meadows and brookside	1475	40°31 28	20°48 29	0653-0695
C	37	25 June	Korça	Area S of Korça, road Boboshticë to Dardhë, 3 km SSE of Boboshticë	Dry gravel slope and roadside	1325	40°32 04	20°47 25	0696-0700
C	38	25 June	Korça	Area S of Korça, road Boboshticë to Dardhë, 1.9 km SE of Boboshticë	Roadside	1165	40°32 40	20°46 58	0701-0702
D	39	26 June	Korça	Road Maliq to Lozhan i Ri, c. 7 km WNW of Maliq	<i>Corylus</i> -dominated forest, meadows and riverside gravel	790	40°43 48	20°37 12	0703-0771p
D	40	26 June	Korça	Road Lozhan i Ri to Moglicë, 2.7 km SE Lozhan i Ri	Rocks and screes in gorge	695	40°43 12	20°32 32	0772-0800
D	41	26 June	Korça	Road Lozhan i Ri to Moglicë, c. 5 km ESE of Moglicë	roadside	635	40°41 36	20°27 07	0801
D	42	26 June	Elbasan	Road Moglicë to Gramsh, c. 15 km SSE of Gramsh	<i>Pinus</i> forest	550	40°46 24	20°18 17	0802-0822
D	43	26 June	Berat	Left slope of valley of river Devoll, c. 1.6 km Sw of Frashër	Dried-out pond and surrounding cultivated land	160	40°51 12	19°56 11	0823-0859
E	44	27 June	Berat	Area ESE of Berat, Tomorri mountain, around the top	Limestone, gravel fields and mountain meadows	2345	40°38 10	20°09 45	0860-0911
E	45	27 June	Berat	Area ESE of Berat, Tomorri mountain, 0.7 km SSE of the top	Mountain meadows and rocks	2265	40°37 51	20°09 58	0912-0922c
E	46	27 June	Berat	Area ESE of Berat, Tomorri mountain, c. 2.7 km SSE of the top	Mountain meadows and rocks	1935	40°37 07	20°11 01	0923-0950e
E	47	27 June	Berat	Area ESE of Berat, Tomorri mountain, c. 3.6 km SSE of the top	Stony mountain meadows, limestone	1720	40°36 38	20°11 23	0951-0954
E	48	27 June	Berat	Area ESE of Berat, Tomorri mountain, c. 3.4 km SSE of the top	Stony mountain meadows, limestone	1675	40°36 49	20°11 25	0955-0956
E	49	27 June	Berat	Area ESE of Berat, Tomorri mountain, c. 3.1 km SE of the top	Stony mountain meadows near forest border	1620	40°37 05	20°11 25	0957-0958

Table 1. continued

E	50	27 June	Berat	Area ESE of Berat, Tomorri mountain, SE-slope	Stony slope with scrub	1325	40°35 41	20°11 33	0959-0979
E	51	27 June	Berat	Area ESE of Berat, Tomorri mountain, SE-slope	Stony slope with scrub	1230	40°35 27	20°11 09	0980
F	52	28 June	Kukës	S of the highway, c. 3.8 km W of Kukës, c. 3 km EENE of Kolsh	<i>Quercus</i> forest with intensively grazed meadows in-between	405	42°04 52	20°22 35	0981-1032
F	53	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, ridge from Çahan to the top	Mountain meadows and rocky outcrops	1810	42°12 37	20°30 14	1033-1050
F	54	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, ridge from Çahan to the top	Mountain meadows and rocky outcrops	1600	42°12 32	20°29 37	1051-1088
F	55	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, ridge from Çahan to the top	Mountain meadows and rocky outcrops	1320	42°12 28	20°28 48	1089-1131
F	56	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, upper part of track from Krumë to Çahan	Scrubland with rocky outcrops, roadside	1015-1100	42°11 50	20°28 13	1132-1160
F	57	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 2 km ENE of Krumë	Scrubland with rocky outcrops, roadside	795	42°12 06	20°26 16	1161-1162
F	58	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 2 km ENE of Krumë	Scrubland with rocky outcrops, roadside	825	42°12 02	20°26 22	1163-1164
F	59	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 3 km ENE Krumë	Scrubland with rocky outcrops, roadside	980	42°12 17	20°26 53	1165-1168
F	60	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 3.2 km ENE Krumë	Scrubland with rocky outcrops, roadside	995	42°12 21	20°27 02	1169-1173
F	61	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 1.8 km NW Çahan	Scrubland with rocky outcrops, roadside	1090	42°12 30	20°27 19	1174-1181
F	62	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 1.4 km NW Çahan	Scrubland with rocky outcrops, roadside	1065	42°12 23	20°27 36	1182-1185
F	63	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, track from Krumë to Çahan, c. 0.9 km WNW Çahan	Scrubland with rocky outcrops, roadside	1175	42°12 01	20°27 46	1186-1190
F	64	29 June	Kukës	Area N of Kukës, Pashtriku Mountain, area NE of Çahan	Tree groups with grazed and cut meadows in-between	1120-1145	42°11 55 42°12 07	20°28 27 20°28 43	1191-1276
G	65	30 June	Kukës	Road Kukës to Bajram Curri, c. 2.6 km WNW of Golaj	Stony slope with single <i>Juniperus</i> shrubs	520	42°15 33	20°20 51	1277-1304b
G	66	30 June	Kukës	Road Kukës to Bajram Curri, c. 0.3 km SW of Kam	Scrubland, brookside	505	42°15 17	20°14 51	1305-1313a

Table 1. continued

					and small pond				
<b>G</b>	67	30 June	Kukës	Road Kukës to Bajram Curri, c. 2.5 km NW Vlad	Scrubland with open places in-between	700	42°19' 31"	20°10' 21"	1314-1368
<b>G</b>	68	30 June	Kukës	Road Kukës to Bajram Curri, c. 4 km ENE of Bajram Curri, c. 2 km NE Jaho Salih	Meadows and scrubland	370	42°21' 56"	20°07' 37"	1369-1371
<b>H</b>	69	30 June	Kukës	Road to Valbonë, Dragobi, gorge of Perroi Milloshit and surroundings	Rocks and brookside	565	42°26' 12"	19°59' 06"	1372-1409
<b>H</b>	70	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	<i>Pinus</i> forest	1770	42°30' 02"	19°59' 36"	1410-1411
<b>H</b>	71	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadow at roadside	1490	42°30' 16"	19°58' 03"	1412-1414
<b>H</b>	72	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1490	42°30' 20"	19°58' 19"	1415-1419
<b>H</b>	73	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1540	42°30' 32"	19°58' 34"	1420-1424
<b>H</b>	74	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Forest	1590	42°30' 37"	19°59' 10"	1425
<b>H</b>	75	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1650	42°30' 28"	19°59' 32"	1426-1428
<b>H</b>	76	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadow	1690	42°30' 15"	19°59' 47"	1429-1437
<b>H</b>	77	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Mountain forest	1720	42°30' 08"	19°59' 41"	1438-1449a
<b>H</b>	78	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, around the alpine cabins	Nutrient-rich place near huts	1815	42°29' 51"	19°59' 36"	1450-1454
<b>H</b>	79	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, around the alpine cabins	Subalpine pastures and roadside	1930-1970	42°29' 27" 42°29' 21"	19°59' 45" 19°59' 55"	1455-1459
<b>H</b>	80	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Subalpine bog	1965	42°29' 23"	19°59' 55"	1460-1482
<b>H</b>	81	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Dwarf shrub heath	1965-2000	42°29' 15"	19°59' 57"	1483-1486
<b>H</b>	82	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Alpine grassland and dwarf shrub heath	2000	42°29' 15"	19°59' 57"	1487-1517
<b>H</b>	83	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadows and forest along the track	1650-1880	42°29' 32"	19°59' 40"	1517-1523
<b>H</b>	84	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Nutrient-rich place near huts	1815	42°29' 51"	19°59' 36"	1524-1525
<b>H</b>	85	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Along the track	2000	42°29' 16"	19°59' 57"	1526
<b>H</b>	86	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadows and forest along the track	1650-1880	42°30' 28" 42°30' 28"	19°59' 32" 19°59' 40"	1527-1534
<b>H</b>	87	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Along the track	2000	42°29' 16"	19°59' 57"	1535-1539
<b>H</b>	88	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, around the alpine cabins	Subalpine pastures and roadside	1930-1970	42°29' 27" 42°29' 21"	19°59' 45" 19°59' 55"	1540-
<b>H</b>	89	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1490	42°30' 16"	19°57' 53"	1541
<b>H</b>	90	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1505	42°30' 14"	19°57' 39"	1542

Table 1. continued

H	91	1 July	Kukës	Valbonë, road to Çerem, c. 0.35 km SW of Çerem	Edge of forest	1180	42°29' 23"	19°57' 32"	1543
H	92	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, shortly above Çerem	Roadside	1265	42°29' 53"	19°57' 23"	1544
H	93	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Dwarf shrub heath	1965-2000	42°29' 21" 42°29' 15"	19°59' 57" 19°59' 55"	1545-1546
H	94	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadow	1690	42°30' 15"	19°59' 47"	1547-1549
H	95	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadows and forest along the track	1650-1880	42°30' 28" 42°29' 32"	19°59' 32" 19°59' 40"	1550-1555
H	96	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Forest	1720	42°30' 08"	19°59' 41"	1556
H	97	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadows and forest along the track	1590-1650	42°30' 28" 42°30' 38"	19°59' 32" 19°59' 10"	1557-1562
H	98	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Meadows and forest along the track	1815-1965	42°29' 23" 42°29' 51"	19°59' 55" 19°59' 35"	1563
H	99	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Along the track	2000	42°29' 16"	19°59' 57"	1564-1568
H	100	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve	Edge of forest	1490	42°30' 16"	19°57' 53"	1569-1570
H	101	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, shortly above Çerem	Roadside	1265	42°29' 53"	19°57' 23"	1571-1572
H	102	1 July	Kukës	Valbonë, road via Çerem to Qafa Kunji i Armëve, shortly above Çerem	Roadside	1290	42°29' 55"	19°57' 20"	1573
H	103	2 July	Kukës	Valbonë, circular valley W of Kukaj	<i>Fagus</i> forest with meadows and rocky outcrops	1340	42°27' 30"	19°50' 55"	1574-1612
H	104	2 July	Kukës	Valbonë, circular valley W of Kukaj	<i>Fagus</i> forest	1340-1390	42°27' 31" 42°27' 15"	19°50' 57" 19°50' 33"	1613-1614, 1617
H	105	2 July	Kukës	Valbonë, circular valley W of Kukaj	<i>Fagus</i> forest	1340	42°27' 31"	19°50' 57"	1615a-1616, 1618
H	106	2 July	Kukës	Valbonë, circular valley W of Kukaj	<i>Fagus</i> forest	1340-1390	42°27' 31" 42°27' 15"	19°50' 57" 19°50' 33"	1619-1620
H	107	2 July	Kukës	Valbonë, circular valley W of Kukaj	<i>Fagus</i> forest near the scree	1390	42°27' 11"	19°50' 20"	1621-1623
H	108	2 July	Kukës	Valbonë, circular valley W of Kukaj	limestone scree and edge of forest along it	1450-1550	42°27' 10" 42°27' 08"	19°50' 20" 19°50' 08"	1624-1676a
H	109	2 July	Kukës	Valbonë, circular valley W of Kukaj	limestone rocks	1640	42°27' 10"	19°50' 02"	1677-1686
H	110	2 July	Kukës	Valbonë, 0.6 km NW of Kukaj	along track in forest, limestone	1210	42°27' 22"	19°52' 02"	1687
H	111	2 July	Kukës	Valbonë, 0.2 km NW of Kukaj	limestone scree	1135	42°27' 17"	19°52' 19"	1688
H	112	2 July	Kukës	Valbonë, besides hotel c. 1 km SSW of the village	along the road	1060	42°25' 25"	19°52' 27"	1689-1691

***The itinerary*****21 June – Tirana**

Foreign participants arrived, met with Albanian specialists at the University of Tirana's Natural History Museum, and visited the Herbarium. In the afternoon, a seminar was delivered by E. Gjeta on the geology, climate, floristics, and vegetation of the areas to be visited during the expedition. The group, later on, transferred to Librazhd.

**22 June – *Shebenik* (general area A p.p.)**

The Shebenik area was surveyed, focusing on *Fagus sylvatica* woodlands and open pastures on serpentine substrates in the Shebenik-Jabllanicë National Park, at elevations between 1075 and 2010 m a.s.l.

**23 June – *Polis Mountains* (general area B)**

The Polis Mountains were visited, featuring *Fagus sylvatica* forests and open pastures on carbonatic bedrock, at 560-1695 m a.s.l.

**24 June – *Jabllanicë Mountains* (general area A p.p.)**

The transboundary Jabllanicë Mountain (Albania/North Macedonia) was explored across conglomerate and predominantly calcareous lithologies. Observations included meadows, *Fagus sylvatica* and *Abies alba* forests, and alpine pastures at 1190-1775 m a.s.l.

**25 June – *Korça & Dardhë* (general area C)**

The group travelled toward Korça and Dardhë, visiting sites with *Pinus nigra*, *Fagus sylvatica*, and *Abies alba* forests on conglomerate and carbonate formations, at 1085-1475 m a.s.l.

**26 June – *Travel to Berat* (general area D)**

On the way from Korça to Berat, several stops were made to survey canyon systems and the Devolli River, across serpentine and carbonate rocks at 160-790 m a.s.l.

**27 June – *Tomorri Mountains* (general area E)**

The Tomorri Mountains, limestone with localized flysch overlay, were explored between 1230 and 2345 m a.s.l. Sites included open pastures, scree slopes, and rocky habitats.

**28 June – *Travel to Kukës* (general area F) p.p.**

The group travelled northeast to Kukës. Along the route, mixed *Quercus forests* and intensively grazed meadows near Qark Kukës were examined at 405 m a.s.l.

**29 June – *Pashtriku Mountain* (general area F p.p.)**

Pashtriku Mountain, on the border with Kosovo, was surveyed. Observations included mountain meadows, shrublands, and limestone rock outcrops at 795-1810 m a.s.l.

**30 June – *Travel to Valbona* (general area G)**

The group moved north toward Valbona, with stops to document stony slopes, shrublands, and rivulet habitats at 370-700 m a.s.l.

**1 July – *Valbona Valley* (general area H p.p.)**

The Valbona Valley was explored on limestone substrates below the Çet Harusha peak (2422 m). Sites included *Pinus peuce* woodlands, meadows, and open dwarf-shrub formations at 1180-2000 m a.s.l.

**2 July – *Valbona Valley and Valbona Pass* (general area H p.p.)**

Survey continued in the Valbona Valley and Valbona Pass, focusing on *Fagus sylvatica* forests with associated meadows, rock outcrops, and limestone scree, at 1340-1390 m a.s.l.

**3 July – *Return to Tirana***

The group returned to Tirana via the Lake Koman ferry crossing. No plants were collected during that final transfer.

## 2. The geology, climate, floristics, and vegetation of the visited areas

by ERMELINDA GJETA

Albania, with an area of 28,748 km<sup>2</sup> and average elevation of 708 m above sea level, is located in the southwestern part of the Balkan Peninsula. It borders with Montenegro in the northwest, Kosovo in the northeast, North Macedonia in the east and Greece in the south, while the Strait of Otranto separates it from Italy in the west. Its territory is part of the Mediterranean Alpine region and falls within the subtropical Mediterranean climate zone. (Qiriazhi 2001; Barina & al. 2017).

The Albanides portion of the Apennine-Dinaride-Albanide-Hellenide mountain arc presents a complex geological structure, characterized by folding and faulting that took place from the late Paleozoic to the Cenozoic. The neotectonic stage of Albania began in the Middle Miocene. The Albanides are divided into:

- Inner Albanides, dominated by magmatic rocks, include: the Korab, Gashi, and Mirdita zones, as well as the intermontane depressions;
- Outer Albanides, which include: the Albanian Alps, Krasta-Cukali, Kruja, Ionian, and Sazani zones, and the Foreland Depression (also known as the Peri-Adriatic Depression). (Qiriazhi 2001).

The country has a variety of geological formations, its mountains developed during different ages (Qiriazhi 2001):

- Miocene-Pliocene-Quaternary: the mountainous relief;
- Pliocene-Quaternary: the Mati depression, the Upper Shkumbin valley, and the hills of the Western Lowland (or Coastal Plain);
- Quaternary: the plains of the Western Lowland, as well as the depressions and fluvio-lacustrine basins of the river valleys.

Based on hypsometry, the following regions are distinguished in Albania:

- Mountain regions: characterized by high relief energy, significant dissection, steep slopes, and high precipitation (1,400-2,500 mm per year);
- Depressions (Basins): such as Great Prespa, Kolonja, Tropoja, etc.;
- Hill region;
- Western Lowland;
- Coastal region.

The palaeogeography of Albania, the complex evolution of its relief, and its lithological diversity, which is characterized by the presence of terrigenous, magmatic and limestone formations, along with other factors, determine a wide variety of both horizontal and vertical land forms, such as mountains, hills, plains, depressions, and valleys. The country's highest peak is Mount Korab (2764 m) in the Korab Mts. followed by the Gramoz Mts. (2523 m), Tomor Mts. (2417 m) etc. (Qiriazhi 2001; Barina & al. 2017).

Albania is characterized by a Mediterranean climate, with mild, humid winters and hot, dry summers. These characteristics apply best in the coastal area, while further inland, the climate assumes continental features. Four Mediterranean climatic zones can be defined (lowland, hilly, sub-mountainous, and mountainous), with 13 sub-zones. The average annual temperatures vary from 14°C in the northeast to 17-18°C in the coastal region. The average annual precipitation is c. 1,480 mm, with a very irregular spatial distribution. Precipitation occurs mainly in the form of rain, whereas snow prevails in the

high mountains of the interior and in the country's eastern parts (Qiriazhi 2001, Pils 2016, Barina & al. 2017).

Albania's pronounced hydrographic diversity is borne out by a rich hydrographic network, the rivers are mostly short, with drainage basins that discharge into the Adriatic and Ionian Seas. River courses show a steep gradient, linked to petrographic diversity and the high elevation difference between their upper and lower reaches. The hydrographic network, with a total length of 60,323 km, is remarkably dense, with 1.7 km per km<sup>2</sup> per average. The water discharge into the seas, averaged over many years, is of c. 41.2 km<sup>3</sup> per year, a figure that ranks Albania among the countries with high water resources (Qiriazhi 2001). Several Albanian rivers retain close-to-natural flow regimes, particularly the Vjosa River, considered to be one of the last free-flowing large rivers in Europe. The country also includes important natural lakes, such as Lake Shkodra, Lake Ohrid, and Lake Prespa, which are of high ecological and biogeographical interest. Seasonal variation in discharge, governed by precipitation patterns and snowmelt, strongly influences sediment transport and flooding processes, affecting aquatic ecosystems (Miho & al. 2013).

In Albania, four main soil types can be distinguished that, following the principle of vertical zonation, correspond to four vegetation zones:

1. mountain meadow soils (alpine pastures),
2. brown forest soils (beech and conifer zone),
3. brown soils (oak zone), and
4. grey-brown soils (forest zone and Mediterranean scrub).

In addition, depending on specific geological and hydrological conditions, other soil types are found, such as: alluvial soils (in river valleys), saline soils, and marsh soils (Qiriazhi 2001).

All the above-mentioned geological, climatic, orographic, geographical etc. features result in a high diversity of flora and vegetation. The Albanian flora includes c. 280 endemic and subendemic species and comprises c. 3629 vascular plant species, 960 genera and 175 families, which represents about 30 % of Europe's total flora (Meco & Mullaj 2015). The vegetation of Albania, which took shape since the Tertiary period, shows many Mediterranean and Central European floristic elements. It is characterized by the presence of elements from four main phytoclimatic zones:

1. Mediterranean scrub,
2. oak forests,
3. beech forests, and
4. alpine pastures.

Maritime sand dunes, saline marshes and grasslands are found in the lowland areas, along and near the Adriatic and Ionian Seas, characterised by *Pancratium maritimum*, *Eryngium maritimum*, *Echinophora spinosa*, *Juniperus oxycedrus* subsp. *macrocarpa*, *Tripolium pannonicum*, *Halimione portulacoides*, *Limbarda crithmoides* subsp. *longifolia*, *Juncus acutus*, etc., while Mediterranean forests with *Pinus halepensis*, and *P. pinea* are mainly found along the coastal shoreline. The hills are dominated mostly by woods and scrub, with *Cistus* spp., *Erica arborea*, *Phlomis fruticosa*, *Phillyrea latifolia*, *Quercus* spp., etc. Between elevations of 400 and 1250 m extends the oak zone, dominated by mesophilic (in the north and northeastern part of the country), xerophilic (in its southern part) and mesoxerophilic oaks (in its central part). Most widespread are pure or mixed forests with *Quercus petraea*, *Q. frainetto*, *Q. cerris*, *Carpinus betulus*, etc.

The Albanian mountain system (with outcrops of limestone, serpentine, flysch, granite, etc.) is formed by two major mountain ranges, the Dinaric (in the northwestern part of the country) and the Pindos Mountain Range (in its southeastern part). In these mountains pure, mature or mixed forests of *Fagus sylvatica*, *Abies alba*, *A. borisii-regis*, *Pinus leucodermis*, *P. peuce*, etc. are stocking.

The alpine grasslands, above the tree-line, is mostly formed by associations of *Festuca* spp., *Sesleria* spp., *Poa* spp., and *Phleum* spp. These are also home to:

1. Arctic-Alpine species (*Petasites doerfleri*, *Arctostaphylos alpinus*, *Primula minima*, etc.);
2. Central European and Balkan elements (*Anemone ranunculoides*, *Pedicularis verticillata*, *Cystopteris alpina*, etc.);
3. Continental, Anatolian and Pontic taxa (*Agropyron cristatum*, *Hyacinthella leucophaea*, *Echium russicum*, *Stipa tirsia*, etc.);
4. Mediterranean taxa (*Equisetum palustre*, *Ajuga orientalis*, *Arisarum vulgare*, *Melilotus graecus*, etc.) (Paparisto & al. 1988; Barina & al. 2017).

### 3. The vascular plants collected during the Iter in Albania

by WERNER GREUTER

#### **Introduction**

To get a feel of what OPTIMA's Itinera Mediterranea are about and what makes these scientific undertakings so valuable and unique, it is a good idea to peep into the account of one of the previous Itinera; perhaps best in that on Iter Mediterraneum VII to Peloponnisos in Greece (Greuter 2012). There, you will find synthetic information on each of the first eleven Itinera, with relevant bibliography, if any. The scientific results of the Twelfth Iter to Tunisia, in 2014, were published in 2015 (Domina & al. 2015a, 2005b). In this introduction, I will try and convey an idea of how the collecting work was organised, so as to hopefully catch the interest of potential participants to any further edition of the Itinera.

The Itinera Mediterranea were created in 1986 by OPTIMA (Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area), following the idea and initiative of Prof. Benito Valdés of Sevilla, Spain, who has been the manager and *spiritus rector* of the relevant OPTIMA Commission for several decades (Valdés 1988a, 1988b).

The initial idea was to organise an Iter every year, a schedule that had to be abandoned after the fifth edition, of 1992, as the work for organising an Iter proved to be increasingly heavy, and the complexities of logistics increased. Since 1994, the Itinera are taking place at irregular intervals, as and when an opportunity presents itself. The next Iter, No. 14, was scheduled to take place in 2022 in the Caucasus (Georgia) in 2022, but had unfortunately to be postponed due to the sadly known geopolitical events in the wider target area.

The declared purpose of the Itinera Mediterranea, from the onset, has been: (a) to study and collect plants from poorly known areas, (b) to study areas which, while perhaps locally well known, have been but little explored by botanists at large, and (c) to enable young Mediterranean botanists to acquire field experience under the guidance of their elders. To

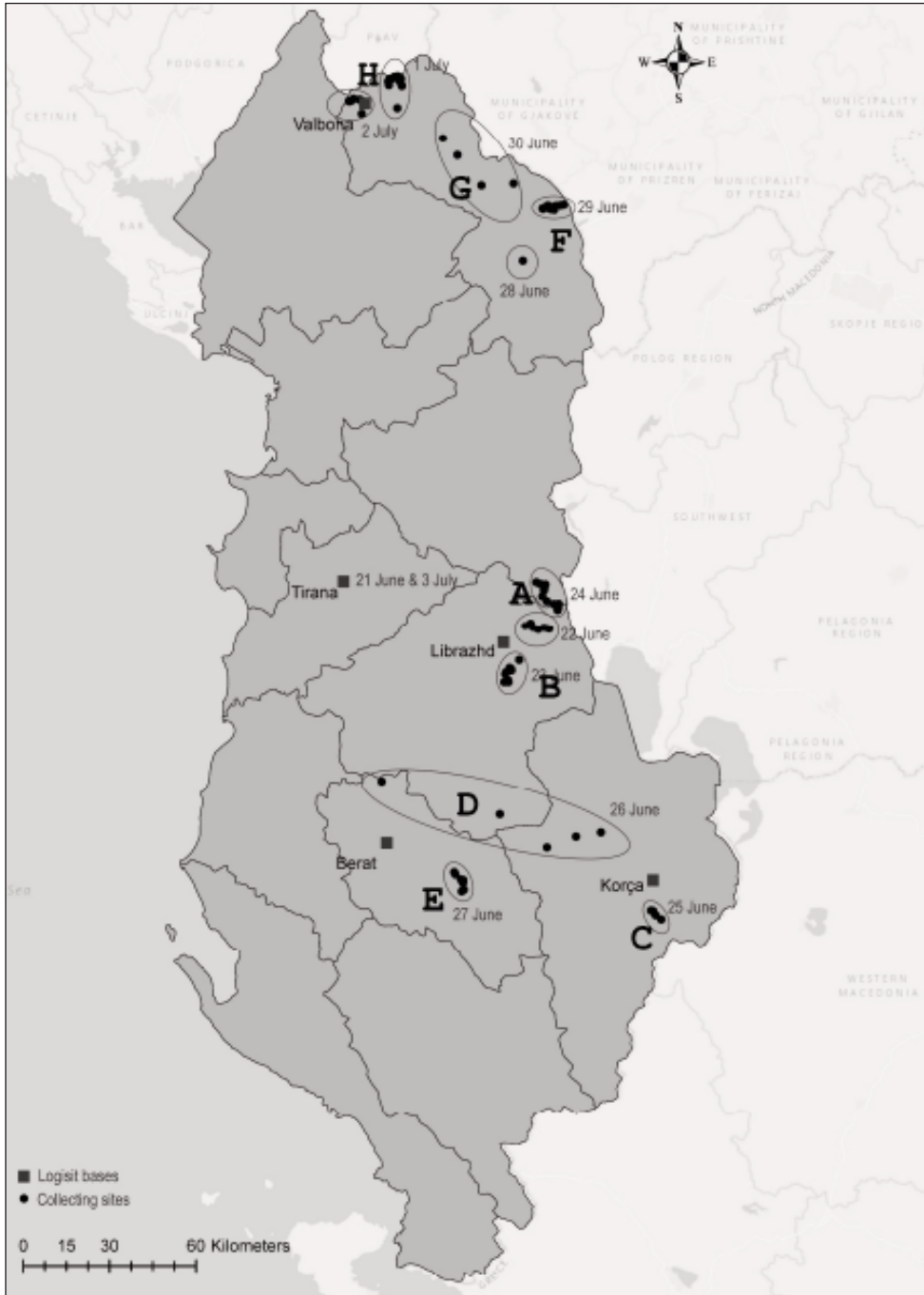


Fig. 3. Map of Albania, showing the territorial units (A-H) and the collecting localities (unnumbered – see Figs. 4-5 for numbering).

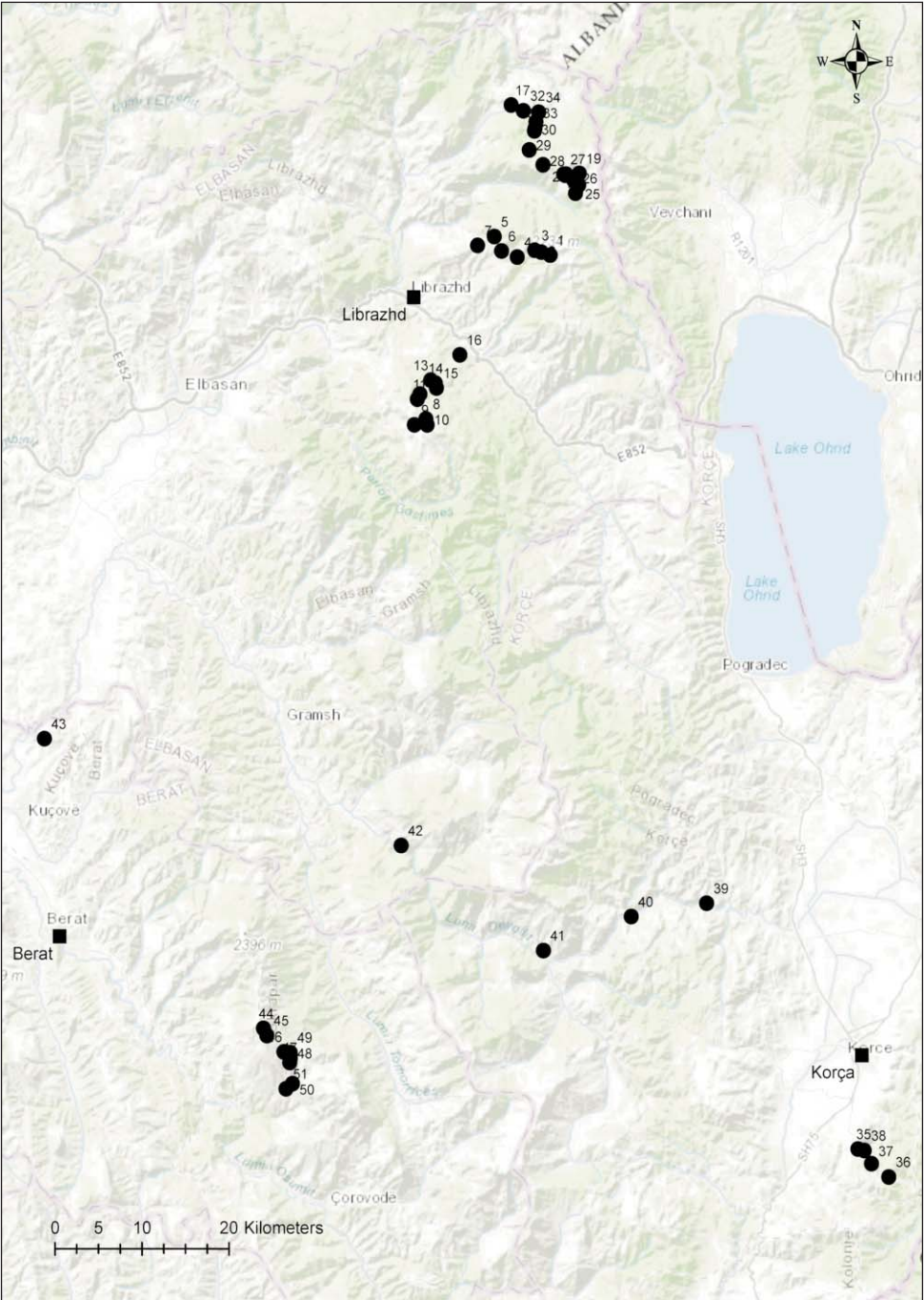


Fig. 4. Lower partial map, showing the territorial units (A-E) and the corresponding collecting localities (numbered 1-51).

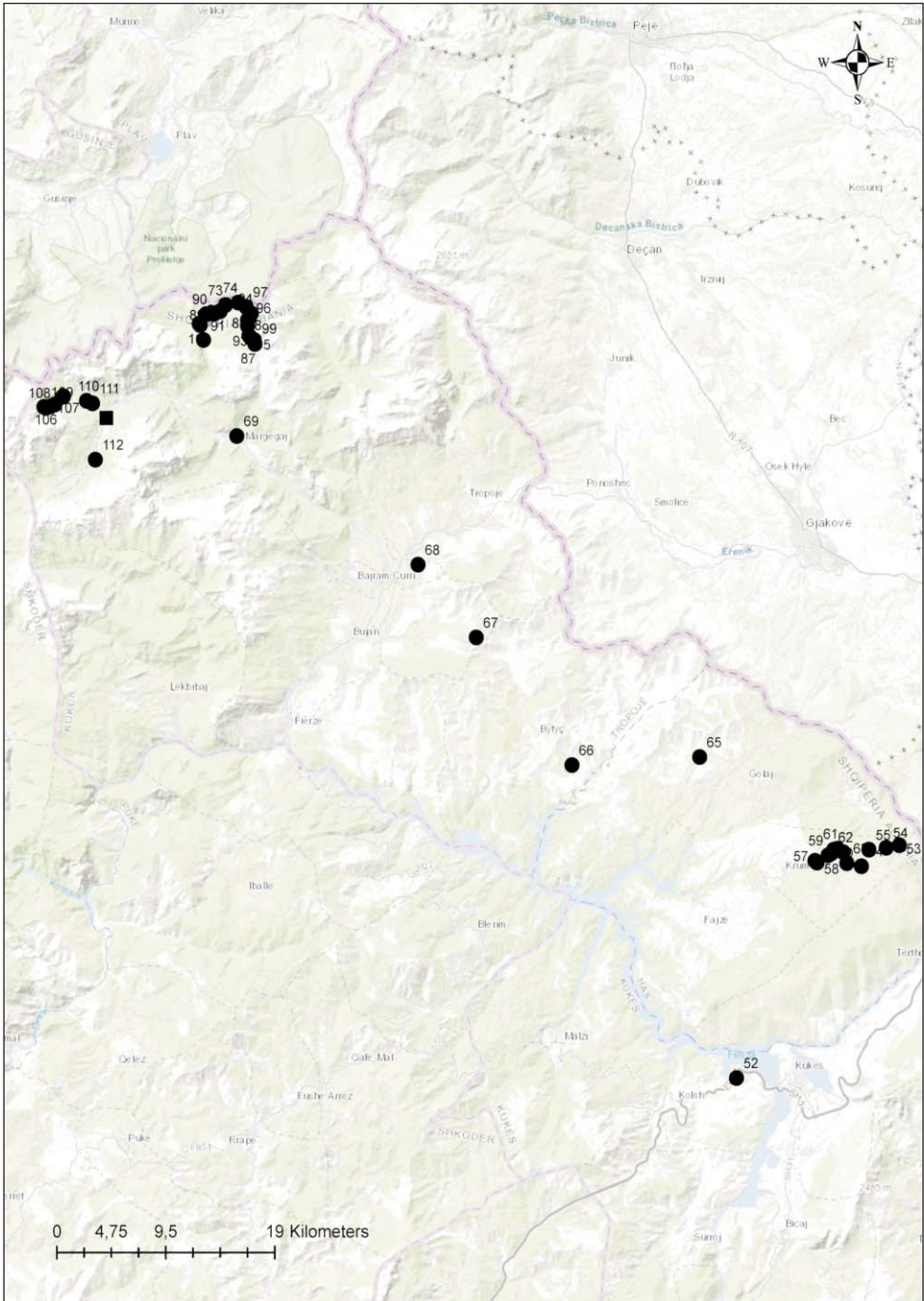


Fig. 5. Upper partial map, showing the territorial units (F-H) and the corresponding collecting localities (numbered 52-112).

promote the last-named aspect, half the places for participants (6 for a total of 12) were reserved for “junior” botanists, who were partly subsidised by the “senior” participants: the juniors payed, among them, for one third of the expedition costs, whereas two thirds were borne by the seniors. In addition, small grants were offered to junior participants by OPTIMA. The role of the Itinera in serving as a platform on which experienced field botanists can transmit their expertise to the younger generations is, in my opinion, their prime and most valuable feature.

An aspect of the Itinera that is often under-estimated is the handling of the sheer bulk of the new material collected. Up to the present day, the number of different gatherings made during the 13 Itinera adds up to well over 22,000, or >2,000 number per iter on average. Considering that, as a rule, ten specimens for each gathering were collected, and even taking into account the fact that this ideal number of parts, while often exceeded, was not consistently attained. Based on the average rate of 7.8 specimens per gathering achieved in the Albanian Iter, the total harvest can be estimated at ca. 150,000 specimens of vascular plants. Sets were routinely distributed to the herbaria of the institution from where the participating members originated; this makes for a substantial set of critically identified plants available, as a standard for comparison, at a large number of Herbaria throughout, but not limited to, the Mediterranean area. The two main and most complete sets were deposited, one in the host country, the other at the seat of the OPTIMA Secretariat (initially Geneva, then Berlin, and more recently Palermo).

The present account includes vascular plants and bryophytes. This material was collected by F. M. Raimondo and G. Domina and studied by P. Campisi and Mattia Letizia Marino, Palermo. A paper on *Heteroptera* (*Insecta*, *Hemiptera*) collected during the expedition by Attilio Carapezza and kept in his private collection, is in preparation; in it about fifteen species are recorded from Albania for the first time.

The way in which the collecting was organised and the material handled and processed has not so far been fully described. In Albania, the drying of the plants was achieved by means of hot air (at a temperature below 50 °C), generated by small heaters with powerful ventilator fans and channelled via tubes of heat-resistant plastic foil through the plant presses, stacked with corrugated cardboard in addition to newspapers. The processed is illustrated in (Domina & al. 2015b: 10, Fig. 4 and 5). With minor exceptions, the plants so treated dry completely overnight. Yet, the number of four heaters is insufficient to cope with a full daily harvest; the heater number is limited, however, by available transport and by the power capacity at each camp site.

Each member of the team was responsible for collecting a pre-determined set of plant families; by this arrangement, duplications in gathering of the same plants was minimised, though not eliminated. The same species being gathered independently by two or three participants at the same site explains the high number of duplicates (up to 32 and in one case, 44) of individual gatherings, as a botanist’s heart bleeds at throwing away well gathered, valuable plant material.

Ernst Vitek as the excursion’s “secretary” undertook the immediate recording, on his laptop, of all locality details, including GPS co-ordinates and elevation records, and of potentially ephemeral plant features such as flower colour and estimated height. Collection numbers were assigned on the spot and recorded immediately in the database, while being

noted simultaneously on all newspaper wrappers, thus excluding the risk of labelling errors. The pressing and numbering of the plants, a collective task often extending far into the night, was done by individual localities. If plants from a given locality turned up after the dealing with that locality had been concluded, they were assigned the last number of their locality with a letter added at the end (the same procedure was used in the rare cases in which a collection turned out to be mixed). The presence of such "lettered numbers" explains the fact that the total number of gatherings (1750) is higher than the running numbering, that ends at 1691.

At the end of the expedition, the whole collected material, in excess of 80 parcels, was loaded upon the van of the Orto botanico, University of Palermo, and transported by sea (Durrës-Bari) and land to Palermo, with Giovanni Scafidi as the driver. In Palermo, Filippo Scafidi, jr. (contracted by the Herbarium Greuter Foundation), and myself reordered the specimens in numerical sequence and redefined the parts (specimens), a time-consuming labour that should not be under-estimated. I then proceeded to the identification of the material with the aid of local and regional Floras and manuals and with the help of specialists for particular, critical groups: *Aria* (FMR = F. M. Raimondo, Palermo), *Cardamine* s. str. (excl. *Dentaria*) (KM = Karol Marhold, Bratislava), *Festuca* and *Poa* (RK = Rainer Karl, Köflach, Austria), *Hieracium* and *Pilosella* (GG = Günter Gottschlich, Tübingen), *Orobanchaceae* (*Orobanche* and *Phelipanche*) (GD = Giannantonio Domina, Palermo), *Rosa* (EL = Edda Lattanzi†, Roma), and *Viola* (ME = Matthias Erben, München).

### ***Specimen enumeration***

Within each of the four principal groups of higher plants (vascular cryptogams, gymnosperms, dicotyledons, monocotyledons) the arrangement is alphabetical by families, then genera, then species. The delimitation and nomenclature of families follows NCU-3 (Greuter & al. 1993, with the exception of *Morinaceae*, here segregated from *Dipsacaceae*), that of species and subspecies conforms to that in Med-Checklist (Greuter & al. 1984, 1986, 1989; Greuter 2008), or Euro+Med Plantbase (Anonymous 2006+), allowing for deviations when justified by subsequent publications. Infra-sub-specific taxa are recognised only exceptionally. The name of the taxon is followed, on the same line, by the general areas or territorial units (lettered A to H, as defined on p. 7 and Fig. 3) and the altitudinal range within which it has been collected, based on the label data. On a separate line, the individual specimens are enumerated in the format N: XXXX [Y], where N stands for the locality number (1 to 112, as in Table 1), XXXX for the gathering number (0001 to 1691), and Y for the number of duplicates collected, followed by the initials of the identifier (when other than myself; see above for the list of specialists involved).

A species new to science is described and named in a separate chapter, at the end.

**Cryptogamae vasculares***Equisetaceae*

*Equisetum arvense* L. – **A, H** – 565-1265 m

**31:** 0539 [13]; **69:** 1372 [14].

*Equisetum palustre* L. – **A** – 1265 m

**31:** 0539a [0], 0541 [12].

*Equisetum telmateia* Ehrh. – **D** – 160 m

**43:** 0826 [18].

*Equisetum variegatum* F. Weber & D. Mohr (aff.) – **C, H** – 1965 80-1085 m

**35:** 0585 [7], 0608 [5]; **80:** 1466 [10].

*Ophioglossaceae*

*Botrychium lunaria* (L.) Sw. – **A** – 1655 m

**28:** 0521 [1].

*Polypodiaceae* (s.l.)

*Asplenium adiantum-nigrum* subsp. *serpentini* (Tausch) Heufl. – **A, C** – 1085-2010 m

**2:** 0072 [19]; **6:** 0173 [3]; **35:** 0602 [6].

*Asplenium ceterach* L. – **B, C, H** – 1085-1340 m

**15:** 0363 [4]; **35:** 0619 [2]; **103:** 1609 [4].

*Asplenium fissum* Willd. – **A, H** – 1340-1880 m

**9:** 0268 [4]; **103:** 1592 [13]; **108:** 1658 [32]

*Asplenium ruta-muraria* L. – **A, H** – 1525 m

**24:** 0457 [9]; **103:** 1610 [3].

*Asplenium septentrionale* (L.) Hoffm. – **A, H** – 1250-2000 m

**33:** 0571 [7]; **99:** 1568 [3].

*Asplenium trichomanes* L. – **A, E, H** – 1340-1935 m

**9:** 0253 [7]; **22:** 0421 [3]; **46:** 0942 [1]; **103:** 1611 [10].

*Asplenium viride* Huds. – **A** – 1655-2010 m

**2:** 0090 [16]; **9:** 0229 [5]; **28:** 0520 [9].

*Athyrium filix-femina* (L.) Roth – **A, H** – 1740-2010 m

**2:** 0093 [13]; **93:** 1545 [7].

*Cystopteris fragilis* (L.) Bernh. subsp. *fragilis* – **A, B** – 1525-1880 m

**9:** 0276 [13]; **11:** 0316 [15], 0318 [4]; **22:** 0426 [5]; **24:** 0458 [2]; **28:** 0511 [5].

*Cystopteris fragilis* subsp. *alpina* (Lam.) Hartm. – **E** – 2265 m

**45:** 0922 [7].

*Dryopteris filix-mas* (L.) Schott – **A, B, H** – 1275-2010 m

**2:** 0089 [4], 0089a [4], 0092 [1]; **14:** 0355 [14]; **23:** 0455 [24]; **103:** 1607 [8].

*Dryopteris villarii* subsp. *pallida* (Bory) Heywood – **A, H** – 1340-1670 m

**26:** 0477 [4]; **103:** 1608 [16].

*Gymnocarpium robertianum* (Hoffm.) Newman – **H** – 565-1340 m

**69:** 1380 [4]; **103:** 1591 [7].

*Paraceterach marantae* (L.) R. M. Tryon – **C, D** – 695-1085 m

**35:** 0596 [32]; **40:** 0792 [10].

*Polystichum aculeatum* (L.) Roth – **H** – 1340 m

**103:** 1606 [6].

*Polystichum lonchitis* (L.) Roth – **A, B, E** – 1630-2265 m

**2:** 0091 [1]; **9:** 0218 [14]; **11:** 0334 [2]; **26:** 0469 [3]; **28:** 0521a [15]; **45:** 0921 [2].

*Pteridium aquilinum* (L.) Kuhn – **A** – 1250 m

**6:** 0159 [9].

## Gymnospermae

### Cupressaceae

*Juniperus communis* subsp. *hemisphaerica* (C. Presl) Nyman – **E** – 2345 m

**44:** 0871 [15].

*Juniperus communis* subsp. *nana* Syme – **H** – 1450-1550 m

**108:** 1644 [8].

*Juniperus oxycedrus* L. – **C** – 405-1250 m

**6:** 0161 [5]; **35:** 0624 [14]; **52:** 1019 [14].

### Pinaceae

*Abies alba* Mill. – **A, H** – 1340-1525 m

**27:** 0479 [20]; **103:** 1601 [9].

*Abies borisii-regis* Mattf. – **A** – 1515-1600 m

**19:** 0385 [10].

*Picea abies* (L.) H. Karst. – **H** – 1060 m

**112:** 1691 [6].

*Pinus nigra* J. F. Arnold – **H** – 1450-1550 m

**108:** 1651 [5].

*Pinus nigra* J. F. Arnold – **A, D** – 550-1250 m

**6:** 0188 [8]; **42:** 0821 [11].

*Pinus peuce* Griseb. – **H** – 1815-2000 m

**78:** 1454 [11]; **85:** 1533 [7].

*Pinus sylvestris* L. – **E** – 2345 m

**44:** 0860 [10].

**Dicotyledones***Acanthaceae*

*Acanthus hungaricus* (Borbás) Baen. – F – 1120-1145 m

**64:** 1241 [14].

*Aceraceae*

*Acer campestre* L. – D – 790 m

**39:** 0746 [16].

*Acer heldreichii* Orph. – H – 1450-1550 m

**108:** 1641 [6].

*Acer monspessulanum* L. – F – 1120-1145 m

**64:** 1246 [13].

*Acer obtusatum* Willd. – B – 1275 m

**14:** 0353 [14].

*Acer pseudoplatanus* L. – A – 1525 m

**24:** 0459 [9], 0461 [2].

*Acer tataricum* L. – D, F – 405-790 m

**39:** 0721 [19]; **52:** 1032 [13].

*Anacardiaceae*

*Cotinus coggygria* Scop. – C – 108 m

**35:** 0621 [17].

*Pistacia terebinthus* L. – D – 695 m

**40:** 0795 [11].

*Aristolochiaceae*

*Aristolochia rotunda* L. – F – 405 m

**52:** 0996 [2].

*Asclepiadaceae*

*Vincetoxicum hirundinaria* Medik. (cf.) – H – 1340 m

**103:** 1604 [10].

*Vincetoxicum hirundinaria* subsp. *nivale* (Boiss. & Heldr.) Markgr. – A – 1670 m

**23:** 0445 [8].

*Betulaceae*

*Alnus glutinosa* (L.) Gaertn. – **G** – 505 m

**66:** 1312 [13].

*Betula pendula* Roth – **G** – 700-1340 m

**67:** 1350 [20]; **103:** 1594 [10].

*Boraginaceae*

*Alkanna scardica* Griseb. – **A** – 1740-2010 m

**2:** 0032 [3].

*Anchusa azurea* Mill. – **D** – 695 m

**40:** 0783 [10].

*Anchusa officinalis* L. – **C** – 1085 m

**35:** 0576 [7].

*Cerintho minor* subsp. *auriculata* (Ten.) Domac – **D** – 790 m

**39:** [22].

*Cynoglossum officinale* L. – **A, B, C, F** – 1165-1880 m

**9:** 0215 [2]; **11:** 0321 [4]; **38:** 0702 [10]; **55:** 1096 [3].

*Echium italicum* L. subsp. *italicum* – **D** – 790 m

**39:** 0747 [7].

*Echium italicum* subsp. *biebersteinii* (Lacaita) Greuter & Burdet – **D** – 790 m

**39:** 0747a [0].

*Echium vulgare* L. – **A, D, H** – 565-1275 m

**32:** 0567 [11]; **39:** 0755 [12]; **69:** 1396 [2].

*Halacsya sendtneri* (Boiss.) Dörfel. – **F** – 980 m

**59:** 1168 [22].

*Lappula barbata* (M. Bieb.) Gürke – **D** – 695 m

**40:** 0779 [1].

*Lappula squarrosa* (Retz.) Dumort. – **H** – 565 m

**69:** 1381 [10].

*Lithospermum officinale* L. – **B, H** – 1060-1550 m

**12:** 0344 [2]; **112:** 1689 [10].

*Moltkia petraea* (Tratt.) Griseb. – **H** – 565m

**69:** 1387 [14].

*Myosotis nemorosa* Besser – **H** – 1540 m

**73:** 1421 [12].

*Myosotis suaveolens* Willd. – **A, E** – 1670-2010 m

**2:** 0075 [7]; **9:** 0210 [4], 0227 [6]; **26:** 0475 [3]; **46:** 0950c [5].

*Myosotis sylvatica* subsp. *cyanea* (Hayek) Vesterg. – **A, E, H** – 1640-2345 m

**3:** 0123 [10]; **44:** 0886 [11]; **46:** 0950d [7]; **78:** 1451 [14].

*Onosma echioides* (L.) L. – **C, F** – 1015-1100 m

**35:** 0579 [9]; **56:** 1154 [5].

*Pulmonaria officinalis* L. – **C, D** – 790-1475

**36:** 0674 [6]; **39:** 0742 [3].

*Symphytum tuberosum* subsp. *angustifolium* (A. Kern.) Nyman – **A, C** – 1475-1880 m  
**9:** 0231 [4]; **36:** 0670 [8].

### *Buxaceae*

*Buxus sempervirens* L. – **A, F, G** – 405-1250 m

**6:** 0177 [10]; **52:** 1011 [12]; **64:** 1206A° [10]; **66:** 1305 [5], 1310 [0].

### *Campanulaceae*

*Asyneuma canescens* (Waldst. & Kit.) Griseb. & Schenk – **F, G** – 700-1320 m

**55:** 1090 [1]; **67:** 1356 [3].

*Asyneuma limoniifolium* (L.) Janch. – **B, C, E, F** – 1085-1935 Mm

**13:** 0349 [9]; **35:** 0637 [10]; **45:** 0912 [7]; **46:** 0937 [6]; **55:** 1099 [2]; **64:** 1242-[5].

*Campanula cervicaria* L. – **A, F** – 1120-1250

**6:** 0176 [17]; **64:** 1216 [3], 1216A [3].

*Campanula foliosa* Ten. – **C, H** – 1475-1880 m

**36:** 0687 [13]; **86:** 1530 [5].

*Campanula glomerata* L. – **A, C, F, G** – 700-1880 m

**9:** 0239 [6]; **36:** 0685 [6]; **54:** 1082 [11]; **67:** 1357 [1].

*Campanula hawkinsiana* Hausskn. & Heldr. – **A, C, D** – 695-2010 m

**2:** 0050 [5] **35:** 0638 [14]; **40:** 0772 [22].

*Campanula lingulata* Waldst. & Kit. – **D** – 550 m

**42:** 0808 [9].

*Campanula persicifolia* L. – **H** – 1340 m

**103:** 1586 [6].

*Campanula pichleri* Vis. – **A, B, H** – 1630-1720 m

**11:** 0327 [11]; **26:** 0470 [4]; **28:** 0514 [3]; **77:** 1444 [7].

*Campanula rotundifolia* L. (*Campanula albanica* Witasek) – **H** – 1450-1550 m

**108:** 1671 [0].

*Campanula sparsa* Friv. – **C** – 1475 m

**36:** 0690 [17].

*Campanula spatulata* Sm. – **A, E** – 1550-1935 m

**4:** 0141 [5]; **8:** 0199 [5]; **9:** 0244 [7]; **21:** 0417 [6]; **46:** 0945 [3].

*Edraianthus graminifolius* (L.) A. DC. (s.l.) – **A, E, F, H** – 1450-2345 m

**9:** 0211 [22]; **28:** 0509 [5]; **44:** 0905 [1]; **53:** 1048 [6]; **108:** 1627 [19].

*Jasione heldreichii* Boiss. & Orph. – **H** – 1930-1970 m

**79:** 1458 [4].

*Phyteuma orbiculare* L. – **H** – 1690-1965 m

**76:** 1435 [7]; **80:** 1462 [2].

*Caprifoliaceae* (s.l.)

- Lonicera alpigena* L. – **H** – 1450-1550 m  
**108:** 1642 [10].
- Lonicera caprifolium* L. – **F** – 795 m  
**57:** 1162 [3].
- Lonicera formanekiana* Halácsy – **A** – 1670 m  
**23:** 0451 [11].
- Lonicera xylosteum* L. – **H** – 1340-1550 m  
**103:** 1599 [18]; **108:** 1648 [10].
- Sambucus ebulus* L. – **F** – 405 m  
**52:** 1005 [11].
- Viburnum lantana* L. – **A, H** – 1340-1670 m  
**23:** 0453 [4]; **103:** 1602 [9].

*Caryophyllaceae*

- Arenaria conferta* subsp. *serpentini* (A. K. Jacks.) Strid – **A** – 1740-2010 m  
**2:** 0076 [4].
- Arenaria leptoclados* (Rchb.) Guss. – **A, D** – 790-1690 m  
**25:** 0462 [7]; **39:** 0731 [3].
- Arenaria serpyllifolia* L. – **F** – 1320 m  
**55:** 1118 [7].
- Cerastium brachypetalum* subsp. *tauricum* (Spreng.) Murb. – **A, E** – 1325-1880 m  
**9:** 0228 [17]; **25:** 0463 [3]; **50:** 0976 [7].
- Cerastium decalvans* Schloss. & Vuk. – **A, E, F** – 1600-2345 m  
**9:** 0264 [13], 0266 [2]; **23:** 0449 [10]; **25:** 0465 [6]; **44:** 0865 [9]; **46:** 0936 [9]; **54:** 1058 [4], 1060 [15].
- Cerastium grandiflorum* subsp. *serpentini* F. K. Mey – **G, H** – 700 m  
**67:** 1341 [15]; **69:** 1391A [9].
- Cerastium moesiacum* Friv. – **H** – 2000 m  
**82:** 1513 [20].
- Cerastium rectum* Friv. subsp. *rectum* – **A** – 1640 m  
**3:** 0121 [11].
- Cerastium semidecandrum* L. – **A** – 1655 **28:** 0518 [18].
- Cerastium smolikanum* Hartvig – **A** – 1740-2010  
**1:** 0031 [1]; **2:** 0100 [1], 0103 [1].
- Dianthus carthusianorum* L. (s.l.) – **H** – 1650-1880 m  
**95:** 1551 [4].
- Dianthus cruentus* Griseb. – **G** – 700 m  
**67:** 1333 [3].
- Dianthus deltooides* L. subsp. *deltooides* – **A** – 1685-1880 m  
**9:** 0252 [8].
- Dianthus giganteus* d'Urv. – **B, F, G** – 700-1600 m

- 13:** 0345 [3]; **54:** 1062 [7]; **64:** 1253 [3]; **67:** 1361 [6].  
*Dianthus petraeus* subsp. *minutiflorus* (Halácsy) Greuter & Burdet – **A, E, F** – 1685-2010 m  
**2:** 0082 [2]; **9:** 0230 [13]; **46:** 0934 [9]; **53:** 1050 [1].  
*Dianthus pinifolius* subsp. *serbicus* Wettst. – **C** – 1085 m  
**35:** 0625 [18].  
*Dianthus sylvestris* subsp. *bertisceus* Rech. f. – **H** – 1340-1550 m  
**103:** 1575 [1]; **108:** 1639 [18].  
*Dianthus sylvestris* Wulfen subsp. *sylvestris* – **E** – 1325 m  
**50:** 0966 [14].  
*Drypis spinosa* L. subsp. *spinosa* – **H** – 1135 m  
**111:** 1688 [16].  
*Herniaria glabra* L. – **A, F** – 405-2010 m  
**2:** 0104 [0]; **52:** 1025 [4].  
*Herniaria incana* Lam. – **C, F** – 1120-1475 m  
**36:** 0692 [4]; **64:** 1198 [3].  
*Minuartia attica* (Boiss. & Spruner) Vierh. – **A, E, F** – 1786-2345 m  
**2:** 0078 [3], 0101 [1]; **9:** 0265 [5], 0267 [3]; **44:** 0864 [11], 0906 [2]; **55:** 1114 [5].  
*Minuartia baldaccii* (Halácsy) Mattf. subsp. *baldaccii* – **A** – 1275-2010 m  
**2:** 0102 [3]; **4:** 0144 [4]; **5:** 0162a [3].  
*Minuartia bosniaca* (Beck) K. Malý – **F** – 1320 m  
**55:** 1114A [0].  
*Minuartia garckeana* (Boiss.) Mattf. – **G** – 505-520 m  
**65:** 1299 [2]; **66:** 1307a [4].  
*Moehringia trinervia* (L.) Clairv. – **A, B** – 1630-1710 m  
**11:** 0333 [3]; **22:** 0422 [1].  
*Paronychia albanica* Chaudhri – **E, F** – 1600-2345 m  
**44:** 0888 [6]; **54:** 1052 [7].  
*Petrorhagia illyrica* subsp. *haynaldiana* (Janka) P. W. Ball & Heywood – **F** – 1120-1145 m  
**64:** 1196 [10].  
*Petrorhagia obcordata* (Margot & Reut.) Greuter & Burdet – **D** – 790 m  
**39:** 0733 [4].  
*Petrorhagia saxifraga* (L.) Link – **D, F** – 405-1100 m  
**39:** 0730 [12], 0771n [12]; **52:** 1026 [9], 1028 [4]; **56:** 1150 [3].  
*Sagina procumbens* L. – **A, F** – 405-1525 m  
**24:** 0460\* [2]; **52:** 1027 [4].  
*Sagina subulata* (Sw.) C. Presl – **A, H** – 1525-2000 m  
**24:** 0456 [1], 0460 [2]; **87:** 1536 [2]; **88:** 1540 [1].  
*Saponaria bellidifolia* Sm. – **E** – 1935 m  
**46:** 0924 [1].  
*Scleranthus perennis* L. subsp. *perennis* – **H** – 1930-2000 m  
**79:** 1459 [3]; **82:** 1494 [9].  
*Scleranthus perennis* subsp. *marginatus* (Guss.) Nyman – **A** – 1685 m  
**8:** 0197 [1].  
*Silene armeria* L. – **A, D** – 790-1275 m

- 32:** 0561 [15]; **39:** 0771m [7].  
*Silene bupleuroides* subsp. *staticifolia* (Sm.) Chowdhuri – **C, E** – 1085-1325 m  
**35:** 0626 [8]; **50:** 0967 [12].  
*Silene coronaria* (L.) Clairv. – **D** – 790 m  
**39:** 0771k [3].  
*Silene fabarioides* Hausskn. – **C** – 1085 m  
**35:** 0628 [16].  
*Silene italica* (L.) Pers. subsp. *italica* – **C, D** – 790-1475 m  
**36:** 0671 [3]; **39:** 0732 [3].  
*Silene latifolia* Poir. – **A, H** – 1650-1880 m  
**9:** 0243 [3]; **95:** 1550 [7].  
*Silene paradoxa* L. – **G** – 700 m  
**67:** 1363 [16].  
*Silene parnassica* subsp. *pindicola* (Hausskn.) Greuter – **A** – 1710-2010 m  
**2:** 0081 [5]; **22:** 0439 [2].  
*Silene pusilla* subsp. *albanica* (K. Malý) Greuter & Burdet – **A, H** 1650-2010 m  
**2:** 0044 [7]; **9:** 0258 [20]; **26:** 0476 [11]; **80:** 1478 [19]; **83:** 1519 [7]; **95:** 1554 [16].  
*Silene schwarzenbergeri* Halácsy – **C** – 1085 m  
**35:** 0616 [8].  
*Silene sendtneri* Boiss. subsp. *sendtneri* – **H** – 2000 m  
**82:** 1514 [6]; **85:** 1531 [9]; **87:** 1539 [20].  
*Silene viridiflora* L. – **F** – 405-1340 m  
**52:** 1016 [1]; **103:** 1585 [9].  
*Silene viscaria* (L.) Jess. – **A, H** – 1540-2000 m  
**9:** 0213 [13], 0243a [2]; **73:** 1420a [2]; **82:** 1511 [8].  
*Silene vulgaris* (Moench) Garcke subsp. *vulgaris* – **A, F, G, H** – 700-2010 m  
**2:** 0070 [3]; **22:** 0437 [11]; **61:** 1177 [2]; **67:** 1355 [5]; **82:** 1515 [2].  
*Spergularia rubra* (L.) J. Presl & C. Presl – **H** – 2000 m  
**87:** 1537 [11].  
*Stellaria nemorum* L. – **A** – 1675-1775 m  
**21:** 0418 [9].

### *Chenopodiaceae*

- Blitum bonus-henricus* (L.) Rchb. – **E** – 2345 m  
**44:** 0863 [8].

### *Cistaceae*

- Cistus albanicus* Heywood (*Cistus sintenisii* Litard.) – **A, C** – 1475-1550 m  
**4:** 0135 [13]; **36:** 0660 [8].  
*Cistus creticus* subsp. *eriocephalus* (Viv.) Greuter & Burdet – **D** – 550 **42:** 0817 [9].  
*Cistus salviifolius* L. – **D** – 550 m

**42:** 0815 [7].

*Fumana bonapartei* Maire & Petitm. – **F, H** – 995-1550 m

**60:** 1172 [7]; **108:** 1668 [7].

*Helianthemum canum* (L.) Baumg. subsp. *canum* – **F, H** – 1340-1600 m

**5:4** 1056 [12]; **103:** 1605 [8].

*Helianthemum nummularium* (L.) Mill. subsp. *nummularium* – **A, F, H** – 1120-1600 m

**18:** 0374 [12]; **54:** 1063 [10]; **64:** 1275 [6]; **103:** 1584 [12].

*Helianthemum nummularium* subsp. *glabrum* (W. D. J. Koch) Wilczek – **H** – 1450-1550 m

**108:** 1666 [10].

### *Compositae*

*Achillea abrotanoides* (Vis.) Vis. – **A, E, H** – 1340-2265 m

**1:** 0022a [1]; **25:** 0464 [6]; **28:** 0507 [16]; **45:** 0922a [6]; **76:** 1434 [11]; **103:** 1587 [6]; **108:** 1637 [3].

*Achillea ageratifolia* (Sm.) Benth. & Hook. f. subsp. *ageratifolia* – **H** – 1640 m

**109:** 1679 [1].

*Achillea chrysocoma* Friv. – **A** – 1685-1880 m

**8:** 0196 [11]; **9:** 0247 [6].

*Achillea clavennae* L. – **H** – 1450-1550 m

**108:** 1632 [11].

*Achillea distans* subsp. *tanacetifolia* (Fiori) Janch. – **H** – 1490 m

**72:** 1416 [4].

*Achillea fraasii* Sch. Bip. – **E** – 1935 m

**46:** 0933 [4], 0948 [1].

*Achillea grandifolia* Friv. – **H** – 1490 m

**72:** 1415 [8].

*Achillea holosericea* Sm. – **B, E, F** – 1320-1935 m

**13:** 0347 [5]; **46:** 0935 [4]; **54:** 1088 [1]; **55:** 1107 [8].

*Achillea lingulata* Waldst. & Kit. – **H** – 2000 m

**82:** 1508 [5].

*Achillea nobilis* subsp. *neilreichii* (A. Kern.) Velen. – **D, F** – 405-790 m

**39:** 0763 [8]; **52:** 1014 [4].

*Achillea seidlilii* J. Presl & C. Presl – **A, C, D** – 790-1515 m

**20:** 0406 [10]; **37:** 0699 [10]; **39:** 0767 [10].

*Amphoricarpos autariatus* subsp. *bertisceus* Blečić & E. Mayer – **H** – 565-1640 m

**69:** 1406 [2]; **109:** 1677 [6].

*Antennaria dioica* (L.) Gaertn. – **A, H** – 1655-2000 m

**9:** 0241 [3]; **28:** 0508 [1]; **82:** 1505 [12].

*Anthemis arvensis* L. – **A, D** – 790-1250 m

**6:** 0160 [2]; **39:** 0762 [11].

*Anthemis cretica* subsp. *tenuiloba* (DC.) Grierson – **E** – 1935-2345 m

**44:** 0892 [8]; **46:** 0947 [3].

- Artemisia alba* Turra – **F** – 1015-1100 m  
**56:** 1144 [6].
- Aster alpinus* L. – **F** – 1810 m  
**53:** 1045 [7].
- Asteriscus aquaticus* (L.) Less. – **D** – 160 m  
**43:** 0857 [10].
- Bellis perennis* L. – **B** – 1250 m  
**15:** 0358 [10].
- Bombycilaena erecta* (L.) Smoljan. – **E** – 1325 m  
**50:** 0975 [3].
- Carduus kernerii* subsp. *scardicus* (Griseb.) Kazmi – **A, F** – 1600-2010 m  
**2:** 0049 [11]; **54:** 1087 [4].
- Carduus nutans* subsp. *leiophyllus* (Petrović) Stoj. & Stef. – **D** – 695 m  
**40:** 0800 [17].
- Carduus tmoleus* Boiss. (cf.) – **A, B** – 1630-1685 m  
**8:** 0200 [10]; **11:** 0325 [7].
- Carlina acanthifolia* subsp. *utzka* (Hacq.) Meusel & Kästner – **C** – 1325 m  
**37:** 0697 [8].
- Carlina vulgaris* L. – **H** – 565 m  
**69:** 1397 [9].
- Carthamus lanatus* L. – **D** – 160 m  
**43:** 0855 [3].
- Centaurea calocephala* Willd. – **F** – 1810 m  
**53:** 1043 [2].
- Centaurea deusta* subsp. *concolor* (DC.) Hayek – **G** – 520-700 m  
**65:** 1284 [18]; **67:** 1340 [21].
- Centaurea deusta* Ten. s.l. (aff.) – **F** – 1600 m  
**54:** 1083 [9].
- Centaurea deusta* Ten. s.l. (*Centaurea albanica* Bornm.) – **A, D, E, F, H** – 1740-2010 m  
**2:** 0119 [2]; **42:** 0809 [16]; **47:** 0951 [13]; **50:** 0973 [4]; **56:** 1137 [9], 1138 [12]; **62:** 1182 [19]; **69:** 1389 [1]; **83:** 1518 [8].
- Centaurea dichroantha* A. Kern. – **G** – 700 m  
**67:** 1342 [7].
- Centaurea kosaninii* Hayek – **F** – 980-1100 m  
**56:** 1132 [19]; **59:** 1166 [17].
- Centaurea nervosa* Willd. – **H** – 2000 m  
**82:** 1498 [3].
- Centaurea rupestris* L. – **C** – 1085 m  
**35:** 0652 [7].
- Centaurea salonitana* Vis. – **D** – 695 m  
**40:** 0794 [16].
- Cirsium appendiculatum* Griseb. – **A** – 1250-2010 m  
**2:** 0073 [1]; **6:** 0148 [12].
- Cirsium boujartii* subsp. *wettsteinii* Petr. – **G** – 700 m  
**67:** 1367 [1].

- Cirsium italicum* DC. – **D** – 160 m  
43: 0841 [1].
- Cirsium rivulare* (Jacq.) All. – **H** – 1690 m  
76: 1431 [10].
- Cota triumfettii* (L.) J. Gay – **A, B** – 1630-1655 m  
11: 0336 [9]; 28: 0516 [5].
- Crepis* sp. – **H** – 2000 m  
82: 1501 [3].
- Crepis aurea* (L.) Cass. – **B** – 1630-2000 m  
11: 0315 [7]; 82: 1502 [4].
- Crepis biennis* L. – **H** – 1490 m  
72: 1417 [5].
- Crepis foetida* subsp. *rhoeadifolia* (M. Bieb.) Čelak. – **D** – 790 m  
39: 0756 [17].
- Crepis neglecta* L. – **D, E** – 550-1350 m  
42: 0812 [2]; 50: 0977 [8].
- Crepis nicaeensis* Pers. – **F** – 1120-1145 m  
64: 1267 [11].
- Crepis viscidula* Froel. subsp. *viscidula* – **A, C, H** – 1475-2000 m  
25: 0467 [6]; 36: 0686 [16]; 82: 1503 [10].
- Crupina crupinastrum* (Moris) Vis. – **C** – 1325 m  
37: 0696 [8].
- Crupina vulgaris* Cass. – **F** – 1120-1145 m  
64: 1251 [9].
- Cyanus adscendens* (Bartl.) Soják – **F** – 1810 m  
53: 1046 [4].
- Cyanus pindicola* (Griseb.) Soják – **E** – 2265-2345 m  
44: 0896 [6]; 45: 0918 [4].
- Doronicum austriacum* subsp. *giganteum* (Griseb.) Stoj. & Stef. – **B** – 1630 m  
11: 0338 [12].
- Erigeron acris* L. – **A** – 1515 m  
20 0408 [1].
- Erigeron annuus* (L.) Desf. – **G** – 370 m  
68: 1369 [2].
- Eupatorium cannabinum* L. – **H** – 565 m  
69: 1385 [10].
- Filago arvensis* L. – **D** – 695 m  
40: 0799 [5].
- Filago germanica* (L.) Huds. – **D, E, F, G** – 370-1600 m  
42: 0819 [3]; 52: 1015 [11]; 54: 1059a [3]; 56: 1159 [3]; 68: 1370 [30].
- Filago pyramidalis* – **D** – 695 m  
40: 0798 (specimen lost).
- Gnaphalium diminutum* Braun-Blanq. (*Gnaphalium hoppeanum* subsp. *magellense* (Fiori) Strid) – **H** – 2000 m  
99: 1567 [7].

- Gnaphalium pichleri* Murb. – **H** – 1640 m  
**109:** 1680 [4].
- Gnaphalium sylvaticum* L. – **H** – 1650-1880 m  
**86:** 1534 [1].
- Hieracium albanicum* Freyn subsp. *albanicum* – **H** – 1450-1550 m  
**108:** 1635 [0] (det. GG).
- Hieracium bifidum* subsp. *canitosum* (Malme) Zahn – **F** – 1810 m  
**53:** 1047 [7] (det. GG).
- Hieracium bifidum* subsp. *sinuosifrons* (Dahlst.) Zahn – **A** – 1655-1880 m  
**9:** 0238 [0]; **26:** 0478 [15]; **28:** 0506 [9] (det. GG).
- Hieracium bifidum* subsp. *stenolepis* (Lindeb.) Zahn – **A** – 1670 m  
**23:** 0447 [1] (det. GG).
- Hieracium chalcidicum* subsp. *divaricatum* (Fr.) Greuter – **E** – 1675 m  
**48:** 0956 [10] (det. GG).
- Hieracium glabratum* subsp. *nudum* Nägeli & Peter – **F** – 1810 m  
**53:** 1041 [1] (det. GG).
- Hieracium guglerianum* Zahn subsp. *guglerianum* – **F** – 795 m  
**57:** 1161 [6] (det. GG).
- Hieracium murorum* subsp. *oblongum* (Jord.) Zahn – **C** – 1475 m  
**36:** 0669 [6] (det. GG).
- Hieracium pannosum* subsp. *eumecobrachium* Zahn – **A** – 1685-1880 m  
**9:** 0245 [4] (det. GG).
- Hieracium rotundatum* Schult. (subsp. ?) – **H** – 1720 m  
**77:** 1443 [16] (det. GG).
- Hieracium rotundatum* subsp. *praecurrens* (Vuk.) Gottschl. & Brandst. – **A, H** – 1530-1880 m  
**29:** 0522 [22]; **83:** 1522 [4] (det. GG).
- Hieracium villosum* Jacq. subsp. *villosum* – **A, F, H** – 565-1600 m  
**28:** 0510 [6]; **54:** 1076 [1]; **55:** 1094 [9]; **69:** 1391 [10]; **103:** 1576 [0] (det. GG).
- Homogyne alpina* (L.) Cass. – **H** – 2000 m  
**82:** 1489 [8].
- Hypochoeris maculata* L. – **F, G, H** – 405-2000 m  
**54:** 1081 [9]; **67:** 1329 [6]; **82:** 1509 [6].
- Hypochoeris radicata* L. – **F** – 405 m  
**52:** 1020 [0].
- Inula ensifolia* L. – **F, G** – 520-1145 m  
**64:** 1191 [16]; **65:** 1295 [8]; **67:** 1327 [5].
- Inula hirta* L. – **F** – 1120-1320 m  
**55:** 1119 [7]; **64:** 1274 [2].
- Inula oculus-christi* L. – **B, F** – 1015-1360 m  
**13:** 0346 [6]; **55:** 1120 [4]; **56:** 1133 [2]; **64:** 1274a [2].
- Jurinea mollis* subsp. *glycacantha* (Sm.) Hayek – **G** – 700 m  
**67:** 1368 [0].
- Jurinea mollis* (L.) Rechb. subsp. *mollis* – **F, H** – 1450-1600 m  
**54:** 1085 [24]; **108:** 1626 [20].

- Lactuca muralis* (L.) Gaertn. – **A, H** – 565-1250 m  
**6:** 0147 [0]; **69:** 1407 [1].
- Lactuca pancicii* (Vis.) N. Kilian & Greuter – **H** – 1590 m  
**74:** 1425 [11].
- Lactuca perennis* L. – **H** – 1450-1550 m  
**108:** 1676a [5].
- Lapsana communis* L. subsp. *communis* – **C** – 1475 m  
**36:** 0688a [17].
- Leontodon biscutellifolius* DC. – **A, F** – 1090-2010 m  
**2:** 0043 [7]; **61:** 1180 [11].
- Leontodon crispus* Vill. – **C** – 1085 m  
**35:** 0642 [10].
- Leontodon hispidus* subsp. *hastilis* (L.) Corb. – **A** – 1265 m  
**31:** 0559 [8].
- Leontodon hispidus* L. subsp. *hispidus* – **A, H** – 1450-1685 m  
**8:** 0203a [4]; **108:** 1630 [6].
- Leontopodium nivale* subsp. *alpinum* (Cass.) Greuter – **A** – 1685-1880 m  
**9:** 0240 [1].
- Leucanthemum pallens* (Perreym.) DC. (cf.) – **H** – 1690 m  
**76:** 1432 [7].
- Leucanthemum praecox* (Horvatić) Villard (cf.) – **A, F, H** – 565-1600 m  
**31:** 0549 [12]; **33:** 0573b [3]; **54:** 1084 [?]; **69:** 1393 [8].
- Onopordum acanthium* L. – **D, G** – 505-790 m  
**39:** 0761 [3]; **66:** 1307 [15].
- Picris hieracioides* L. – **G, H** – 565-700 m  
**67:** 1359a [2]; **69:** 1395 [9].
- Pilosella bauhini* subsp. *magyarica* (Peter) S. Bräut. – **A, C, D** – 550-1265 m  
**31:** 0558 [10]; **35:** 0641 [14]; **42:** 0811 [6] (det. GG).
- Pilosella biflora* (Arv.-Touv.) Arv.-Touv. – **H** – 1650-1880 m  
**83:** 1521 [5] (det. GG).
- Pilosella cymosa* (L.) F. W. Schultz & Sch. Bip. – **B** – 1630 m  
**11:** 0339 [0] (det. GG).
- Pilosella cymosa* subsp. *sabina* (Sebast.) H. P. Fuchs – **A, E** – 1685-2345 m  
**9:** 0251 [9]; **44:** 0911 [1]; **46:** 0950 [4] (det. GG).
- Pilosella densiflora* (Tausch) Soják – **B** – 1275 m  
**14:** 0356 [4] (det. GG).
- Pilosella guthnickiana* (Hegetschw.) Soják – **H** – 1650-2000 m  
**82:** 1510 [4]; **83:** 1517b [0] (det. GG).
- Pilosella hypeurya* (Peter) Soják – **H** – 1690 m  
**76:** 1433b [7] (det. GG).
- Pilosella piloselloides* (Vill.) Soják subsp. *piloselloides* – **A, F, G** – 505-1250 m  
**6:** 0182 [3]; **64:** 1206b [1]; **66:** 1306 [1] (det. GG).
- Pilosella piloselloides* subsp. *litoralis* (Nägeli & Peter) Gottschl. – **A** – 1740-2010 m  
**2:** 0035 [0] (det. GG).
- Pilosella testimonialis* (J. Hofm.) Gottschl. – **A, F, H** – 405-2000 m

- 8:** 0198 [6]; **20:** 0407 [10]; **52:** 1021 [6]; **55:** 1089 [5]; **64:** 1240 [2]; ~~**76:** 1433 [7];~~ **76:** 1433a [7?]; **82:** 1500 [0] (det. GG).
- Podospermum roseum* (Waldst. & Kit.) Gemeinholzer & Greuter – **A, H** – 1740-2010 m  
**2:** 0039 [11]; **82:** 1499 [2].
- Ptilostemon afer* (Jacq.) Greuter subsp. *afer* – **B, F** – 1175-1275 m  
**14:** 0357 [2]; **63:** 1190 [10].
- Pulicaria dysenterica* subsp. *uliginosa* Nyman – **D** – 160 m  
**43:** 0849 [15].
- Reichardia macrophylla* (Vis. & Pančić) Pančić – **H** – 1640 m  
**109:** 1681 [8].
- Scolymus hispanicus* L. – **D** – 160 m  
**43:** 0835 [13].
- Scorzonera doriae* Degen & Bald. – **F** – 1120-1145 m  
**64:** 1200 [13].
- Senecio squalidus* subsp. *rupestris* (Waldst. & Kit.) Greuter – **A, E** – 1685-2345 m  
**9:** 0242 [6]; **44:** 0891 [7].
- Solidago virgaurea* L. – **H** – 1450-1550 m  
**108:** 1631 [1].
- Tanacetum corymbosum* (L.) Sch. Bip. – **F** – 1600 m  
**54:** 1086 [5].
- Tanacetum larvatum* (Pant.) Hayek – **A, H** – 1640-2010 m  
**2:** 0062 [9]; **26:** 0473 [5]; **109:** 1678 [6].
- Taraxacum* (sect. *Alpestris*) sp. – **A** – 1655 m  
**28:** 0515 [2].
- Taraxacum* (sect. *Crocea*) sp. sex. – **A** – 1740-2010 m  
**1:** 0009 [2]; **2:** 0096 [1].
- Taraxacum* (sect. *Erythrosperma*) sp. – **E** – 2345 m  
**44:** 0895 [14].
- Taraxacum pindicum* Kirschner & Štěpánek – **A** – 1740-2010 m  
**2:** 0036 [10].
- Taraxacum umbrosum* Sonck & al. – **A** – 2000 m  
**1:** 0009a [6].
- Telekia speciosa* (Schreb.) Baumg. – **H** – 1540 m  
**73:** 1424 [11].
- Tephroseris papposa* (Rchb.) Schur subsp. *papposa* – **F** – 1810 m  
**53:** 1036 [4].
- Tolpis staticifolia* (All.) Sch. Bip. – **H** – 1450-1550 m  
**108:** 1636 [15].
- Tragopogon samaritanii* Boiss. – **D** – 790 m  
**39:** 0768 [8].
- Tripleurospermum tenuifolium* (Kit.) Freyn – **H** – 1265 m  
**92:** 1544 [4].
- Willemetia stipitata* (Jacq.) Dalla Torre – **H** – 1965 m  
**80:** 1461 [8].
- Xeranthemum annuum* L. – **D** – 695 m

**40:** 0793 [24].

*Xeranthemum cylindraceum* Sm. – **F** – 1120-1145 m

**64:** 1212 [13].

### *Convolvulaceae*

*Convolvulus arvensis* L. – **A, D** – 790-1515 m

**20:** 0409 [3]; **39:** 0753 [20].

*Convolvulus cantabrica* L. – **F** – 1120-1145 m

**64:** 1249b [10].

*Convolvulus elegantissimus* Mill. – **F, G** – 520-1145 m

**64:** 1249a [2]; **65:** 1302 [4].

*Cuscuta epithimum* (L.) L. – **C, G** – 700-1085 m

**35:** 0610 [1]; **67:** 1338 [1].

### *Cornaceae*

*Cornus mas* L. – **D** – 790 m

**39:** 0728 [17].

*Cornus sanguinea* L. subsp. *sanguinea* – **D** – 790 m

**39:** 0716 [16].

### *Corylaceae*

*Carpinus betulus* L. – **D** – 790 m

**39** 0715 [12].

*Carpinus orientalis* Mill. – **D** – 790 m

**39** 0714 [12], 0739 [17].

*Corylus avellana* L. – **D, H** – 790-1690 m

**39** 0737 [15]; **94** 1548 [13].

*Corylus colurna* L. (cf.) – **H** – 1490 m

**100** 1570 [6].

*Ostrya carpinifolia* Scop. – **F** – 405 m

**52** 1030 [12].

### *Crassulaceae*

*Sedum acre* L. – **D, F** – 695-1320 m

**40:** 0789 [3]; **55:** 1131 [13]; **56:** 1143 [5].

*Sedum album* subsp. *athoum* (DC.) Maire & Petitm. – **A, C, D, F** – 695-2010 m

**2:** 0099 [6]; **35:** 0623 [3]; **40:** 0790 [4]; **54:** 1065 [2]; **64:** 1222 [8].

*Sedum annuum* L. – **E** – 1935 m

- 46:** 0928 [3].  
*Sedum atratum* L. – **H** – 2000 m  
**87:** 1538 [2].  
*Sedum cepaea* L. – **C** – 1475 m  
**36:** 0679 [11].  
*Sedum grisebachii* Boiss. & Heldr. – **A** – 1640-1880 m  
**3:** 0120 [4]; **9:** 0256 [2].  
*Sedum magellense* subsp. *olympicum* (Boiss.) Greuter & Burdet – **H** – 1450-1550 m  
**108:** 1657 [5].  
*Sedum ochroleucum* Chaix – **B, C, F** – 1085-1360 m  
**13:** 0351 [6]; **35:** 0578 [11]; **55:** 1129 [7].  
*Sedum sexangulare* L. – **H** – 1340 m  
**103:** 1574 [10].  
*Sedum urvillei* DC. – **B, C, F** – 1085-1360 m  
**13:** 0351a [1], 0352 [5]; **35:** 0631 [2]; **64:** 1238 [7].  
*Sempervivum marmoreum* Griseb. – **H** – 2000 m  
**82:** 1506 [1].

### Cruciferae

- Aethionema saxatile* (L.) W. T. Aiton subsp. *saxatile* – **F** – 1120-1320 m  
**55:** 1127 [5]; **64:** 1213a [3].  
*Alyssum alyssoides* (L.) L. – **C, F** – 1085-1320 m  
**35:** 0649 [5]; **55:** 1127a [1]; **64:** 1213b [1].  
*Alyssum chalcidicum* Janka (*A. elatius* F. K. Mey.) – **A, C, D, F** – 405-1655 m  
**3:** 0129 [8]; **28:** 0490 [16]; **35:** 0643 [7]; **40:** 0773 [13]; **52:** 1029 [7].  
*Alyssum murale* Waldst. & Kit. (s.l.) – **G** – 700 m  
**67:** 1318 [12].  
*Alyssum repens* Baumg. – **A, F** – 1120-1880 m  
**9:** 0257 [7]; **23:** 0454 [4]; **55:** 1116 [4]; **64:** 1213 [3].  
*Alyssum smolikanum* subsp. *serpenticola* (F. K. Mey.) Pils – **A** – 1740-2010 m  
**1:** 0011 [12], 0020 [3]; **2:** 0105 [12], 0106 [10].  
*Arabis alpina* L. – **A, H** – 1685-1880 m  
**9:** 0262 [6]; **22:** 0424 [7]; **77:** 1447 [8].  
*Arabis collina* Ten. – **H** – 1450-1550 m  
**108:** 1676 [10].  
*Arabis hirsuta* var. *sagittata* (Bertol.) DC. – **B, F** – 1120-1695 m  
**10:** 0287 [3]; **64:** 1276 [8].  
*Aubrieta gracilis* subsp. *albanica* (F. K. Mey. & J. E. Mey.) Greuter, **comb. & stat. nov.**  
(= *Aubrieta albanica* F. K. Mey. & J. E. Mey. in Haussknechtia, Beiheft 15: 62. 2011).  
– **E** – 2345 m  
**44:** 0880 [7].  
*Aurinia corymbosa* Griseb. – **A** – 1515-1655 m  
**18:** 0372 [13]; **28:** 0500 [17].

- Barbarea balcana* Pančić – **A** – 1640-1685 m  
**3:** 0133 [1]; **8:** 0201a [1]; **8:** 0493 [2].
- Bornmuellera baldaccii* subsp. *rechingeri* Greuter – **A** – 1740-2010 m  
**1:** 0019 [15]; **2:** 0086 [14].
- Cardamine bulbifera* (L.) Crantz – **A, B** – 1630-1710 m  
**11:** 0330 [25]; **22:** 0444 [1].
- Cardamine carnosa* Waldst. & Kit. – **E** – 2265 m  
**45:** 0914 [5] (det. KM).
- Cardamine enneaphyllos* (L.) Crantz – **B** – 1630 m  
**11:** 0328 [9].
- Cardamine glauca* DC. – **A, G** – 700-2000 m  
**1:** 0015 [7]; **2:** 0063 [5]; **32:** 0565 [13]; **67:** 1331 [7] (det. KM).
- Cardamine impatiens* L. – **H** – 1340-1390 m  
**104:** 1613 [11] (det. KM).
- Cardamine matthioli* Moretti – **B, H** – 1695-1965 m  
**10:** 0289 [11]; **80:** 1480 [9] (det. KM).
- Cardamine plumieri* Vill. (cf.) – **A** – 1740-2010 m  
**2:** 0064 [6] (det. KM).
- Draba lasiocarpa* Rochel – **A, E, F** – 1600-2345 m  
**1:** 0002 [5]; **28:** 0498 [1]; **44:** 0878 [4]; **54:** 1070 [3].
- Erysimum cuspidatum* (M. Bieb.) DC. – **D** – 790 m  
**39:** 0703 [9].
- Erysimum kuemmerlei* Jáv. – **A, B, E, F** – 405-2345 m  
**8:** 0201 [4]; **9:** 0223 [3]; **10:** 0286 [1]; **11:** 0329 [11]; **19:** 0405a [6]; **28:** 0488 [13];  
**44:** 0873 [15]; **52:** 1013 [6]; **55:** 1125a [14], 1130 [1]; **64:** 1225 [9].
- Erysimum linariifolium* Tausch – **D** – 790 m  
**39:** 0705 [12].
- Erysimum microstylum* Hausskn. – **A** – 1685-1880 m  
**9:** 0222 [11].
- Iberis sempervirens* L. – **A, E, H** – 1450-2345 m  
**2:** 0074 [9]; **9:** 0275 [9]; **44:** 0876 [3]; **108:** 1669 [12].
- Iberis umbellata* L. – **D** – 695 m  
**40:** 0774 [12].
- Kernera saxatilis* (L.) Sweet – **H** – 1450-1550 m  
**108:** 1673 [1].
- Lepidium campestre* (L.) W. T. Aiton – **A** – 1275 m  
**32:** 0562 [10].
- Phyllolepidium rupestre* (Sweet) Trinajstić – **E** – 2345 m  
**44:** 0877 [10].
- Rorippa pyrenaica* (All.) Rchb. – **A** – 1740-2010 m  
**2:** 0065 [3].
- Rorippa sylvestris* (L.) Besser – **D** – 790 m  
**39:** 0711 [32].
- Sinapis arvensis* L. – **D** – 790 m  
**39:** 0710 [9].

*Dipsacaceae*

*Knautia drymeia* Heuff. – **A, D** – 790-1710 m

**22:** 0427 [11]; **33:** 0574 [6]; **39:** 0740 [16].

*Knautia integrifolia* (L.) Bertol. – **D** – 160 m

**43:** 0840 [8].

*Knautia macedonica* Griseb. – **G** – 700 m

**67:** 1330 [18].

*Lomelosia crenata* (Cirillo) Greuter & Burdet – **C, H** – 565-1325 m

**7:** 0700 [14]; **69:** 1394 [1].

*Lomelosia graminifolia* (L.) Greuter & Burdet – **H** – 1450-1550 m

**108:** 1629 [18].

*Scabiosa tenuis* Boiss. – **D** – 695-790 m

**39:** 0765 [13]; **40:** 0797 [6].

*Scabiosa triniifolia* Friv. – **F** – 825-1100 m

**56:** 1134 [14]; **58:** 1164 [6].

*Scabiosa velenovskyana* Bobrov – **A, F, H** – 1320-1775 m

**21:** 0415 [14]; **55:** 1097 [8]; **55:** 1106 [9]; **103:** 1579 [6].

*Scabiosa webbiana* D. Don – **A, B, D, E** – 550-1360 m

**33:** 0573c [11]; **13:** 0348 [4]; **42:** 0810 [5]; **50:** 0969 [1].

*Ericaceae*

*Arctostaphylos uva-ursi* (L.) Spreng. – **H** – 1390-1640 m

**107:** 1621 [7]; **109:** 1684 [4].

*Erica arborea* L. – **D** – 550 m

**42:** 0803 [6].

*Erica carnea* L. – **A, F** – 1320-2000 m

**1:** 0013 [16]; **55:** 1113 [15].

*Vaccinium myrtillus* L. – **H** – 1965-2000 m

**81:** 1486 [10].

*Vaccinium uliginosum* L. – **H** – 1965-2000 m

**81:** 1485 [9].

*Euphorbiaceae*

*Euphorbia amygdaloides* L. – **A, D, H** – 790-1710 m

**4:** 0146a [14]; **5:** 0146a [14]; **6:** 0174 [9]; **22:** 0435 [1]; **39:** 0726 [7].

*Euphorbia capitulata* Rchb. – **H** – 1640 m

**109:** 1682 [10].

*Euphorbia glabriflora* Vis. – **A, C, F, G** – 520-1090 m

**6:** 0187 [6]; **35:** 0617 [12]; **61:** 1176 [15]; **65:** 1297 [6].

*Euphorbia herniariifolia* Willd. – **E** – 2345 m

**44:** 0875 [3].

*Euphorbia myrsinites* L. – **A, C, E** – 1085-1880 m

**9:** 0225 [13]; **22:** 0429 [3]; **35:** 0614 [6]; **50:** 0978 [5].

*Euphorbia nicaeensis* All. – **G** – 520 m

**65:** 1296 [12].

*Euphorbia seguieriana* subsp. *niciciana* (Borbás ex Novák) Rech. f. – **C, D** – 550-1085 m

**35:** 0634 [15]; **39:** 0724 [8]; **39:** 0759 [5]; **42:** 0816 [11].

*Euphorbia stricta* L. – **A** – 1265-1275 m

**31:** 0556 [10]; **32:** 0566 [20].

*Euphorbia taurinensis* All. – **D** – 790 m

**39:** 0771o [2].

### *Fagaceae*

*Fagus sylvatica* L. – **A, H** – 1250-1340 m

**6:** 0189 [1], 159a [11]; **103:** 1612 [6].

*Quercus cerris* L. – **D, F** – 160-1145 m

**43:** 0836 [11], 0858 [9]; **52:** 1017 [4]; **64:** 1248 [19].

*Quercus frainetto* Ten. – **D, F** – 405-790 m

**39:** 0717 [11]; **52:** 1018 [14].

*Quercus pubescens* Willd. – **G** – 520-700 m

**65:** 1292 [18]; **67:** 1366 [13].

*Quercus trojana* Webb – **D** – 635 m

**41:** 0801 [11].

### *Gentianaceae*

*Centaurium erythraea* Rafn subsp. *erythraea* – **F** – 1120-1145 m

**64:** 1273 [9].

*Centaurium erythraea* subsp. *rumelicum* (Velen.) Melderis – **D, F, G** – 160-790 m

**39:** 0723 [3]; **43:** 0824 [4]; **52:** 0993 [12]; **65:** 1280 [11].

*Gentiana cruciata* L. – **A** – 1300 m

**30:** 0523 [11].

*Gentiana dinarica* Beck – **H** – 1965 m

**80:** 1479 [1].

*Gentiana lutea* L. (cf.) – **H** – 1450-1550 m

**108:** 1624 [1].

*Gentiana utriculosa* L. – **H** – 1450-1690 m

**76:** 1429 [12]; **108:** 1656 [3].

*Gentiana verna* subsp. *tergestina* (Beck) Hayek – **A, E** – 1740-2345 m

**1:** 0016 [2] **2:** 0041 [3] **44:** 0861 [6].

*Geraniaceae*

*Geranium aristatum* Freyn & Sint. – **A, C** – 1475-1655 m

**28:** 0504 [9]; **36:** 0653 [10].

*Geranium asphodeloides* Burm. f. – **A** – 1265 m

**31:** 0555 [13].

*Geranium macrorrhizum* L. – **A** – 1685-1880 m

**9:** 0285a [21]; **22:** 0419 [16].

*Geranium pyrenaicum* Burm. f. – **A** – 1265-1880 m

**9:** 0280 [4]; **18:** 0371 [13]; **31:** 0534 [10]; **31:** 0555a [0].

*Geranium reflexum* L. – **A, H** – 1590-1710 m

**22:** 0419a [14]; **97:** 1561 [2].

*Geranium robertianum* L. – **B** – 1630 m

**11:** 0332 [10].

*Geranium sanguineum* L. – **A, F** – 1015-1600 m

**4:** 0142 [2]; **54:** 1067 [5]; **56:** 1147 [2]; **64:** 1270 [6].

*Geranium subcaulescens* DC. – **A, E** – 1655-1935 m

**9:** 0236 [12]; **23:** 0450 [3]; **28:** 0485 [4]; **46:** 0923 [2].

*Geranium sylvaticum* L. – **A, H** – 1475-2000 m

**9:** 0277 [13]; **81:** 1484 [9]; **84:** 1525 [4]; **93:** 1546 [15].

*Geranium versicolor* L. – **C** – 1475 m

**36:** 0663 [10].

*Globulariaceae*

*Globularia bisnagarica* L. – **F** – 1120-1145 m

m

**64:** 1195 [4].

*Globularia meridionalis* (Podp.) O. Schwarz – **A, F** – 1600-2000 m

**1:** 0030 [2]; **54:** 1071 [1].

*Hypericaceae*

*Hypericum barbatum* Jacq. – **A, B, F, H** – 1320-1880 m

**9:** 0250 [3]; **10:** 0302 [1]; **19:** 0405 [5]; **22:** 0436 [3]; **55:** 1117 [5]; **70:** 1411 [7]; **83:** 1517 [0]; **83:** 1523 [7].

*Hypericum ermelandarum* Greuter – **A** – 1250 m

**6:** 0175 [10].

*Hypericum perforatum* L. – **A, C, D, F, H** – 565-1320 m

**32:** 0560 [5]; **35:** 0630 [13]; **39:** 0727 ; 13]; **52:** 0995 [3]; **55:** 1111 [5]; **64:** 1223 [7]; **69:** 1401 [4].

*Hypericum richeri* subsp. *grisebachii* (Boiss.) Nyman – **H** – 2000 m

**82:** 1487 [18]; **85:** 1527 [3].

*Hypericum rumeliacum* subsp. *apollinis* (Boiss. & Heldr.) N. Robson & Strid – **A** –

1740-2010 m

**2:** 0084 [6].

### *Juglandaceae*

*Juglans regia* L. – **H** – 565 m

**69:** 1376 [10].

### *Labiatae*

*Ajuga reptans* L. – **B** – 1340-1880 m

**12:** 0342 [17]; **83:** 1520 [0]; **106:** 1619 [4].

*Lamium garganicum* L. subsp. *garganicum* – **C, E** – 1085-1935 m

**35:** 0577 [14]; **36:** 0665 [2]; **46:** 0927 [12].

*Melissa officinalis* subsp. *altissima* (Sm.) Arcang. – **D** – 160 m

**43:** 0827 [7].

*Mentha pulegium* L. – **D, F** – 160-405 m

**43:** 0831 [3]; **52:** 0999 [5].

*Mentha spicata* L. – **H** – 565 m

**69:** 1400 [4].

*Nepeta nuda* L. – **B, H** – 1250-1265 m

**15:** 0362 [6]; **101:** 1572 [7].

*Origanum vulgare* L. – **C** – 160-1145 m

**35:** 0622 [4]; **43:** 0851 [5]; **64:** 1197 [8]; **69:** 1399 [4].

*Phlomis fruticosa* L. – **E** – 1325 m

**50:** 0962 [13].

*Prunella grandiflora* (L.) Scholler – **D** – 790 m

**39:** 0718 [11].

*Prunella laciniata* (L.) L. – **F, G** – 405-520 m

**52:** 1001 [14]; **65:** 1289 [2].

*Prunella laciniata* (L.) L. × *Prunella grandiflora* (L.) Scholler – **A** – 1250 m

**6:** 0178 [13].

*Prunella vulgaris* L. – **A, G** – 700-1515 m

**20:** 0410 [8]; **67:** 1358 [9].

*Salvia amplexicaulis* Benth. – **F, G** – 700-1145 m

**64:** 1206 [11]; **67:** 1360 [9].

*Salvia pratensis* L. – **E** – 1230 m

**51:** 0980 [5].

*Salvia ringens* Sm. – **D, F** – 695-1090 m

**40:** 0778 [11]; **60:** 1169 [20]; **61:** 1175 [1].

*Salvia verticillata* L. – **C, F** – 1120-1475 m

**36:** 0667 [11]; **64:** 1208 [11].

*Satureja acinos* (L.) Scheele – **F** – 1015-1100 m

- 56:** 1145 [1].  
*Satureja alpina* subsp. *albanica* (Kümmerle & Jáv.) Greuter & Burdet – **A, E, H** – 1450-2265 m  
**9:** 0221 [1]; **108:** 1665 [3]; **45:** 0922c [8].  
*Satureja alpina* subsp. *meridionalis* (Nyman) Greuter & Burdet – **A** – 1740-2010 m  
**1:** 0029 [2]; **2:** 0056 [3].  
*Satureja grandiflora* (L.) Scheele – **A, B, H** – 1490-1710 m  
**11:** 0340 [7]; **12:** 0343 [9]; **22:** 0432 [9]; **71:** 1412 [12].  
*Satureja inodora* Host (*Micromeria parviflora* Rchb.) – **H** – 1640 m  
**109:** 1686 [6].  
*Satureja majoranifolia* (Miller) K. Malý – **F** – 1015-1175 m  
**56:** 1142 [8]; **63:** 1187 [20].  
*Satureja montana* subsp. *variegata* (Host) P. W. Ball – **F** – 1120-1145 m  
**64:** 1207 [10].  
*Satureja suaveolens* (Sm.) Watzl – **F** – 1600 m  
**54:** 1072 [2].  
*Satureja subspicata* Bartl. ex Vis. – **H** – 565 m  
**69:** 1405 [3].  
*Satureja vulgaris* (L.) Fritsch subsp. *vulgaris* – **A** – 405-1710 m  
**11:** 0341 [10]; **22:** 0440 [7]; **39:** 0751 [6]; **55:** 1091 [10]; **52:** 1000 [9].  
*Scutellaria alpina* L. – **H** – 1450-1550 m  
**108:** 1670 [0].  
*Scutellaria columnae* All. – **D** – 790 m  
**39:** 0745 [1].  
*Scutellaria orientalis* L. – **F** – 825 m  
**58:** 1163 [13].  
*Sideritis montana* L. – **A, F** – 1120-1275 m  
**32:** 0564 [9]; **64:** 1220 [14].  
*Sideritis raeseri* Boiss. & Heldr. subsp. *raeseri* – **E** – 1325 m  
**50:** 0968 [1].  
*Stachys alopecuros* (L.) Benth. – **A, H** – 1340-1550 m  
**4:** 0143 [3]; **103:** 1578 [6].  
*Stachys germanica* L. – **F** – 1120-1145 m  
**64:** 1255 [3].  
*Stachys germanica* subsp. *tymphaea* (Hausskn.) R. Bhattacharjee – **A, E, H** – 1640-1935 m  
**3:** 0125 [13]; **8:** 0194 [11]; **46:** 0950b [9]; **78:** 1452 [9].  
*Stachys recta* L. (s.l.) – **F, H** – 1320-1550 m  
**55:** 1093 [15]; **103:** 1583 [0]; **108:** 1640 [12].  
*Stachys recta* subsp. *atherocalyx* (K. Koch) Stoj. & Stef. (cf.) – **F** – 1015-1100 m  
**56:** 1155 [16].  
*Stachys scardica* (Griseb.) Hayek – **F** – 1120-1145 m  
**64:** 1230 [10]; **64:** 1254 [7].  
*Teucrium capitatum* L. – **D** – 160 m  
**43:** 0823 [6].  
*Teucrium chamaedrys* L. – **D** – 790 m

**39:** 0743 [7].

*Teucrium chamaedrys* var. *illyricum* Borb. & Bornm. – F – 1320 m

**55:** 1103 [8].

*Teucrium chamaedrys* var. *illyricum* Borb. & Bornm. et var. *glanduliferum* Hausskn.

p.p. – F, H – 565-1145 m

**64:** 1228 [6]; **69:** 1382 [10].

*Teucrium montanum* L – D – 520-1250 m

**6:** 0181 [2]; **42:** 0814 [3]; **64:** 1207a [1]; **64:** 1239 [7]; **65:** 1287 [3].

*Thymus* sp. – A – 2000 m

**1:** 0018 [12].

*Thymus ciliatopubescens* (Halácsy) Halácsy – A, E – 1685-2345 m

**8:** 0192 [11]; **9:** 0216 [10]; **44:** 0883 [7].

*Thymus praecox* subsp. *zygiformis* (Heinr. Braun ex Wettst.) J alas – A, H – 1675-2010 m

**1:** 0028 [2]; **2:** 0059 [8]; **21:** 0412 [9]; **79:** 1457 [12].

*Thymus pulegioides* L. – E – 2265 m

**45:** 0913 [9].

*Thymus teucrioides* Boiss. & Spruner subsp. *teucrioides* – A – 695-1250 m

**6:** 0185 [8]; **40:** 0781 [4].

*Thymus teucrioides* subsp. *alpinus* Hartvig – A – 1740-2010 m

**2:** 0053 [4].

### *Leguminosae*

*Anthyllis* sp. – A – 1740-2010 m

**2:** 0042 [11].

*Anthyllis aurea* Welden & Host – F – 160 m

**54:** 1057 [15].

*Anthyllis montana* L. – A, E – 1685-1880 m

**9:** 0206 [7]; **47:** 0953 [4].

*Anthyllis vulneraria* L. – C, F – 1085-1320 m

**35:** 0645 [7]; **55:** 1113 [9].

*Astragalus* – E – 1935-2345 m

**44:** 0872 [10]; **45:** 0915 [6]; **46:** 0946 [3].

*Astragalus depressus* L. – A – 1475-1880 m

**9:** 0232 [6]; **36:** 0655 [7].

*Astragalus glycyphyllos* L. – C – 1475 m

**36:** 0675 [6].

*Astragalus onobrychis* L. – C – 1475 m

**36:** 0662 [10].

*Bituminaria bituminosa* (L.) C. H. Stirt. – B – 160-560 m

**16:** 0365 [2]; **43:** 0843 [10].

*Cercis siliquastrum* – D – 160 m

**43:** 0859 [10].

*Chamaecytisus* – F – 1015-1320 m

- 55:** 1110 [6]; **56:** 1139 [4]; **56:** 1156 [11]2; **64:** 1268 [10].  
*Chamaecytisus supinus* (L.) Link – **A, C, F, G** – 1250 m  
**2:** 0038 [4]; **6:** 0186 [3]; **36:** 0658 [7]; **56:** 1136 [3]; **67:** 1344 [2].  
*Colutea arborescens* L. subsp. *arborescens* – **G** – 700 m  
**67:** 1325 [11].  
*Coronilla scorpioides* (L.) W. D. J. Koch – **F** – 1090 m  
**61:** 1178 [1].  
*Cytisus nigricans* L. subsp. *nigricans* – **A, D, G** – 700-1275 m  
**32:** 0563 [13]; **39:** 0704 [9]; **67:** 1319 [15]; **67:** 1320 [12].  
*Dorycnium herbaceum* Vill. – **A, C, F** – 1085-1550 m  
**4:** 0137 [8]; **6:** 0183 [11]; **35:** 0627 [13]; **55:** 1112 [5].  
*Dorycnium hirsutum* (L.) Ser. – **D** – 550 m  
**42:** 0818 [11].  
*Dorycnium pentaphyllum* subsp. *germanicum* (Gremli) Gams – **C, F** – 1120-1475 m  
**36:** 0661 [14]<sup>4</sup>; **4:** 1266 [12].  
*Galega officinalis* L. – **D** – 790 m  
**39:** 0712 [8].  
*Genista depressa* M. Bieb. – **A** – 1685-1880 m  
**9:** 0207 [4].  
*Genista hassertiana* (Bald.) Buchegger – **F, G** – 520-1100 m  
**56:** 1146 [6]; **65:** 1298 [9].  
*Genista radiata* (L.) Scop. – **A** – 1740-2010 m  
**2:** 0054 [13].  
*Genista sagittalis* L. – **F** – 1320 m  
**55:** 1128 [13].  
*Genista sylvestris* Scop. subsp. *sylvestris* – **F** – 1320 m  
**55:** 1109 [9].  
*Genista tinctoria* L. – **G, H** – 700-2000 m  
**67:** 1316 [8]; **82:** 1488 [7].  
*Hippocrepis comosa* L. – **A, F** – 1090-2010 m  
**2:** 0047 [12]; **61:** 1181 [2].  
*Hippocrepis emerus* subsp. *emeroides* (Boiss. & Spruner) Lassen – **D** – 695 m  
**40:** 0775 [8].  
*Lathyrus digitatus* (M. Bieb.) Fiori – **F** – 1600 m  
**54:** 1059 [3].  
*Lathyrus laxiflorus* (Desf.) Kuntze – **C** – 1475 m  
**36:** 0654 [20].  
*Lathyrus nissolia* L. – **A** – 1685-1880 m  
**9:** 0260 [0].  
*Lathyrus palustris* L. – **C** – 1085 m  
**35:** 0647 [11].  
*Lathyrus pratensis* L. – **A** – 1265 m  
**3:1** 0550 [13].  
*Lathyrus venetus* (Mill.) Wohlf. – **A, C** – 1475-1710 m  
**2:** 0425 [6]; **36:** 0656 [6].

- Lotus alpinus* (DC.) Ramond – **A** – 2000 m  
1: 0014 [2].
- Lotus corniculatus* L. – **A, G** – 700-2010 m  
2: 0071 [5]; 6: 0157 [6]; 28: 0501 [6]; 67: 1317 [11].
- Medicago falcata* L. – **C, G** – 700-1085 m  
35: 0646 [2]; 67: 1321 [16].
- Medicago lupulina* L. – **A** – 1275 m  
32: 0568 [14].
- Medicago prostrata* Jacq. – **F** – 1320 m  
55: 1126 [10].
- Medicago rigidula* (L.) All. – **C** – 1085 m  
35: 0583 [2].
- Melilotus albus* Medik. – **D** – 790 m  
39: 0750 [3].
- Melilotus officinalis* (L.) Lam. – **D** – 790 m  
39: 0752 [16].
- Onobrychis arenaria* (Kit.) DC. – **A, H** – 1685-1880 m  
9: 0249 [18]; 108: 1662 [17].
- Onobrychis arenaria* subsp. *lasiostachya* (Boiss.) Hayek – **F** – 1015-1320 m  
55: 1108 [9]; 56: 1152a [3]; 64: 1252 [3].
- Ononis spinosa* L. – **D** – 790 m  
39: 0709 [7].
- Robinia pseudoacacia* L. – **G** – 700 m  
67: 1326 [12].
- Securigera varia* (L.) Lassen – **F** – 1175 m  
63: 1189 [6].
- Trifolium alpestre* L. – **A, C, F** – 1320-1880 m  
9: 0270 [6]; 36: 0657 [7]; 55: 1123 [9].
- Trifolium angustifolium* L. – **D** – 790 m  
39: 0708 [6].
- Trifolium arvense* L. – **D, F** – 405-695 m  
40: 0776 [11]; 52: 0982 [12].
- Trifolium badium* Schreb. – **H** – 1590-1650 m  
97: 1559 [8].
- Trifolium dubium* Sibth. – **A** – 1550 m  
4: 0138 [1].
- Trifolium echinatum* M. Bieb. – **D** – 160 m  
43: 0825 [11].
- Trifolium fragiferum* L. – **F** – 405 m  
52: 0987 [4].
- Trifolium incarnatum* L. – **D** – 790 m  
39: 0706 [6].
- Trifolium lappaceum* L. – **F** – 405 m  
52: 0988 [5].
- Trifolium lucanicum* Guss. – **C** – 1085 m

- 35:** 0644 [12].  
*Trifolium medium* L. – **F** – 405 m  
**52:** 0986 [4].  
*Trifolium nigrescens* Viv. – **D** – 550 m  
**42:** 0820 [1].  
*Trifolium noricum* Wulfen – **H** – 1450-1550 m  
**108:** 1672 [3].  
*Trifolium ochroleucon* Huds. – **C** – 1475 m  
**36:** 0666 [15].  
*Trifolium patulum* Tausch – **C, F, G** – 700-1475 m  
**36:** 0659 [16]; **36:** 0688 [12]; **64:** 1247 [12]; **67:** 1322 [12].  
*Trifolium pilczii* Adamović – **A** – 2000 m  
**1:** 0010 [8].  
*Trifolium pratense* L. – **A** – 1250-1685 m  
**6:** 0169 [1]; **8:** 0203 [3].  
*Trifolium repens* L. – **A, B** – 1640-1695 m  
**3:** 0122 [1], 0130 [4]; **8:** 0202 [7]; **10:** 0309 [9]; **28:** 0496 [8].  
*Trifolium tenuifolium* Ten. – **F** – 405 m  
**52:** 0985 [9].  
*Trifolium velenovskyi* Vandas – **H** – 1650 m  
**75:** 1426 [11].  
*Vicia cassubica* L. – **H** – 1590-1650 m  
**97:** 1560 [4].  
*Vicia cracca* subsp. *incana* (Gouan) Rouy – **A, C** – 1475-1880 m  
**9:** 0214 [15]; **23:** 0446 [8]; **36:** 0676 [10].  
*Vicia sepium* L. \*\* – **H** – 1590-1650 m  
**97:** 1557 [16].

### *Lentibulariaceae*

- Pinguicula balcanica* Casper – **H** – 1965 m  
**80:** 1468 [3].  
*Pinguicula hirtiflora* Ten. – **A, C, H** – 565-2010 m  
**2:** 0069 [5]; **6:** 0168 [8]; **35:** 0591 [4]; **69:** 1386 [5].

### *Linaceae*

- Linum bienne* Mill. – **F, G** – 520-1145 m  
**64:** 1214 [10]; **65:** 1301 [2].  
*Linum catharticum* L. – **A, H** – 1265-1550 m  
**31:** 0553 [4]; **108:** 1661 [6].  
*Linum elegans* Boiss. – **A** – 1740-2010 m  
**2:** 0087 [3].

*Linum hirsutum* L. – **G** – 700 m

**67**: 1347 [17].

*Linum nodiflorum* L. – **D** – 160 m

**43**: 0852 [5].

*Linum pubescens* Banks & Sol. – **F** – 980 m

**59**: 1165 [15].

*Linum punctatum* subsp. *pyncnophyllum* (Boiss. & Heldr.) Gustavsson – **A** – 740-2010 m

**2**: 0040 [6], 0077 [2].

*Linum tauricum* subsp. *albanicum* (Janch.) Greuter & Burdet – **F** – 1320 m

**55**: 1121 [7].

*Linum tenuifolium* L. – **C, F** – 1085-1320 m

**35**: 0635 [1]; **55**: 1115 [6].

*Linum trigynum* L. – **F** – 405 m

**52**: 1024 [4].

### *Lythraceae*

*Lythrum salicaria* L. – **D** – 790 m

**39**: 0748 [6].

### *Malvaceae*

*Alcea biennis* subsp. *cretica* (Weinm.) Valdés – **H** – 565 m

**69**: 1409 [0].

*Althaea hirsuta* L. – **F** – 1015-1100 m

**56**: 1140 [1].

*Lavatera thuringiaca* L. (*Malva thuringiaca* (L.) Vis.) – **G, H** – 565-700 m

**67**: 1345 [12]; **69**: 1408 [9].

*Malva moschata* L. – **H** – 1490 m

**71**: 1414 [7].

### *Moraceae*

*Ficus carica* L. – **G** – 700 m

**67**: 1349 [11].

### *Morinaceae*

*Morina persica* L. – **C, E** – 1325-1720 m

**37**: 0698 [15]; **47**: 0954 [13].

*Oleaceae*

*Forsythia europaea* Degen & Bald. – **F, G** – 405-700 m

**52:** 1010 [14]; **67** 1315 [8].

*Fraxinus ornus* L. – **D, G, H** – 565-700 m

**40:** 0796 [3]; **67** 1365 [1]; **69** 1388a [11].

*Ligustrum vulgare* L. – **F** – 405 m

**52:** 1012 [12].

*Phillyrea latifolia* L. – **D** – 550 m

**42:** 0804 [6].

*Onagraceae*

*Epilobium anagallidifolium* Lam. – **H** – 1965 m

**80:** 1481 [1].

*Epilobium angustifolium* L. – **E** – 1675 m

**48:** 0955 [10].

*Epilobium gemmascens* C. A. Mey. (cf.) – **A** – 1655 m

**28:** 0502 [2].

*Epilobium montanum* L. – **B, H** – 1590-1650 m

**11:** 0331 [7]; **97** 1558 [10].

*Orobanchaceae*

*Orobanche* – **H** – 1450-1550 m

**108:** 1664 [1].

*Orobanche alba* Willd. – **A** – 1685-1880 m

**9:** 0220 [11] (det. GD).

*Orobanche gracilis* Sm. – **F** – 1600 m

**54:** 1066 [3] (det. GD).

*Orobanche hederæ* Duby – **F** – 1120-1320 m

**55:** 1098 [12]; **64** 1215 [2] (det. GD).

*Orobanche minor* Sm. – **C** – 1085 m

**35:** 0612 [2] (det. GD).

*Orobanche reticulata* Wallr. – **A** – 1265 m

**1:** 0557 [6] (det. GD).

*Phelipanche mutelii* (F. W. Schultz) Pomel – **C** – 1085 m

**35:** 0639 [1] (det. GD).

*Phelipanche purpurea* (Jacq.) Soják – **A** – 1640 m

**3:** 0126 [5] (det. GD).

*Paeoniaceae*

*Paeonia saueri* D. Y. Hong al. – **H** – 1340 m  
**103**: 1577 [11].

*Papaveraceae*

*Chelidonium majus* L. – **H** – 1340-1390 m  
**104**: 1617 [2].

*Corydalis densiflora* C. Presl – **E** – 2345 m  
**44**: 0869 [1].

*Papaver rhoeas* L. – **C, D, F** – 790-1165 m  
**38**: 0701 [7]; **39**: 0720 [8]; **64**: 1199 [0].

*Plantaginaceae*

*Plantago argentea* Chaix – **F, G, H** – 700-1550 m  
**55**: 1095 [9]; **67**: 1324 [9]; **108**: 1652 [3].

*Plantago holosteum* Scop. – **A, F, G** – 520-2000 m  
**1**: 0022 [3]; **64**: 1202 [9]; **65**: 1283 [7]; **67**: 1314 [10].

*Plantago lanceolata* L. – **B, D** – 695-1630 m  
**11**: 0319 [4]; **40**: 0785 [6].

*Plantago lanceolata* var. *sphaerostachya* Mert. & W. D. J. Koch – **F** – 405 m  
**52**: 0990 [4].

*Plantago major* L. – **D** – 160 m  
**43**: 0832 [8].

*Plantago media* L. – **A** – 2000 m  
**1**: 0006 [18].

*Plantago media* subsp. *pindica* (Hauskn.) Greuter & Burdet (cf.) – **A** – 1740-2010 m  
**2**: 0088 [1].

*Plumbaginaceae*

*Acantholimon albanicum* O. Schwarz & F. K. Mey. – **C** – 1085 m  
**35** 0593 [10].

*Armeria canescens* (Host) Boiss. – **A, E; F** – 1740-2345 m  
**1**: 0025 [11]; **2**: 0058 [9]; **8**: 0195 [7]; **9**: 0248 [3]; **44**: 0867 [15]; **46**: 950e [6];  
**53**: 1035 [4].

*Polygalaceae*

*Polygala alpestris* subsp. *croatica* (Chodat) Hayek – **A, E** – 1740-2345 m

**2:** 0061 [3]; **44:** 0874 [3].

*Polygala nicaeensis* subsp. *mediterranea* Chodat (cf.) – **A, F, H** – 405-1880 m

**6:** 0184 [4]; **9:** 0272 [8]; **28:** 0482 [8]; **52:** 0983 [14]; **103:** 1605a [1]; **109:** 1685 [6].

*Polygala doerfleri* Hayek – **F, G** – 520-1145 m

**60:** 1172a [12]; **64:** 1194 [5]; **65:** 1294 [18]; **67:** 1323 [9].

### *Polygonaceae*

*Persicaria alpina* (All.) H. Gross – **A** – 1740-2010 m

**2:** 0045 [9].

*Persicaria vivipara* (L.) Ronse Decr. – **H** – 2000 m

**87:** 1535 [3].

*Polygonum aviculare* L. – **F** – 1120-1145 m

**64:** 1193 [8].

*Rumex acetosa* L. – **A** – 1685-1880 m

**9:** 0269 [7].

*Rumex acetosella* L. subsp. *acetosella* – **A, H** – 1655-2000 m

**28:** 0513 [9]; **79:** 1455 [6]; **85:** 1526 [2].

*Rumex acetosella* subsp. *acetoselloides* (Balansa) Den Nijs – **A** – 1515-1600 m

**19:** 0403 [9].

*Rumex acetosella* subsp. *multifidus* (L.) Schübl. & G. Martens – **A** – 1640 m

**3:** 0124 [6].

*Rumex alpinus* L. (*Rumex pseudoalpinus* Höfft) – **E, H** – 1815-2345 m

**44:** 0870 [1]; **84:** 1524 [8].

*Rumex arifolius* All. – **B** – 1630 m

**11:** 0310 [10].

*Rumex crispus* L. – **F** – 405 m

**52:** 1023 [3].

*Rumex nebroides* Campd. – **E** – 2345 m

**44:** 0862 [3].

*Rumex scutatus* L. – **A** – 1740-2010 m

**2:** 0060 [3].

### *Primulaceae*

*Lysimachia dubia* Aiton – **G** – 520 m

**65:** 1286 [4].

*Lysimachia nummularia* L. – **F** – 405 m

**52:** 0981 [20].

*Lysimachia punctata* L. – **D** – 790 m

**39:** 0719 [10].

*Primula veris* subsp. *columnae* (Ten.) Lüdi – **A, E** – 1685-1935 m

**8:** 0191 [12]; **46:** 0941 [4].

*Soldanella chrysosticta* Kress – **A** – 1740-2010 m  
**2:** 0095 [2].

### *Pyrolaceae*

*Orthilia secunda* (L.) House – **H** – 1340 m  
**105:** 1618 [6].

*Pyrola minor* L. – **A** – 1515-1545 m  
**18:** 0370 [4].

### *Ranunculaceae*

*Aconitum lycoctonum* subsp. *neapolitanum* (Ten.) Nyman – **H** – 1650-1880 m  
**95:** 1553 [0].

*Caltha palustris* L. – **B, H** – 1695-1720 m  
**10:** 0291 [13]; **77:** 1448 [13].

*Caltha palustris* L. – **H** – 1965 m  
**80:** 1463 [12].

*Clematis flammula* L. – **F** – 405 m  
**52:** 1022 [9].

*Clematis integrifolia* L. – **F** – 1600 m  
**54:** 1079 [1].

*Clematis vitalba* L. – **D, G** – 695-700 m  
**40:** 0791 [10]; **67:** 1332 [9].

*Consolida regalis* Gray – **F** – 1120-1145 m  
**64:** 1192 [3].

*Helleborus multifidus* Vis. – **F** – 1120-1145 m  
**64:** 1250 [5].

*Helleborus odorus* subsp. *cyclophyllus* (A. Braun) Maire & Petitm. – **C** – 1250-1880 m  
**36:** 0694 [6]; **9:** 0260a [1]; **15:** 0360 [13].

*Nigella damascena* L. – **F** – 1015-1145 m  
**56:** 1149 [13]; **64:** 1245 [9].

*Ranunculus acris* L. – **C** – 1085 m  
**35:** 0632 [5].

*Ranunculus brevifolius* Ten. – **E** – 2345 m  
**44:** 0890 [2].

*Ranunculus circinatus* Sibth. (cf.) – **A** – 1655 m  
**28:** 0481 [11].

*Ranunculus demissus* DC. – **E** – 2345 **44:** 0907 [1].

*Ranunculus platanifolius* L. – **A** – 1685-1880 m  
**9:** 0233 [10].

*Ranunculus platanifolius* L. – **H** – 1720 m  
**77:** 1439 [9].

*Ranunculus polyanthemus* subsp. *polyanthemoides* (Boreau) Ahlfv. (cf.) – **B, F, H** –  
1600-2000 m

**11:** 0324 [11]; **54:** 1054 [8]; **80:** 1482 [10]; **85:** 1529 [4].

*Ranunculus polyanthemus* subsp. *nemorosus* (DC.) Schübl. & G. Martens – **A, E, H** –  
1640-2345 m

**9:** 0271 [3]; **44:** 0897 [12]; **77:** 1440 [13]; **109:** 1683 [2].

*Ranunculus polyanthemus* subsp. *polyanthemophyllus* (W. Koch & H. E. Hess) Baltisb.  
– **A** – 1740-2010 m

**1:** [11]; **2:** 0085 [4].

*Ranunculus repens* L. – **A, C, H** – 1475-1880 m

**28:** 0505 [7]; **36:** 0691 [12]; **95:** 1552 [9].

*Ranunculus serbicus* Vis. – **C** – 1085-1475 m

**35:** 0629 [1]; **36:** 0693 [11].

*Ranunculus thora* L. – **H** – 1450-1550 m

**108:** 1663 [2].

*Thalictrum aquilegifolium* L. – **A** – 1670 m

**26:** 0471 [11].

*Thalictrum minus* L. – **A** – 565-2010 m

**2:** 0046 [9]; **67:** 1346 [5]; **91:** 1543 [4]; **108:** 1634 [18]; **69:** 1390 [11].

*Trollius europaeus* L. – **H** – 1720 m

**77:** 1446 [13].

### *Resedaceae*

*Reseda lutea* L. – **D** – 790 m

**39:** 0713 [17].

*Reseda luteola* L. – **D, F** – 790-1100 m

**39:** 0754 [0]; **56:** 1135 [10].

### *Rhamnaceae*

*Frangula alnus* Mill. – **G** – 505 m

**66:** 1311 [14].

*Frangula rupestris* (Scop.) Schur – **F** – 1600 m

**54:** 1077 [5].

*Paliurus spina-christi* Mill. – **D** – 160 m

**43:** 0837 [10].

*Rhamnus alpina* subsp. *fallax* (Boiss.) Maire & Petitm. – **H** – 1450-1550 m

**108:** 1647 [6]; **23:** 0452 [9]; **103:** 1595 [8].

*Rhamnus cathartica* L. – **F** – 1120-1145 m

**64:** 1236 [23].

*Rosaceae*

*Agrimonia eupatoria* L. subsp. *eupatoria* – **A, F** – 1120-1265 m

**31:** 0551 [3]; **64:** 1272 [10].

*Alchemilla amphisericca* Buser – **A** – 1685-1880 m

**9:** 0208 [11].

*Alchemilla gracilis* Opiz (cf.) – **H** – 2000 **99:** 1566 [6].

*Alchemilla heterotricha* Rothm. – **A** – 1515-1545 m

**18:** 0368 [11].

*Alchemilla plicatula* Gand. [incl. *A. velebitica* (Janch.) Degen] – **A** – 1670-1880 m

**9:** 0224 [8]; **26:** 0474 [4].

*Alchemilla xanthochlora* Rothm. – **A** – 1685-1880 m

**9:** 0279 [11].

*Amelanchier ovalis* Medik. – **F** – 1320 m

**55:** 1100 [14].

*Aria edulis* (Willd.) M. Roem. – **A, H** – 1450-1550 m

**108:** 1645 [8] (det. FMR).

*Aria graeca* (Spach) M. Roem. – **F** – 1320-1880 m

**9:** 0219 [12]; **55:** 1104 [4] (det. FMR).

*Aruncus dioicus* (Walter) Fernald – **H** – 1490 m

**71:** 1413 [13].

*Cotoneaster pyrenaicus* Gand. – **F, H** – 1320-1340 m

**55:** 1101 [7]; **103:** 1597 [10].

*Cotoneaster tomentosus* (Aiton) Lindl. – **H** – 1450-1550 m

**108:** 1650 [8].

*Crataegus monogyna* Jacq. – **D** – 160 m

**43:** 0839 [11].

*Crataegus orientalis* M. Bieb. – **A, E** – 1265-1620 m

**31:** 0533 [10]; **49:** 0957 [14].

*Dryas octopetala* L. – **F** – 1810 m

**53:** 1034 [4].

*Fragaria vesca* L. – **A** – 1250 m

**6:** 0171 [3].

*Geum bulgaricum* Pančić – **H** – 1450-1550 m

**108:** 1675 [4].

*Geum coccineum* Sm. – **A** – 1515-1655 m

**18:** 0369 [20]; **28:** 0483 [14].

*Geum montanum* L. – **H** – 2000 m

**99:** 1564 [6].

*Geum rivale* L. – **H** – 1590-1650 m

**97:** 1562 [10].

*Geum urbanum* L. – **A, F** – 1120-1640 m

**3:** 0131 [9]; **64:** 1269 [5].

*Malus pumila* Mill. – **D** – 790 m

**39:** 0771a [20].

- Potentilla argentea* L. – **D** – 790 m  
**39**: 0707 [9].
- Potentilla crantzii* (Crantz) R. M. Fritsch – **A** – 1740-2010 m  
**2**: 0097 [6]; **2**: 0098 [6]; **1**: 0017 [5].
- Potentilla crantzii* (Crantz) R. M. Fritsch var. – **H** – 2000 m  
**82**: 1505a [5]; **99**: 1565 [2].
- Potentilla erecta* (L.) Rausch. – **A, G** – 520-1250 m  
**6**: 0156 [6]; **65**: 1288 [1].
- Potentilla hirta* subsp. *pedata* (Willd.) Holmboe – **A, B** – 1515-1695 m  
**3**: 0132 [7]; **10**: 0288 [12]; **18**: 0373 [13].
- Potentilla hirta* var. *laeta* (Focke) Th. Wolf – **F** – 1120-1145 m  
**64**: 1224 [3].
- Potentilla micrantha* DC. var. – **A** – 1740-2010 m  
**2**: 0080 [12].
- Potentilla speciosa* Willd. var. *speciosa* – **F, H** – 1450-1600 m  
**54**: 1069 [16]; **108**: 1643 [2].
- Prunus avium* (L.) L. – **G** – 700 m  
**67**: 1364 [14].
- Prunus cerasifera* Ehrh. – **A, F, G** – 370-1250 m  
**33**: 0572 [13]; **52**: 1031 [12]; **68**: 1371 [20].
- Prunus domestica* L. (cf.) – **A** – 1250 m  
**6**: 0180 [14].
- Prunus webbii* (Spach) Vierh. (cf.) – **H** – 1265 m  
**101**: 1571 [20].
- Prunus mahaleb* L. – **C, F** – 1085-1145 m  
**35**: 0589 [14]; **64**: 1219 [12].
- Pyrus communis* subsp. *pyraster* (L.) Ehrh. – **A, D, F** – 790-1320 m  
**6**: 0179 [12]; **39**: 0725 [13]; **55**: 1105 [6]; **64**: 1231 [13].
- Pyrus spinosa* Forssk. – **E** – 1325 m  
**50**: 0972 [20].
- Rosa agrestis* Savi – **D, E, F, H** – 405-1325 m  
**39**: 0735 [6], 0736 [6]; **50**: 0963 [5]; **52**: 1006 [5], 1008 [4], 1009 [4]; **69**: 1375 [5];  
**64**: 1263 [5] (det. EL).
- Rosa arvensis* Huds. – **F** – 405 m  
**52**: 1007 [4] (det. EL).
- Rosa canina* L. – **A, C, F, G, H** – 520-1490 m  
**31**: 0536 [4], 0537 [11]; **33**: 0573a [4]; **35**: 0650 [4]; **64**: 1260 [4], 1265 [4]; **65**:  
1304a [3]; **89**: 1541 [4]; **103**: 1588 [5] (det. EL).
- Rosa canina* L. (or *R. ×subcanina* (Christ) Vuk.) – **F** – 1320 m  
**55** 1122 [4] (det. EL).
- Rosa corymbifera* Borkh. – **A, F, G, H** – 520-1275 m  
**5**: 0146 [13]; **34**: 0575 [6]; **64**: 1259 [2]; **65**: 1304b [3]; **69**: 1374 [4] (det. EL).
- Rosa micrantha* Borrer ex Sm. – **C, E, F** – 1085-1325 m  
**35**: 0651 [8]; **50**: 0965 [7]; **64**: 1257 [2] (det. EL).
- Rosa mollis* Sm. – **E, F** – 1320-1935 m

- 46:** 0949 [9]; **55:** 1124 [7] (det. EL).  
*Rosa pendulina* L. – **H** – 1340 m  
**103:** 1590 [10] (det. EL).  
*Rosa pulverulenta* M. Bieb. – **A, B, E, F** – 1685-1880 m  
**9:** 0246 [3]; **15:** 0359 [5]; **23:** 0448 [5]; **33:** 0573 [4]; **45:** 0916 [5], 917 [3]; **50:** 0964 [4]; **64:** 1258 [3], 1262a [1] (det. EL).  
*Rosa spinosissima* L. – **F** – 1120-1600 m  
**64:** 1264 [3]; **54:** 1080 [6] (det. EL).  
*Rosa tomentosa* Sm. – **C, H** – 565-1475 m  
**36:** 0695 [8]; **69:** 1375 [5] (det. EL).  
*Rosa villosa* L. – **F, H** – 1120-1505 m  
**64:** 1261 [2], 1262 [2]; **90:** 1542 [5]; **103:** 1589 [9] (det. EL).  
*Rubus canescens* DC. – **B, D** – 790-1275 m  
**14:** 0354 [7]; **39:** 0734 [6].  
*Rubus hirtus* Waldst. & Kit. – **H** – 1340-1690 m  
**94:** 1549 [10]; **103:** 1596 [5].  
*Rubus idaeus* L. – **B, H** – 1340-1630 m  
**11:** 0326 [6]; **103:** 1603 [7].  
*Rubus sanctus* Schreb. (incl. *Rubus ulmifolius* Schott) – **D, H** – 550-565 m  
**42:** 0802 [9]; **69:** 1373 [15].  
*Sanguisorba minor* subsp. *balearica* (Nyman) Muñoz Garm. & C. Navarro – **A, C, F** – 1015-1550 m  
**4:** 0139 [1]; **35:** 0648 [3]; **56:** 1148 [8].  
*Sorbus aucuparia* L. – **H** – 1390 m  
**107:** 1623 [18].  
*Torminalis clusii* K. R. Robertson & J. B. Phipps – **G** – 700 m  
**67:** 1339 [12].

### Rubiaceae

- Asperula aristata* L. f. – **A, G, H** – 700-1710 m  
**22:** 0428 [9]; **25:** 0468 [2]; **67:** 1317a [4], 1352 [3]; **108:** 1653 [5], 1667 [9].  
*Asperula cynanchica* L. – **G, H** – 520-1540 m  
**65:** 1278 [16]; **73:** 1422 [8].  
*Asperula doerfleri* Wettst. – **E** – 2345 m  
**44:** 0887 [9].  
*Asperula purpurea* (L.) Ehrend. subsp. *purpurea* – **H** – 1340 m  
**103:** 1582 [1].  
*Asperula scutellaris* Vis. – **H** – 565 m  
**69:** 1404 [44].  
*Cruciata laevipes* Opiz – **A, B, C, D, E, H** – 790-1935 m  
**11:** 0320 [14]; **22:** 0420 [9]; **31:** 0540 [5]; **36:** 0664 [3]; **39:** 0729 [4]; **46:** 950a [10];  
**77:** 1441 [7].  
*Galium anisophyllum* Vill. (incl. *G. plebejum* Boiss & Heldr.) – **E** – 2345 m

- 44:** 0879 [5].  
*Galium aparine* L. – **F** – 1120-1145 m  
**64:** 1232 [4].  
*Galium corrudifolium* Vill. (incl. *G. macedonicum* Krendl) (cf.) – **A, C, E, F, G** – 520-1935 m  
**22:** 0441 [10]; **35:** 0582 [16]; **46:** 0926 [10]; **60:** 1171 [8]; **65:** 1290 [6]; **108:** 1655 [5].  
*Galium mollugo* L. (s.l.) – **F** – 1600 m  
**54:** 1053 [5].  
*Galium lucidum* All. (incl. *Galium oreophilum* Krendl) – **F, G** – 700-1090 m  
**61:** 1179 [10]; **67:** 1359 [7].  
*Galium odoratum* (L.) Scop. – **C, H** – 1475-1720 m  
**36:** 0672 [13]; **77:** 1449a [7].  
*Galium parisiense* L. – **A** – 1265-1655 m  
**28:** 0499 [14]; **31:** 0544 [10].  
*Galium pseudaristatum* Schur – **D** – 790m  
**39:** 0741 [6].  
*Galium verum* L. – **C, F** – 405-1085 m  
**35:** 0581 [6]; **52:** 1003 [14].  
*Valantia aprica* (Sm.) Boiss. & Heldr. – **E** – 2345 m  
**44:** 0881 [12].

### *Rutaceae*

- Dictamnus albus* L. – **F** – 980 m  
**59:** 1167 [5].

### *Salicaceae*

- Populus alba* L. – **C** – 1085 m  
**35:** 0611 [15].  
*Populus tremula* L. – **H** – 1390 m  
**107:** 1622 [12].  
*Salix alba* L. – **C** – 1085 m  
**35:** 0618 [15].  
*Salix amplexicaulis* Bory – **C** – 1085 m  
**35:**-0613 [12], 0615 [21].  
*Salix caprea* L. – **H** – 1340-1550 m  
**103:**-1600 [10]; **108:**1649 [7].  
*Salix cinerea* L. – **H** – 1490 m  
**100:**-1569 [5].  
*Salix eleagnos* Scop. – **A** – 1265 m  
**31:** 0529 [13].

*Santalaceae*

*Thesium alpinum* L. – F – 1015-1100 m

56: 1158 [1].

*Thesium auriculatum* Vandas – H – 1450-1550 m

108: 1674 [1].

*Thesium divaricatum* Mert. & W. D. J. Koch – F – 405 m

52: 0984 [15].

*Thesium linophyllum* L. – H – 565 m

69: 1404a [?].

*Saxifragaceae*

*Parnassia palustris* L. – H – 565 m

69: 1398 [5].

*Saxifraga paniculata* Mill. – A, E, F – 1710-2345 m

9-0261 [10]; 22: 0431 [4]; 44:-0868 [2]; 53: 1049 [1].

*Saxifraga rotundifolia* L. – A, B, H – 1630-1720 m

11: 0314 [17]; 22: 0438 [9]; 77: 1442 [15].

*Saxifraga scardica* Griseb. – E – 2345 m

44: 0904 [5].

*Saxifraga sempervivum* K. Koch – A – 1685-1880 m

9: 0263 [10].

*Saxifraga stellaris* subsp. *engleri* P. Fourn. – H – 1965 m

80:-1469 [9].

*Saxifraga taygetea* Boiss. & Heldr. – A – 1740-2010 m

1:-0026 [4]; 2:-0079 [8].

*Scrophulariaceae* (s.l.)

*Digitalis ferruginea* L. – F – 1120-1145 m

64: 1235 [2].

*Digitalis grandiflora* Mill. – A, F, H – 1550-1650 m

4: 0136 [5]; 54: 1075 [1]; 75: 1427 [12].

*Digitalis viridiflora* Lindl. – A – 1675-1775 m

21: 0414 [10].

*Euphrasia liburnica* Wettst. – A – 1675-1775 m

21: 0411 [3].

*Euphrasia minima* DC. – B – 1695 m

10: 0299 [28].

*Euphrasia pectinata* Ten. – A, B, F – 1120-1250 m

15: 0361 [13]; 17 0367 [4]; 31: 0542 [15]; 33: 0570 [13]; 64: 1234 [6], 1234a [2].

*Euphrasia salisburgensis* Funck – F – 1320 m

55: 1102 [10].

- Linaria alpina* (L.) Mill. – **E** – 2345 m  
**44:** 0882 [9].
- Linaria peloponnesiaca* Boiss. & Heldr. – **A, C, H** – 565-2010 m  
**2:** 0052 [2]; **9:** 0217 [6]; **35:** 0580 [6]; **69:** 1379 [7].
- Melampyrum scardicum* Wettst. – **H** – 1650-1880 m  
**95:** 1555 [1].
- Microrrhinum minus* (L.) Fourr. – **D** – 790 m  
**39:** 0771p [0].
- Pedicularis brachyodonta* subsp. *grisebachii* (Wettst.) Hayek – **A, F** – 1685-1880 m  
**9:** 0204 [6]; **53:** 1044 [1].
- Pedicularis brachyodonta* subsp. *montenegrina* (Nyman) D. A. Webb (cf.) – **E** – 2345 m  
**44:** 0884 [2].
- Pedicularis petiolaris* Ten. – **A** – 1740-2010 m  
**2:** 0037 [2].
- Rhinanthus mediterraneus* (Sterneck) Adamović – **A** – 1710 m  
**22:** 0423 [5].
- Rhinanthus melampyroides* (Borbás & Degen) Soó – **H** – 1450-1550 m  
**108:** 1659 [12].
- Rhinanthus minor* L. – **A** – 1265 m  
**31:** 0552 [9].
- Rhinanthus pindicus* (Sterneck) Soó – **A, C** – 1085-1190 m  
**17:** 0366 [13]; **35:** 0587 [8].
- Rhinanthus rumelicus* Velen. – **H** – 1690 m  
**76:** 1430 [15].
- Scrophularia canina* subsp. *bicolor* (Sm.) Greuter – **A, D** – 695-1275 m  
**32:** 0569 [8]; **39:** 0749 [7]; **40:** 0777 [5].
- Scrophularia canina* subsp. *tristis* (K. Malý) V. Nikolić – **C** – 1085 m  
**35:** 0584 [12].
- Scrophularia heterophylla* subsp. *laciniata* (Waldst. & Kit.) Maire & Petitm. [var. *alpina* (Heuff.) Hayek] – **H** – 1450-1550 m  
**108:** 1654 [9].
- Scrophularia heterophylla* subsp. *laciniata* (Waldst. & Kit.) Maire & Petitm. [var. *multifida* (Willd.) Hayek] – **E** – 2345 m  
**44:** 0889 [20].
- Scrophularia nodosa* L. – **B** – 1630 m  
**11:** 0322 [10].
- Verbascum banaticum* Schrad. – **H** – 565 m  
**69:** 1388 [10].
- Verbascum glabratum* subsp. *bosnense* (K. Malý) Murb. (cf.) – **F** – 995 m  
**60:** 1173 [?].
- Verbascum glabratum* subsp. *brandzae* (D. Brândză) Murb. – **H** – 1340-1390 m  
**106:** 1620 [3].
- Verbascum longifolium* Ten. – **A** – 1640-1935 m  
**3:** 0127 [12]; **8:** 0193 [13]; **46:** 0944 [5]; **78:** 1450 [9].
- Verbascum nigrum* L. (cf.) – **D** – 790 m

**39:** 0760 [10].

*Verbascum nigrum* subsp. *abietinum* (Borbás) I. K. Ferguson – **F** – 1015-1100 m

**56:** 1157 [8].

*Verbascum sinuatum* L. (cf.) – **D** – 160 m

**43:** 0830 [8].

*Veronica andrasovskyi* Jáv. – **G** – 520-700 m

**65:** 1300 [1]; **67:** 1343 [1].

*Veronica austriaca* L. – **F** – 1120-1145 m

**64:** 1204 [23].

*Veronica beccabunga* L. – **A** – 1265 m

**31:** 0545 [6].

*Veronica chamaedrys* L. subsp. *chamaedrys* – **A, C, E, H** – 1475-1935 m

**22:** 0434 [10]; **36:** 0668 [13]; **46:** 0943 [11]; **77:** 1438 [7].

*Veronica officinalis* L. – **H** – 1540 m

**73:** 1423 [13].

*Veronica orsiniana* Ten. – **A, E** – 1740-2265 m

**1:** 0003 [6]; **2:** 0051 [9]; **45:** 0922b [4].

*Veronica urticifolia* Jacq. – **H** – 1720 m

**77:** 1449 [17].

*Wulfenia baldaccii* Degen – **H** – 1770 m

**70:** 1410 [1].

### *Solanaceae*

*Atropa belladonna* L. – **H** – 1210 m

**110:** 1687 (specimens lost).

*Datura stramonium* L. – **G** – 520 m

**65:** 1304 [11].

*Hyoscyamus niger* L. – **F** – 1175 m

**63:** 1186 [12].

### *Thymelaeaceae*

*Daphne oleoides* Schreb. – **A, E, H** – 1685-2010 m

**1:** 0005 [13]; **2:** 0057 [2]; **2:** 0083 [8]; **9:** 0226 [4]; **46:** 0929 [7]; **108:** 1646 [6].

### *Tiliaceae*

*Tilia rubra* DC. (vel *platyphyllos* var.?) – **H** – 1290 m

**102:** 1573 [9].

*Ulmaceae*

*Ulmus glabra* Huds. – **H** – 1060 m

**112:** 1690 [9].

*Ulmus minor* subsp. *canescens* (Melville) Browicz & Ziel. – **D** – 160 m

**43:** 0838 [9].

*Umbelliferae*

\**Bunium tenerum* Hausskn. – **A** – 1550 m

**4:** 0140 [4].

*Ammoides pusilla* (Brot.) Breistr. – **D** – 160 m

**43:** 0854 [2].

*Anthriscus cerefolium* (L.) Hoffm. – **F** – 1120-1145 m

**64:** 1229 [13].

*Athamanta albanica* Alston & Sandwith – **D** – 695 m

**40:** 0787 [2].

*Athamanta turbith* subsp. *haynaldii* (Borbás & R. Uechtr.) Tutin – **A** – 1685-1880 m

**9:** 0237 [9]; **25:** 0466 [1].

*Bupleurum karglii* Vis. – **E, H** – 565-1325 m

**50:** 0974 [4]; **69:** 1392 [8].

*Bupleurum veronense* Turra – **F, G** – 405-1145 m

**52:** 0994 [12]; **64:** 1226 [5]; **65:** 1279 [16].

*Carum graecum* subsp. *serpentinicum* Hartvig – **C** – 1085 m

**35:** 0636 [13].

*Carum rupestre* Boiss. & Heldr. – **A, B, E, F, H** – 1650-2265 m

**2:** 0067 [6]; **10:** 0290 [11]; **28:** 0512 [1]; **45:** 0920 [5]; **46:** 0925 [3]; **53:** 1042 [5].

*Chaerophyllum aromaticum* L. – **H** – 1650 m

**75:** 1428 [10].

*Chaerophyllum aureum* L. – **C, H** – 1475-1815 m

**36:** 0689 [11]; **76:** 1437 [2]; **78:** 1453 [11].

*Chaerophyllum coloratum* L. – **F** – 1120-1145 m

**64:** 1209 [13].

*Chaerophyllum hirsutum* L. – **H** – 1650-1880 m

**76:** 1436 [5]; **86:** 1528 [4].

*Eryngium creticum* Lam. – **D** – 160 m

**43:** 0856 [20].

*Geocaryum capillifolium* (Guss.) Coss. – **A, B** – 1630-1775 m

**11:** 0337 [8]; **21:** 0416 [1].

*Heracleum sphondylium* subsp. *pyrenaicum* (Lam.) Bonnier & Layens – **E** – 1620 m

**49:** 0958 [6].

*Laserpitium latifolium* L. – **G** – 700 m

**67:** 1328 [15].

*Malabaila aurea* (Sm.) Boiss. – **C** – 1085 m

**35:** 0640 [3].

*Meum athmanticum* (cf.) – **H** – 1650-2000 m

**82:** 1512 [6]; **86:** 1532 [8].

*Orlaya daucooides* (L.) Greuter – **F** – 1320 m

**55:** 1092 [14].

*Orlaya daucorlaya* Murb. – **D, F** – 790-1145 m

**39:** 0764 [7]; **64:** 1218 [12].

*Orlaya grandiflora* (L.) Hoffm. – **E** – 1325 m

**50:** 0960 [12].

*Pimpinella serbica* (Vis.) Drude – **H** – 1720 m

**77:** 1445 [19].

*Pimpinella tragium* Vill. subsp.? – **H** – 1450-1550 m

**108:** 1638 [11].

*Pimpinella tragium* subsp. *lithophila* (Schischk.) Tutin – **B, H** – 1340-1360 m

**13:** 0350 [4]; **103:** 1581 [13].

*Torilis arvensis* (Huds.) Link subsp. *arvensis* – **D, E** – 160-1325 m

**39:** 0766 [8]; **43:** 0853 [2]; **50:** 0979 [16].

*Trinia glauca* (L.) Dumort. subsp. *glauca* – **H** – 1450-1550 m

**108:** 1625 [12].

### *Urticaceae*

*Parietaria officinalis* L. – **H** – 565 m

**69:** 1383 [4].

*Urtica dioica* L. – **A** – 1640 m

**3:** 0128 [6].

### *Valerianaceae*

*Centranthus longiflorus* subsp. *junceus* (Boiss. & Heldr.) I. Richardson – **D** – 695 m

**40:** 0788 [15].

*Valeriana crinii* Boiss. (cf.) – **E** – 2265-2345 m

**44:** 0893 [5]; **45:** 0919 [9].

*Valeriana montana* L. – **A** – 1450-2010 m

**2:** 0033 [13]; **9:** 0205 [8]; **53:** 1033 [3]; **108:** 1628 [5].

*Valeriana officinalis* subsp. *collina* (Wallr.) Nyman – **H** – 1340 m

**103:** 1598 [1].

*Valeriana officinalis* L. subsp. *officinalis* – **A** – 1670 m

**26:** 0472 [10].

### *Verbenaceae*

*Verbena officinalis* L. – **G** – 700 m

**67:** 1348 [9].

### *Violaceae*

*Viola aetolica* Boiss. & Heldr. – **A, F, H** – 1320-1965 m

**9:** 0254 [1]; **55:** 1125 [14]; **98:** 1563 [9] (det. ME).

*Viola albanica* Halácsy – **A, E** – 1740-2345 m

**2:** 0094 [10]; **44:** 0866 [6] (det. ME).

*Viola biflora* L. – **A** – 1740-2010 m

**2:** 0034 [2] (det. ME).

*Viola dukadjinica* W. Becker & Košanin – **A** – 1740-2010 m

**2:** 0048 [10] (det. ME).

*Viola orphanidis* Boiss. – **A** – 1675-1775 m

**21:** 0413 [22] (det. ME).

*Viola riviniana* Rchb. – **H** – 565 m

**69:** 1403 [9] (det. ME).

### *Vitaceae*

*Vitis vinifera* subsp. *sylvestris* (Willd.) Hegi – **G** – 505 m

**66:** 1309 [14].

### Monocotyledones

#### *Araceae*

*Arum cylindraceum* Gasp. – **F** – 1120-1145 m

**64:** 1201 [12].

#### *Cyperaceae*

*Blysmus compressus* (L.) Link – **A, B, C, H** – 1085-1965 m

**6:** 0152 [17]; **10:** 0305 [26]; **28:** 0491 [3]; **35:** 0588 [3]; **80:** 1471 [7].

*Carex buekii* Wimm. var. (cf.) – **A** – 1250 m

**6:** 0153 [1], 0154 [4].

*Carex cuprina* (Heuff.) A. Kern. – **F** – 405 m

**52:** 1002 [2].

*Carex davalliana* Sm. – **A** – 1740-2010 m

**2:** 0066 [7].

*Carex demissa* Hornem. – **A** – 1250 m

**6:** 0167 [4].

*Carex distans* L. – **A, F** – 1250-1265 m

- 31:** 0546 [9]; **6:** 0149 [6]; **62:** 1185 [3].  
*Carex divulsa* Stokes – **F** – 405 m  
**52:** 0992 [2].  
*Carex echinata* Murray – **A, B, H** – 1250-1970 m  
**6:** 0151 [12], 0164 [8]; **10:** 0298 [9]; **19:** 0386 [12]; **28:** 0480 [9]; **79:** 1456 [14]; **80:** 1464 [3].  
*Carex ferruginea* Scop. – **A, F** – 1015-2010 m  
**2:** 0117 [5]; **56:** 114B [7].  
*Carex flacca* subsp. *serrulata* (Spreng.) Greuter – **C, G** – 520-1085 m  
**35:** 0590 [16]; **65:** 1283a [0].  
*Carex hirta* L. – **A, B, C** – 1265-1695 m  
**10:** 0300 [11], 0304 [5]; **28:** 0497 [8], 0517 [8]; **31:** 0538 [14]; **36:** 0673 [9].  
*Carex kitaibeliana* Bech. – **A, E, F, H** – 1515-2345 m  
**1:** 0001 [7].  
*Carex kitaibeliana* Bech. – **A, E, F** – 1740-2010 m  
**2:** 0114 [7]; **9:** 0209 [11]; **19:** 0400 [11]; **44:** ; 885 [8]; **54:** 1073 [3]; **108:** 1660 [33].  
*Carex lepidocarpa* Tausch – **A, F, H** – 1120-1600 m  
**19:** 0396 [9]; **64:** 19A [2]; **80:** 1475 [2];  
*Carex leporina* L. – **A, B, H** – 1250-2000 m  
**6:** 0166 [5]; **10:** 0303 [17]; **28:** 0492 [12]; **82:** 1511a [5], 1516 [3].  
*Carex muricata* L. – **A, E** – 1515-1935 m  
**19:** 0390 [4]; **46:** 0931 [10].  
*Carex nigra* (L.) Reichard – **A, H** – 1965-2000 m  
**1:** 0027 [10]; **80:** 1465 [4], 1470 [4].  
*Carex pallescens* L. – **A, B, H** – 1265-1965 m  
**10:** 0308 [10]; **28:** 0494 [3]; **31:** 0543 [5]; **80:** 1460 [5].  
*Carex paniculata* L. – **A, B, H** – 1250-1690 m  
**6:** 0165 [8], 0172 [11]; **10:** 0307 [7]; **19:** 0384a [0]; **28:** 487 [6]; **31:** 0547 [5]; **94:** 1547 [10].  
*Carex remota* L. – **A, H** – 1250-1490 m  
**6:** 0155 [6]; **72:** 1418 [8].  
*Carex sempervirens* Vill. – **E, H** – 1720-2000 m  
**47:** 0952 [5]; **81:** 1483 [8].  
*Carex spicata* Huds. – **A, H** – 565-1600 m  
**19:** 0398 [9]; **28:** 0503 [15]; **69:** 1378 [3].  
*Carex sylvatica* Huds. – **A, H** – 1265-1490 m  
**31:** 0548 [7]; **72:** 1419 [6].  
*Carex vesicaria* L. – **A** – 1655 m  
**28:** 0495 [16].  
*Carex viridula* Michx. – **A** – 1250 m  
**6:** 0150 [4].  
*Eleocharis palustris* (L.) R. Br. – **A, B** – 1655-1695 m  
**10:** 0306 [1]; **28:** 0489 [3], 0519 [13].  
*Eriophorum angustifolium* Honck. – **A, B, H** – 1250-2010 m  
**2:** 0055 [6]; **6:** 0162 [7]; **10:** 0301 [3]; **19:** 0384 [4]; **80:** 1472 [3].

*Schoenus nigricans* L. – **C, D, F, G** – 520 m  
**35:** 0592 [6]; **43:** 0833 [8]; **62:** 1184 [15]; **65:** 1285 [11].  
*Scirpus sylvaticus* L. – **A** – 1515-1600 m  
**19:** 0395 [15].

### *Dioscoreaceae*

*Dioscorea communis* (L.) Caddick & Wilkin – **G** – 505 m  
**66:** 1313 [2].

### *Gramineae*

*Achnatherum calamagrostis* (L.) P. Beauv. – **F, G, H** – 565-1145 m  
**64:** 1205 [9]; **67:** 1351 [1]; **69:** 1384 [14], 1402 [10].  
*Agrostis castellana* Boiss. & Reut. – **G** – 700 m  
**67:** 1335 [6].  
*Agrostis rupestris* All. – **H** – 2000 m  
**82:** 1497 [9].  
*Aira elegantissima* Schur – **A** – 1265 m  
**31:** 0554 [4].  
*Alopecurus gerardi* Vill. – **H** – 2000 m  
**82:** 1491 [11].  
*Anthoxanthum odoratum* L. – **A, H** – 1515-2000 m  
**1:** 0021 [6]; **9:** 0235 [5]; **19:** 0376 [6]; **96:** 1556 [3].  
*Bellardiachloa variegata* (Lam.) Kerguelen – **A** – 1685-1880 m  
**9:** 0259 [11].  
*Bothriochloa ischaemum* (L.) Keng – **D** – 160-1265 m  
**31:** 0526 [3]; **39:** 0771e [5]; **43:** 0842 [5], 0847 [2]; **67:** 1353 [7].  
*Brachypodium sylvaticum* (Huds.) P. Beauv. – **D, F** – 405-1175 m  
**39:** 0771b [6]; **52:** 0997 [2]; **63:** 1188 [10]; **64:** 1271 [8].  
*Briza media* L. – **A, C, F** – 1085-1265 m  
**31:** 0525 [9]; **35:** 0599 [9]; **64:** 1256 [9].  
*Bromus arvensis* L. – **D, G** – 505-790 m  
**6:** 1313a [2]; **39:** 0738 [19], 0771h [10]  
*Bromus cappadocicus* Boiss. & Balansa subsp. *cappadocicus* – **F** – 1600 m  
**54:** 1061 [3].  
*Bromus cappadocicus* subsp. *lacmonicus* (Hauskn.) P. M. Sm. – **F** – 1120-1145 m  
**64:** 1217 [6].  
*Bromus hordeaceus* L. – **A, B** – 1515-1630 m  
**11:** 0311 [16]; **19:** 0404 [5].  
*Bromus riparius* Rehmman – **G** – 700 m  
**67:** 1334 [6].  
*Bromus secalinus* L. – **D** – 550 m

- 42:** 0807 [5].  
*Bromus squarrosus* L. – **A, D, F** – 695-1600 m  
**7:** 0190 [4]; **19:** 0387 [17]; **40:** 0780 [6]; **64:** 1233a [1], 1243 [8].  
*Bromus sterilis* L. – **E** – 1120-1325 m  
**50:** 0959 [9]; **64:** 1233 [2].  
*Calamagrostis pseudophragmites* (Haller f.) Koeler (cf.) – **A, F** – 1090-1265 m  
**31:** 0535 [10]; **61:** 1174 [3].  
*Catapodium rigidum* (L.) C. E. Hubb. – **H** – 565 m  
**69:** 1377 [5].  
*Chrysopogon gryllus* (L.) Trin. – **D, G** – 505-550 m  
**42:** 0813 [7]; **65:** 1281 [16]; **66:** 1308 [8].  
*Cynosurus cristatus* L. – **A** – 1515-1600 m  
**19:** 0379 [6].  
*Cynosurus echinatus* L. – **A, F** – 1015-1600 m  
**19:** 0397 [14]; **56:** 1141 [5].  
*Cynosurus polybracteatus* Poir. (cf.) – **B** – 1695 m  
**10:** 0296 [8].  
*Dactylis glomerata* subsp. *hispanica* (Roth) Nyman – **C** – 1085-1630 m  
**11:** 0323 [6]; **19:** 0389 [10]; **35:** 0600 [6].  
*Danthonia alpina* Vest – **F** – 1600 m  
**54:** 1074 [8].  
*Danthonia decumbens* (L.) DC. – **A** – 1740-2010 m  
**2:** 0115 [2].  
*Dasypyrum villosum* (L.) P. Candargy – **C, D** – 790-1085 m  
**35:** 0595 [6]; **39:** 0744 [6].  
*Deschampsia cespitosa* (L.) P. Beauv. – **A, H** – 1515-2000 m  
**1:** 0004 [12]; **19:** 0377 [17]; **82:** 1490 [8].  
*Deschampsia flexuosa* (L.) Trin. – **H** – 520-2000 m  
**82:** 1490a [1].  
*Deschampsia flexuosa* (L.) Trin. [var. *aristis rectis brevioribus*] – **G** – 520 m  
**65:** 1277 [13].  
*Elymus athericus* (Link) Kerguélen (cf.) – **C** – 1085 m  
**35:** 0601 [2].  
*Elymus elongatus* (Host) Runemark – **D, G** – 160-700 m  
**43:** 0828 [20]; **67:** 1354 [2].  
*Elymus repens* (L.) Gould – **G** – 700 m  
**67:** 1336 [7].  
*Festuca* sp. – **A, E, F** – 1120-1935 m  
**19:** 0394 [6]; **46:** 0932 [1]; **64:** 1203 [12].  
*Festuca* sp. [mixed with *Anthoxanthum* + *Trisetum*] – **A** – 1265 m  
**31:** 0528 [3].  
*Festuca* (sect. *Eskia*) sp. – **A** – 1515-1600 m  
**19:** 0375 [13].  
*Festuca dalmatica* (Hack.) K.Richt. or *Festuca illyrica* Markgr.-Dann. – **D** – 790 m  
**39:** 0771i [2], 0771j [8] (det. RK).

- Festuca ovina* L. (s.l.) – **A, E, F** – 1515-2010 m  
**2:** 0113 [13]; **4:** 0145a [2]; **9:** 0281 [5]; **22:** 0430 [5], 0443 [11]; **44:** 0899 [12]; **54:** 1078 [5]; **19:** 0392 [2] (det. RK).
- Festuca paniculata* (L.) Schinz & Thell. – **A, H** – 1515-2000 m  
**19:** 0391 [11]; **82:** 1495 [7] (det. RK).
- Festuca rubra* L. (s.l.) – **A** – 1515-1600 m  
**19:** 0399 [6] (det. RK).
- Festuca valesiaca* Schleich. ex Gaudin (s.l.) – **A, E** – 2000-2345 m  
**44:** 0909 [6]; **1:** 0012 [11] (det. RK).
- Festuca varia* (s.l.) *bosniaca* Kumm. & Sendtn. (cf.) – **A, E** – 1685-2345 m  
**2:** 0118 [3]; **9:** 0285 [8]; **44:** 0898 [11], 0902 [13] (det. RK).
- Festucopsis serpentini* (C. E. Hubb.) Melderis – **A, C** – 1085-2010 m  
**2:** 0068 [6], 0108 [5]; **35:** 0605 [6].
- Glyceria fluitans* (L.) R. Br. – **A** – 1655 m  
**28:** 0486 [7].
- Glyceria maxima* (Hartm.) Holmb. – **A** – 1250 m  
**6:** 0170 [44].
- Holcus lanatus* L. – **A, D** – 790-1265 m  
**31:** 0524 [21]; **39:** 0722 [5].
- Hordeum geniculatum* All. – **A** – 1250 m  
**6:** 0163 [5].
- Hyparrhenia hirta* (L.) Stapf – **D** – 160 m  
**43:** 0850 [8].
- Imperata cylindrica* (L.) Raeusch. – **D** – 160 m  
**43:** 0845 [5].
- Koeleria macrantha* (Ledeb.) Schult. (cf.) – **C, D** – 790-1085 m  
**35:** 0603 [11]; **39:** 0769 [9].
- Koeleria splendens* C. Presl (cf.) – **G** – 700 m  
**67:** 1337 [6].
- Lolium perenne* L. – **C** – 1475 m  
**36:** 0683 [6], 0684 [8].
- Melica ciliata* L. subsp. *ciliata* – **C, D, E, F** – 790-1325 m  
**35:** 0604 [7]; **39:** 0770 [5]; **50:** 0970 [9]; **60:** 1170 [4]; **64:** 1221 [8].
- Melica transsilvanica* subsp. *klokovii* Tzvelev – **D** – 695 m  
**40:** 0784 [4].
- Melica uniflora* Retz. – **A, C** – 1475-1710 m  
**22:** 0433 [3]; **36:** 0682 [16].
- Milium effusum* L. – **C** – 1475 m  
**36:** 0677 [6].
- Nardus stricta* L. – **A** – 1515-2010 m  
**1:** 0008 [15]; **2:** 0116 [1]; **10:** 0293 [12]; **19:** 0383 [9].
- Phleum montanum* K. Koch – **A, C, E** – 1475-2345 m  
**9:** 0278 [5]; **36:** 0681 [9]; **44:** 0903 [15]; **46:** 0939 [4].
- Phleum pratense* L. – **C, F** – 1085-1145 m  
**35:** 0606 [6]; **64:** 1237 [4].

*Poa* sp. – **B** – 405-1630 m

**11:** 0313 [5]; **35:** 0620 [3]; **40:** 0786 [10]; **52:** 1004 [5].

*Poa* sp. (mixed material) – **C** – 1085 m

**35:** 0598 [9] (det. RK).

*Poa alpina* L. – **A** – 1120-1880 m

**9:** 0273 [6]; **64:** 1227 [2] (det. RK).

*Poa angustifolia* L. – **B, C** – 1475-1630 m

**11:** 0317 [6]; **36:** 0680 [6] (det. RK).

*Poa annua* L. – **A** – 1515-1600 m

**19:** 0393 [2] (det. RK).

*Poa bulbosa* L. – **A** – 1515-1600 m

**19:** 0402 [5] (det. RK).

*Poa compressa* L. – **A** – 1515-1600 **19:** 0378 [5] (det. RK).

*Poa molinerii* Balb. or *Poa badensis* Haenke ex Willd. – **A, B, E** – 1515-2345 m

**11:** 0312 [2]; **19:** 0388 [4]; **44:** 0901 [12], 0910 [10] (det. RK).

*Poa nemoralis* L. – **A, C, D, H** – 790-2000 m

**19:** 0401 [8]; **22:** 0442 [8]; **36:** 0678 [6]; **39:** 0771f [5]; **82:** 1496 [4] (det. RK).

*Poa pratensis* L. – **A** – 1640 m

**3:** 0134 [1] (det. RK).

*Poa trichophylla* Boiss. (aff.) – **C** – 1085 m

**35:** 0594 [4] (det. RK).

*Sesleria coeruleans* Friv. – **A** – 2000 m

**1:** 0023 [5].

*Sesleria juncifolia* Suffren – **F** – 1600 m

**54:** 1068 [8].

*Sesleria robusta* Schott & al. (cf.) – **A, E, G** – 520-2345 m

**2:** 0109 [7]; **9:** 0234 [9]; **44:** 0900 [3]; **65:** 129a° [4].

*Sesleria sillingeri* Deyl – **E** – 2345 m

**44:** 0908 [9].

*Sorghum halepense* (L.) Pers. – **D** – 160 m

**43:** 0848 [7].

*Stipa bromoides* (L.) Dörfl. – **D** – 550 m

**42:** 0806 [16].

*Stipa eriocalis* Borbás (cf.) – **A, E, F** – 1600-1880 m

**9:** 0212 [8], 0284a [13]; **46:** 0940 [9]; **54:** 1051 [6].

*Stipa pulcherrima* K. Koch – **E** – 1935 m

**46:** 0930 [8].

*Stipa rechingeri* Martinovský – **C** – 1085 m

**35:** 0607 [2].

*Taeniatherum caput-medusae* subsp. *crinitum* (Schreb.) Melderis – **G** – 520 m

**65:** 1303 [6].

*Trisetum* – **D** – 790 m

**39:** 0771c [5].

*Trisetum flavescens* subsp. *tenue* (Hack.) Strid (cf.) – **E** – 1935 m

**46:** 0938 [4].

*Triticum neglectum* (Bertol.) Greuter – **D, E** – 790-1325 m

**39:** 0771g [12]; **50:** 0971 [8].

*Triticum triunciale* (L.) Raspail – **D, E, F** – 695-1325 m

**39:** 0771 [6]; **40:** 0782 [7]; **42:** 0805 [9]; **50:** 0961 [10]; **64:** 1244 [11].

*Vulpia myuros* (L.) C. C. Gmel. – **F** – 405 m

**52:** 0998 [1].

### *Iridaceae*

*Gladiolus palustris* Gaudin – **F** – 1600 m

**54:** 1055 [9].

*Iris pseudacorus* L. – **D** – 160 m

**43:** 0844 [3].

### *Juncaceae*

*Juncus acutiflorus* Ehrh. ex Hoffm. – **G** – 520 m

**65:** 1283d [2].

*Juncus acutus* L. – **D** – 160 m

**43:** 0829 [13].

*Juncus alpinoarticulatus* Vill. – **B, H** – 1695-2000 m

**10:** 0297 [3]; **80:** 1477 [1]; **82:** 1492 [5].

*Juncus articulatus* L. – **F, G** – 405-1065 m

**52:** 0991 [2]; **62:** 1183 [3]; **65:** 1283b [2], 1283c [2].

*Juncus compressus* Jacq. – **A, B** – 1515-1695 m

**10:** 0292 [8]; **19:** 0380 [10].

*Juncus effusus* L. – **A, F, H** – 405-1540 m

**6:** 0158 [6]; **52:** 0989 [8]; **73:** 1420 [9].

*Juncus inflexus* L. – **A, C** – 1085-1600 m

**19:** 0382 [9]; **31:** 0527 [10]; **35:** 0609 [4].

*Luzula spicata* subsp. *pindica* (Hauskn.) Gamisans – **H** – 2000 m

**82:** 1504 [9].

*Luzula taurica* (V. I. Krecz.) Novikov – **D, H** – 790-2000 m

**39:** 0771d [2]; **82:** 1507 [7].

### *Liliaceae* (s. l.)

*Allium albanicum* Brullo & al. – **F, G** – 520-1100 m

**56:** 1153 [6]; **65:** 1293 [24]

*Allium flavum* L. subsp. *flavum* – **F, G** – 520-1100 m

**56:** 1152 [2]; **65:** 1291 [27].

*Allium guttatum* Steven – **C** – 1085 m

**35:** 0633 [3].

- Allium roseum* f. *albiflorum* Maire – **B** – 1695 m  
**10:** 0295 [1].
- Allium sphaerocephalon* L. – **D, F** – 160-1100 m  
**43:** 0846 [6]; **56:** 1160 [1].
- Anthericum liliago* L. – **F** – 1600 m  
**54:** 1064 [7].
- Asphodelus macrocarpus* Parl. – **A** – 1550-1880 m  
**4:** 0145 [6]; **9:** 0282 [6].
- Convallaria majalis* L. – **F, H** – 405-1390 m  
**52:** 1014a [7]; **104:** 1614 [1].
- Hemerocallis lilioasphodelus* L. – **G** – 700 m  
**67:** 1362 [10].
- Lilium albanicum* Griseb. – **F** – 1810 m  
**53:** 1038 [2].
- Lilium chalcedonicum* L. – **A** – 1740-2010 m  
**2:** 0107 [7]; **9:** 0283 [2].
- Muscari neglectum* Ten. – **A** – 1740-2010 m  
**2:** 0112 [2].
- Narthecium scardicum* Košanin – **A, H** – 1740-2010 m  
**2:** 0110 [9]; **80:** 1467 [10].
- Ornithogalum gussonei* Ten. (cf.) – **A** – 1740-2010 m  
**1:** 0007 [3]; **2:** 0111 [4].
- Ornithogalum pyramidale* L. (*Ornithogalum brevistylum* Wolfner) – **F** – 1120-1145 m  
**64:** 1211 [9].
- Tulipa sylvestris* subsp. *australis* (Link) Pamp. – **E** – 2345 m  
**44:** 0894 [1].

### Orchidaceae

- Cephalanthera rubra* (L.) Rich. – **B, F, H** – 1120-1630 m  
**11:** 0335 [7]; **64:** 119F [0]; **105:** 1616 [1].
- Coeloglossum viride* (L.) Hartm. – **A** – 1685-1880 m  
**9:** 0274 [4].
- Corallorhiza trifida* Châtel. – **H** – 1340 m  
**105:** 1615a [2].
- Dactylorhiza* sp. – **F** – 1120-1145 m  
**64:** 119G [0].
- Dactylorhiza cordigera* (Fr.) Soó – **A, B, F, H** – 1120-1880 m  
**9:** 0284 [2]; **10:** 0294 [8]; **19:** 0381 [1]; **64:** 119B [0]; **80:** 1473 [13].
- Dactylorhiza incarnata* (L.) Soó – **A, C, F** – 1085-1810 m  
**31:** 0532 [2]; **35:** 0597 [10]; **53:** 1040 [1].
- Dactylorhiza viridis* (L.) R. M. Bateman & al. – **F** – 1120-1810 m  
**53:** 1039 [1]; **64:** 119D [0].
- Epipactis atrorubens* (Hoffm.) Besser – **C** – 1085 m

**35:** 0586 [10].

*Epipactis palustris* (L.) Crantz – **A** – 1265 m

**31:** 0530 [0].

*Gymnadenia conopsea* (L.) R. Br. – **H** – 1450-1550 m

**108:** 1633 [12].

*Gymnadenia frivaldii* Hampe ex Griseb. – **F** – 1120-1145 m

**64:** 119E [1].

*Gymnadenia rhellicani* (Teppner & E. Klein) Teppner & E. Klein – **F** – 1810 m

**53:** 1037 [3].

*Neotinea ustulata* (L.) R. M. Bateman & al. – **H** – 1340 m

**103:** 1580 [2].

*Neottia nidus-avis* (L.) Rich. – **B, H** – 1250-1340 m

**15:** : 0364 [0]; **105:** 1615b [3].

*Orchis militaris* L. – **F** – 1120-1145 m

**64:** 119C [0].

*Pseudorchis albida* (L.) Á. Löve & D. Löve – **H** – 1965-2000 m

**80:** 1474 [4]; **82:** 1493 [8].

### *Potamogetonaceae*

*Potamogeton natans* L. – **A** – 1655 m

**28:** 0484 [14].

*Stuckenia pectinata* (L.) Börner – **D** – 790 m

**39:** 0757 [2].

### *Typhaceae*

*Typha domingensis* Pers. – **D** – 160 m

**43:** 0834 [10].

### Figures for the collected material

In total, 1750 gatherings have been made, numbered 0001 to 1691, with several numbers comprising two or more gatherings and denoted additionally by a lower-case letter (*a*, etc.; up to *p* in one case). Four gatherings could not be retrieved during the sorting of the material and are considered lost, but two of them are nevertheless included in the above enumeration, having been reliably identified in the field: *Filago pyramidalis* and *Atropa belladonna*; the two others, 0255 and 0822, identified in the field as *Hieracium* sp. and *Labiatae* sp., respectively, were omitted from the account. Including duplicates, the whole material consists of c. 12'350 specimens. The main duplicate sets have been deposited, first in the Natural History Museum in Tirana, then in the herbaria of the specialists who had volunteered to identify the material, and lastly in the institutions represented by the foreign participants (PAL-Gr, W, GE, RO, CAT; one set was sent to MEL). Several more duplicate sets of varying size remain

available for interested parties on an exchange or sale basis. If you are interested, just write. The Albanian material, in all, represents 82 families: 3 of vascular cryptogams, 2 of gymnosperms, 67 of dicots and 10 of monocots. The most diverse families are *Compositae* (53 genera, 128 taxa), *Gramineae* (40 g., 87 t.), *Leguminosae* (22 g., 69 t.), *Rosaceae* (19 g., 56 t.), *Caryophyllaceae* (15 g., 52 t.), *Labiatae* (15 g., 48 t.), *Scrophulariaceae* (11 g., 40 t.), *Cruciferae* (16 g., 33 t.), *Cyperaceae* (6 g., 29 t.), *Umbelliferae* (17 g., 27 t.), *Ranunculaceae* (9 g., 25 t.), and *Boraginaceae* (13 g., 19 t.). These twelve largest families, taken together, account for 59 % of the 383 genera collected, and for 64 % of the 957 taxa. Among the genera harvested, the following are represented by 10 or more taxa: *Carex* (24), *Trifolium* (20), *Silene* (14), *Hieracium*, *Ranunculus* and *Rosa* (12), *Achillea* and *Poa* (11), and *Campanula*, *Geranium*, *Linum*, *Pilosella*, *Satureja*, and *Sedum* (10).

#### 4. *Hypericum ermelandarum*, a new St. John's wort species from Albania

by WERNER GREUTER

The genus *Hypericum* is well represented and species-rich in the Balkan countries. During the Iter Mediterraneum XIII, five species were collected, including the present one that does not match material of any of the others, nor of any further species with which I compared it, and which is therefore here described as a species new to science. In its *locus classicus* in the north-eastern part of Jabllanica Mountains it grew plentiful and showed little if any variation in its morphology, so that (even though a clonal nature of the local population cannot be excluded) I consider it as a genetically stable, true-breeding taxon. I take pleasure in dedicating it to the two Albanian ladies of our team names Ermelinda, E. Gjeta and E. Mahmutaj, who by their ever pleasant presence and cheerful mood contributed substantially to the harmony and cohesion of our group. Ermelinda being a rare and unusual name, at least outside of Albania, the coincidence of having two homonyms within a small group of persons is indeed remarkable.

#### *Hypericum ermelandarum* Greuter, sp. nov.

Holotypus: Iter Mediterraneum XIII, No. 75: Albania, Qark Elbasan, area E of Librazhd, Shebenik-Jabllanicë National Park, track from Gizavesht to Liqenet e Dragostunjës, 41°13'02"N, 20°24'30"E, 1250 m s.m., 22 Jun 2017, *Gjeta & al.* (PAL-Gr #124893; isotypi: B, CAT, GE, RO, MEL, Muz. Tiranë, W, etc.).

*Planta* perennis herbacea, caudice lignoso tenui saepe in ramos graciles diviso; *surculi* basales steriles pauci, 5-10 cm longi, ascendentes vel subdecumbentes, in parte distali subdense foliati, foliis ellipticis basi rotundata vel subcordata subsessili, apice obtuso, 8-10(-12) × 2-3(-4) mm metientibus; *caules floriferi* pauci, 25-30(-35) cm alti, e basi arcuata s. ascendente erecti, *foliis* inferioribus forma et magnitudine eis surculorum similibus, sursum gradatim auctis et proportione latioribus, late ovatis, basi sessili amplexicauli et apice obtuso, 12-16 × 8-10 mm metientibus; *puncti glandulares* translucidi ubicunque desunt, *nigri* in lamina foliari nulli, sed in sepalis, petalis antherisque nec non in apice fimbriarum obviis; *foliorum margo* undique angustissime (< 0,2 mm), translucide membranaceo-alatus, ala irregulariter eroso-denticulata et punctis glandularibus atris paucis irregulariter

obsita, sed in foliis caulinis superioribus conspicue crebre glanduloso-denticulatus et in summis, inflorescentiam fulcrantibus longiuscule (ca. 2 mm) glanduloso-fimbriatus; *bracteae* fere omnino in fimbrias decompositae; *sepala* 5, anguste ovata, 6-8 × 2-3 mm metientia, dorso dense irregulariter atropunctata et secus medium atro-striata, margine conspicue fimbriata, fimbriis £ 2 mm longis nigro-capitatis; *petala* 5 lutea, ± anguste spatulata, limbo atro-punctulato et margine apicem versus minute atro-fimbriato; *antherarum* connectivum nigro-apiculatum; *capsulae* ignotae, ex vestigiis vesiculis destitutis anni praeteriti latiuscule ovoideae.

Potissime *Hyperico barbato* Jacq. comparandum, differt autem fimbriis sepalorum et bractearum subbrevioribus, in glandulam capitatam nigram nec in apicem albescentem filiformem desinentibus, imprimis autem ala membranacea translucida foliorum caulinarum. Aliae species *Hyperici* cum nostra comparandae sunt *H. bithynicum*, *H. montbretii*, *H. rumelicum* et *H. apollinis* Boiss. & Heldr., quae cunctae margine membranaceo foliorum carent et glandulae nigrae laminares, praesertim intramarginales, saepe insuper translucidae, in foliis praebent. Species hae, summopere polymorphae, probabiliter porro species (vel subspecies) nondum recognitae amplectent.

## 5. The bryophyte materials collected during the "Iter Mediterraneum" (Albania)

by PATRIZIA CAMPISI, MATTIA LETIZIA MARINO, GIANNANTONIO DOMINA & FRANCESCO M. RAIMONDO

### *Introduction*

Within the Mediterranean region, Albania is one of the countries where floristic research on bryophytes has recently intensified. Until more than twenty years ago, this country was one of the least known from a bryofloristic perspective, partly due to the lack of botanists specifically dedicated to this group of plants, as highlighted by Düll (1996) and Geissler (2001).

Over the last twenty years, thanks to the work of both individual researchers, including those of other nationalities, and some scientific societies, which have organized field work, bryological knowledge in Albania has significantly intensified (e.g. Colacino 2023a; Colacino & Marka 2009; Colacino & Sabovljević 2006; Marka & al. 2018), leading to the identification of a significant number of taxa unknown in the country and, more recently, to the creation of a first updated checklist of the entire bryoflora (Colacino 2023b).

In the light of these recent investigations, as reported from Colacino (2023), Albania currently has a total of 583 bryophyte taxa, including 125 liverworts and hornworts and 458 mosses. This number is likely to increase as research progresses, given that several areas of the territory still require investigations.

In this context, with the aim of contributing to the improvement of bryofloristic knowledge of Albania, during the thirteenth Iter Mediterraneum of OPTIMA, in addition to the collection of vascular plant samples, which the Iter is primarily aimed at, a group of 92 bryophyte specimens were collected by F. M. Raimondo and G. Domina.

Below is the list of taxa, arranged alphabetically by family. For each taxon, the collection sites and localities (both indicated in bold), along with altitude and notes on their distribution in Albania, are provided. In addition, the specimen number (in italics) is reported.

### ***Collecting localities***

The collecting localities for bryophytes were given the same numbers as for vascular plants. The general areas are those that have been defined for the latter, are denoted by the same letters as for these (see p. 7), and are repeated below. In the general areas **C**, **D**, and **E**, no bryophytes have been collected.

A: Shebenik-Jabllanicë National Park, Jabllanicë Mountain, 1075-2010 m a.s.l.; 22 and 24 June. Localities 1-9, 18-28: Elbasan prefecture. Localities 17, 29-33: Dibra prefecture.

B: Polis Mountains, 560-1695 m a.s.l.; 23 June. Localities 10-16: Elbasan prefecture.

F: Pashtriku Mountain, N slopes of main range, 450 and 795-1810 m a.s.l.; 28-29 June. Localities 52-64: Kukës prefecture.

G: Road to Valbonë, Dragobi, gorge of Perroi Milloshit and surroundings (Rocks and brookside), 370-700 m a.s.l.; 30 June. Locality 69: Kukës prefecture.

H: Valbonë, road via Çerem to Qafa Kunji i Armëve, 1180-2000 m a.s.l.; 1 July. Localities 70-102: Kukës prefecture.

### ***Specimen enumeration***

Within each of the two principal groups (*Hepaticae* and *Musci*) the arrangement is alphabetical by families, then genera, then species. The delimitation of families and species nomenclature follows Hodgetts & al. (2020) and Jiménez & al. (2022). The material is deposited in the *Herbarium Mediterraneum Panormitanum* (PAL).

In the enumeration, the name of the taxon is followed, on the same line, by the general area or territorial unit (lettered **A**, **B** or **F** to **H**, as defined above) and the altitude (m above the sea level), based on the label data. On a separate line, the individual specimens are enumerated in the format N: XX, where N stands for the locality number (1 to 112, as in Table 1), and XX for the gathering number (1 to 71).

## **Liverworts**

### ***Anastrophyllaceae***

***Barbilophozia barbata*** (Schmidel ex Schreb.) Loeske – **H** – 1500 m

72:61 This is the first report for the prefecture of Kukës.

### ***Conocephalaceae***

***Conocephalum conicum*** (L.) Dumort. – **H** – 1500 m

71: 62. This is the first report for the prefecture of Kukës.

### ***Jungermanniaceae***

*Jungermannia atrovirens* Dumort. – **H** – 1500 m

73: 24. This is the first report for the prefecture of Kukës.

*Mesoptychia turbinata* (Raddi) L. Söderstr. & Váňa – **A, H** – 1500 - 1550 m

4: 63; 89: 64. This is the first report for the prefectures of Elbasan and Kukës.

### *Marchantiaceae*

*Marchantia polymorpha* L. – **A** – 1640 m

3: 32. This is the first report for the prefecture of Elbasan.

### *Pelliaceae*

*Apopellia endiviifolia* (Dicks.) Nebel & D. Quandt – **H** – 1500 m

89: 26. This is the first report for the prefecture of Kukës.

### *Plagiochilaceae*

*Pedinophyllum interruptum* (Nees) Kaal. – **H** – 1500 m

89: 65. This is the first report for the prefecture of Kukës.

*Plagiochila asplenioides* (L.) Dumort. – **H** – 1500 m

90: 66. In this prefecture the taxon had not been reported since 1950.

*Plagiochila porelloides* (Torr. ex Nees) Lindenb. – **H** – 1500 m

89: 67. This is the first report for the prefecture of Kukës.

### *Radulaceae*

*Radula* (L.) Dumort. sp. – **H** – 1500 m

89: 71.

### *Scapaniaceae*

*Scapania calcicola* (Arnell & J. Perss.) Ingham – **H** – 1500 m

89: 68. This is the first report for the prefecture of Kukës. The taxon was previously known only from one prefecture.

*Scapania undulata* (L.) Dumort. – **H** – 1500 m

100: 69 .

### *Solenostomataceae*

*Solenostoma hyalinum* (Lydell) Mitt. – **H** – 1500 m

100: 70. This is the first report for the prefecture of Kukës. The taxon was previously known only from one prefecture.

**Musci***Amblystegiaceae*

*Campyliadelphus chrysophyllus* (Brid.) R.S. Chopra – **H** – 1500 m

90: 36. This is the first report for the prefecture of Kukës.

*Cratoneuron filicinum* (Hedw.) Spruce – **A**, **H** – 1250 – 1500 m

6:37; 89: 38. This is the first report for the prefecture of Kukës.

*Hygroamblystegium tenax* (Hedw.) Jenn. – **A** – 1250 m

6: 31. This is the first report for the prefecture of Elbasan.

*Palustriella falcata* (Brid.) Hedenäs – **H** – 1500 m

89: 25. This is the first report for the prefecture of Kukës.

*Aongstroemiaceae*

*Diobelonella palustris* (Dicks.) Ochyra – **H** 1500 m

90: 22.

*Bartramiaceae*

*Bartramia ithyphylla* Brid. – **H** – 1500 m

73: 33. This is the first report for the prefecture of Kukës.

*Philonotis calcarea* (Bruch & Schimp.) Schimp. – **A**, **H** – 1250-1500 m

6: 11; 72: 27. This is the first report for the prefectures of Elbasan and Kukës.

*Philonotis fontana* (Hedw.) Brid. – **H** – 1500 m

73: 28. This is the first report for the prefecture of Kukës.

*Philonotis tomentella* Molendo – **H** – 1500 m

73: 29.

*Brachytheciaceae*

*Brachythecium rivulare* Schimp. – **H** – 1500 m

73: 34. This is the first report for the prefecture of Kukës.

*Brachythecium rutabulum* (Hedw.) Schimp. var. *rutabulum* – **A** – 1250 m

7: 35.

*Eurhynchium striatum* (Hedw.) Schimp. – **A** – 1640 m

3: 39. This is the first report for the prefecture of Elbasan.

*Homalothecium lutescens* (Hedw.) H.Rob. var. *lutescens* – **F**, **H** – 565-1065 m

62: 14; 69: 16. This is the first report for the prefecture of Kukës.

*Homalothecium sericeum* (Hedw.) Schimp. – **B** – 1695 m

10: 3.

*Oxyrrhynchium speciosum* (Brid.) Warnst. – **H** – 1500 m

89: 48. This is the first report for the prefecture of Kukës.

*Rhynchostegium riparioides* (Hedw.) Cardot – **H** – 1500 m

90: 52. In this prefecture the taxon had not been reported since 1950.

### *Bryaceae*

*Ptychostomum imbricatum* (Müll.Hal.) Holyoak & N. Pedersen – **B, H** – 1250-1500 m

15: 1; 89: 19. These are the first report for the prefectures of Elbasan and Kukës.

*Ptychostomum pallescens* (Schleich. ex Schwägr.) J.R. Spence – **F** – 405 m

52: 13.

*Ptychostomum pseudotriquetrum* (Hedw.) J.R. Spence & H.P. Ramsay var. *pseudotriquetrum* – **A, H** – 1250-1500 m

6: 9; 71: 20. This is the first report for the prefecture of Kukës.

### *Calliergonaceae*

*Sarmentypnum exannulatum* (Schimp.) Hedenäs – **H** – 1500 m

73: 55.

### *Climaciaceae*

*Climacium dendroides* (Hedw.) F. Weber & D. Mohr – **A** – 1250 m

6: 10. This is the first report for the prefecture of Elbasan. The taxon was previously known only from one prefecture.

### *Fontinalaceae*

*Fontinalis antipyretica* (Hedw.) subsp. *antipyretica* – **A, H** – 565-1250 m

6: 30; 69: 40. These are the first report for the prefectures of Elbasan and Kukës. The taxon was previously known only from one prefecture.

### *Grimmiaceae*

*Grimmia alpestris* (F. Weber & D. Mohr) Schleich. – **H** – 565 m

69: 15. This is the first report for the prefecture of Kukës.

*Grimmia hartmanii* Schimp. – **H** – 1500 m

69: 41; 73: 42. These are the first report for the prefecture of Kukës.

*Schistidium apocarpum* (Hedw.) Bruch & Schimp. – **H** – 565 m

69: 56. In this prefecture the taxon had not been reported since 1950.

### *Heterocladiellaceae*

*Heterocладиella dimorpha* (Brid.) Ignatov & Fedosov – **B, H** – 565-1500 m

**15:** 43; **73:** 44. These are the first report for the prefectures of Elbasan and Kukës. The taxon was previously known only from one prefecture.

### *Hylocomiaceae*

*Hylocomiadelphus triquetrus* (Hedw.) Ochyra & Stebel – **H** – 1500 m

**100:** 45. In this prefecture the taxon had not been reported since 1950.

### *Hymenolomataceae*

*Hymenoloma crispulum* (Hedw.) Ochyra – **H** – 565-1500 m

**69:**46; **71:** 47. In these prefectures the taxon had not been reported since 1950.

### *Leucodontaceae*

*Leucodon sciuroides* (Hedw.) Schwägr. – **B** – 1250 m

**15:** 4.

### *Mniaceae*

*Plagiomnium elatum* (Bruch & Schimp.) T.J. Kop. – **A** – 1275 m

**5:** 12. This is the first report for the prefecture of Elbasan. The taxon was previously known only from one prefecture.

*Pohlia cruda* (Hedw.) Lindb. – **B, H** – 1250-1500 m

**15:** 5; These are the first report for the prefectures of Elbasan and Kukës.

*Pohlia nutans* (Hedw.) Lindb. subsp. *nutans* – **H** – 1500 m

**73:** 49. This is the first report for the prefecture of Kukës. The taxon was previously known only from one prefecture.

*Rhizomnium punctatum* (Hedw.) T.J. Kop. var. *punctatum* – **H** – 1500 m

**73:** 51. This is the first report for the pre- fecture of Kukës.

### *Myuriaceae*

*Ctenidium molluscum* (Hedw.) Mitt. – **B** – 1250 m

**15:** 21.

### *Polytrichaceae*

*Polytrichastrum alpinum* (Hedw.) G.L. Sm. – **H** – 1500 m

**89:** 50. This is the first report for the prefecture of Kukës.

*Polytrichum juniperinum* Hedw. – **B, H** – 565-1500 m

**15: 6; 69 17:** This is the first report for the prefecture of Kukës.

### *Pottiaceae*

*Husnotiella sinuosa* (Mitt.) J.A. Jiménez & M.J.Cano – **H** – 1500 m

**71: 23.** This is the first report for the prefecture of Kukës.

*Tortella tortuosa* (Hedw.) Limpr. – **B, H** – 560-1500 m

**16: 8; 71: 59.** This is the first report for the prefecture of Kukës.

*Vinealobryum insulanum* (De Not.) R.H. Zander – **B** – 560 m

**16: 60.** This is the first report for the prefecture of Elbasan.

### *Pterigynandraceae*

*Pterigynandrum filiforme* Hedw. – **B** – 1630 m

**11: 7.**

### *Pylaisiaceae*

*Calliergonella cuspidata* (Hedw.) Loeske – **B** – 1695 m

**10: 2.**

### *Scorpidiaceae*

*Sanionia uncinata* (Hedw.) Loeske – **H** – 565-1500 m

**69: 53; 100: 54.** This is the first report for the prefecture of Kukës. The taxon was previously known only from one prefecture.

### *Seligeriaceae*

*Blindia acuta* (Hedw.) Bruch & Schimp. – **H** – 1500 m

**90: 18.**

### *Sphagnaceae*

*Sphagnum auriculatum* Schimp. – **H** – 1500 m

**73: 57.**

*Sphagnum subsecundum* Nees – **H** – 1500 m

**90: 58.**

### *Figures for the collected material*

Overall, the 13th OPTIMA Mediterranean Iter led to the compilation of a list of 58 bryophyte taxa: 13 liverworts and 45 mosses. Nine families of liverworts and 22 mosses are represented, mostly by one or two taxa. Only the families *Amblystegiaceae*, *Bartramiaceae*, *Brachytheciaceae*, and *Mniaceae* are represented by four or more taxa.

Among these, 38 were previously unknown in the prefecture(s) where they were found. Of these, seven (*Scapania calcicola*, *Climacium dendroides*, *Fontinalis antipyretica* subsp. *antipyretica*, *Heterocladiella dimorpha*, *Plagiomnium elatum*, *Pohlia nutans* subsp. *nutans*, and *Sanionia uncinata*) were previously known from only one Albanian prefecture.

The Iter thus enabled the collection of useful data on the distribution of numerous bryophytes in Albania. This confirms the need for and importance of floristic surveys, as they are essential tools for the understanding and monitoring of biodiversity, along with the efforts aimed at compiling checklists and redlists at various geographical scales.

### References

- Anonymous [Euro+Med] 2006+ [continuously updated]: Euro+Med PlantBase – the information resource for Euro-Mediterranean plant diversity. Published at <http://www.europlusmed.org> [accessed 10/1/2026]
- Barina, Z., Mullaj, A., Pifkó, D., Somogyi, G., Meco, M. & Rakaj, M. 2017: Distribution Atlas of Vascular Plants in Albania. – Budapest.
- Colacino, C. 2023a: Contribution to the bryophyte flora of Albania. – *Phytol. Balcan.* **29(2)**: 163-170.
- 2023b: Bryophyte flora of Albania: an updated checklist with new records. – *Phytol. Balcan.* **29(3)**: 337-370.
- & Marka, J. 2009: Bryophytes of the Karavasta Lagoon area, with new reports for Albania. – *Phytol. Balcan.* **15**: 39-42.
- & Sabovljević, M. 2006: Bryophyte flora of Albania: a preliminary checklist. – *Crypt. Bryol.* **27**: 471-498.
- Domina, G., El Mokni, R., Greuter, W. & Raimondo F. M. 2015a: Results of the 12th “Iter Mediterraneum” in Tunisia, 24 March – 4 April, 2014. – *Bocconea* **27(1)**: 1-76. <https://doi.org/10.7320/Bocc27.1.001>
- , Greuter, W., Elyes Kchouk, M., El Mokni, R., Smaoui, A., Vitek, E., Bazan, G., Escobar, P. & Raimondo, F. M. 2015b: The 12th “Iter Mediterraneum” in Tunisia, 24 March – 4 April 2014. – *Bocconea* **27(1)**: 5-11. <https://doi.org/10.7320/Bocc27.1.005>
- Düll, R. 1996: The current state of bryophyte investigation in the Mediterranean area. – *Bocconea* **5**: 271-278.
- Geissler, P. 2001: The phytogeography of Mediterranean bryophytes: progress and problems. – *Bocconea* **13**: 81-88.
- Greuter, W. 2008: Med-Checklist. A critical inventory of vascular plants of the circum-mediterranean countries, **2**. – Palermo, Genève & Berlin.
- 2012: Results of the Seventh “Iter Mediterraneum” in the Peloponnese, Greece, May to June 1995. – *Bocconea* **25**: 5-127. <https://doi.org/10.7320/Bocc25.005>
- , Burdet, H. M. & Long, G. 1984, 1986, 1989: Med-Checklist. A critical inventory of vascular plants of the circum-mediterranean countries, **1, 3, 4**. – Genève & Berlin.
- Greuter, W., Brummitt, R. K., Farr, E., Kilian, N., Kirk, P. M. & Silva, P. C. 1993: NCU-3. Names in current use for extant plant genera. – *Regnum Veg.* **129**.

- Hodgetts, N. G., Söderström, L., Blockeel, T. L., Caspari, S., Ignatov & al. 2020: An annotated checklist of bryophytes of Europe, Macaronesia and Cyprus. – *J. Bryol.* **42(1)**: 1-116. <https://doi.org/10.1080/03736687.2019.1694329>
- Jiménez, J. A., Cano, M. J. & Guerra, J. 2022: A multilocus phylogeny of the moss genus *Didymodon* and allied genera (*Pottiaceae*): generic delimitations and their implications for systematics. – *J. Syst. Evol.* **60(2)**: 281-304. <https://doi.org/10.1111/jse.12735>.
- Marka, J., Blockeel, T. M., Long D. J. & Papp, B. 2018: Bryophytes new to Albania from the British Bryological Society field meeting in 2014 – *J. Bryol.* **40(2)**: 163-172. <https://doi.org/10.1080/03736687.2018.1428072>
- Meco, M. & Mullaj, A. 2015: Phenological aspects of Albanian Flora. – Poster at International Conference on Soil. 4-6 May 2015 Tirana, Albania.
- Miho, A., Witmer, M., & Bego, F. 2013: Riverine ecosystems in Albania. – *Hydrobiologia* **719**: 55-67.
- Paparisto, K., Demiri, M., Mitrushi, I. & Qosja, Xh. 1988: Konsiderata të përgjithshme. – Pp 9-32 in: Paparisto, K., Demiri, M., Mitrushi, I. & Qosja, X., *Flora e Shqipërisë*, **1**. –Tiranë.
- Pils, G. 2016: *Illustrated Flora of Albania*. – St. Stefan.
- Qiriazhi, P. 2001: *Gjeografia fizike e Shqipërisë*. – Tiranë.
- Valdés, B. 1988a: The "Itinera Mediterranea" (from the minutes of the I Itinera Mediterranea Seminar, Sevilla, May 14, 1987). – *OPTIMA Newslett.* **20-24**: 44-46.
- 1988b: *Los Itinera Mediterranea*. – *Lagascalia* **15(extra)**: 131-137.

Addresses of the contributors:

Patrizia Campisi, Department of Biological, Chemical and Pharmaceutical Sciences and Technologies, University of Palermo, Via Archirafi 38, 90123 Palermo, Italy. E-mail: [patrizia.campisi@unipa.it](mailto:patrizia.campisi@unipa.it)

Giannantonio Domina & Mattia Letizia Marino, Department of Agricultural, Food and Forest Sciences, University of Palermo, viale delle Scienze, bldg. 4, 90128 Palermo, Italy. E-mails: [mattialetizia.marino@unipa.it](mailto:mattialetizia.marino@unipa.it), [giannantonio.domina@unipa.it](mailto:giannantonio.domina@unipa.it)

Ermelinda Gjeta, Flora and Fauna Research Center, Faculty of Natural Sciences, University of Tirana, Place "Mother Tereza", Tirana, Albania. E-mail: [ermelindagjeta@live.com](mailto:ermelindagjeta@live.com)

Francesco M. Raimondo, PLANTA/Center for Research, Documentation and Training, Via Serraglio Vecchio 28, 90123 Palermo, Italy. E-mail: [raimondo@centroplantapalermo.org](mailto:raimondo@centroplantapalermo.org)