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The botanical legacy of Mihael Dimonie (1870–1935), an almost forgotten plant collector in the southern Balkan Peninsula before the First World War

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Abstract: An up-to-date biography of Mihael Dimonie (1870–1935), an important Aromanian plant collector in the southern Balkan Peninsula, is presented. So far, he has been better known to linguists than to botanists on account of the *Codex Dimonie* and his contributions to Aromanian cultural heritage. His private herbarium collections were destroyed in two separate fires in 1917 and 1944, and only the numerous vouchers belonging to the *Plantae Macedonicae* series that had been commercially distributed remain. These specimens are available in several European and American herbaria and are a lasting testament to Dimonie's extensive collecting activities in what are today Albania, Bulgaria, Greece and North Macedonia. His collecting localities in the southern Balkans are indicated in a map. Seven names based on material collected by Dimonie and one based on material collected by Ignaz Dörfler are lectotyped and nomenclatural notes for six other taxa are presented. A preliminary list of taxa described (or partly described) from Dimonie's material includes at least 29 names.

Key words: Albania, Aromanian language, Balkan Peninsula, biography, Bulgaria, flora, Greece, herbarium, lectotypification, Mihael Dimonie, North Macedonia, Romania

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Introduction

Mihael Dimonie collected in the European part of the Ottoman Empire and distributed plant material to several important European herbaria as a series of exsiccata bearing the label “Dimonie, Plantae Macedonicae” (Greuter 1975; Karagiannakidou & Raus 1996). Standard biographical sources such as *Taxonomic literature II* (TL-2) (<http://www.sil.si.edu/digitalcollections/tl-2/index.cfm>), *Index of botanists* (http://kiki.huh.harvard.edu/databases/botanist_index.html) or *Index collectorum* (<https://www.uni-goettingen.de/en/index-collectorum/186907.html>) lack information on him. However, some biographical

details have been published in rarely accessed books and journals, which are solely in the Romanian language (Longinescu 1935; Ștefureac 1984, 1986). We therefore decided to present here the first biography of Dimonie in English together with recent information concerning his plant material in European herbaria, as well as lectotypifications and nomenclatural notes for some taxa based on his collections.

Matevski (2009) provided a brief account, referring to “M. M. Dimonie”; Rechinger (1944) and Karagiannakidou & Raus (1996) to “H. M. Dimonie”, but all three sources lack biographical data. Hertel & Schreiber (1988: 300) listed him as “Dimonie, Mihael”, a professor

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of the Romanian commercial school from Thessaloniki and probably a commercial plant trader. According to Greuter (1975), Dimonie, together with Lujo Adamović, Ignaz Dörfler and Christos Leonis, represents a category of professional plant collector in the Balkan Peninsula, a profession that for economic and political reasons ceased to exist after World War I. For Adamović and Dörfler, comprehensive biographies are available (for Adamović: Jasprica & Kovačić 2001; for Dörfler: Vogt & al. 2018), but not for Dimonie or Leonis.

Biography

Mihael Dimonie came from a well-to-do Aromanian family. He was born in 1870 in the family house in Ohrid (North Macedonia), at that time part of the Vilayet of Monastir in the Ottoman Empire (Longinescu 1935; Ștefureac 1984). After completing primary school in Monastir (present-day Bitola), he obtained a scholarship to attend the prestigious Școala Normală Superioară high school in Bucharest (Romania). He enrolled at the Faculty of Sciences, University of Bucharest and graduated in 1894 with a teaching diploma (Ștefureac 1984). Studying in Romania was a common practice for future Aromanian teachers in the second half of the 19th century (Motta 2011). In Bucharest, Dimonie was one of the last students of Dimitrie (Demetrius) Brândză (1846–1895), a leading botanist and founder of the University Botanical Garden. In 1894, Dimonie returned to what is now North Macedonia and for three years taught natural sciences in a Romanian high school in Bitola (Ștefureac 1984).

In 1889, the German linguist Gustav Weigand, with the help of the two Dimonie brothers Iancu and Mihael, discovered the *Codex Dimonie* in the Dimonie home in Ohrid (Kahl & Prifti 2016). This collection of 127 sheets of mostly religious texts in early Aromanian language and in Cyrillic script was written by a grand-uncle of the Dimonie brothers at the beginning of the 19th century (Kahl & Prifti 2016). Due to this important document, the name Dimonie is better known to linguists and historians studying Aromanian heritage than to botanists (Nevaci 2013; Kahl & Prifti 2016).

Dimonie's later interest in medicinal plants may have been influenced by his collaboration with Dimitrie Grecescu (1841–1910), who was a professor of medical botany in Bucharest, and also a physician and phytogeographer (Văduva-Poenaru 2000). Dimonie's herbarium vouchers collected between 1895 and 1896 were documented by Grecescu (1899) in a paper written in French entitled *Plantes de la Macédoie appartenant au Vilayet de Monastir, recueillies par Michel Dimonié*. Most of the records originated from the surroundings of Ohrid and Bitola, some from Mt Pelister (= Peristeri) in the Baba Mts (Grecescu 1899). Based on Dimonie's knowledge of the Aromanian language Grecescu (1899) even included several vernacular plant names in the introduction to his

work, and Panțu (1906) added several names provided by Mihael and his brother Iancu in his book on Romanian vernacular plant names. In a later publication written in Romanian, Grecescu (1907) listed approximately 900 taxa. Apart from duplicating records from Grecescu (1899), this work included plants from Thessaloniki and material collected by three students of pharmacy, viz. E. Constantinescu, S. Șunda and N. Petrescu.

Throughout his life, Dimonie was torn between a school career, establishing a successful business and collecting plants, the last of these being his real passion (Longinescu 1935). In 1898, Dimonie was a high school teacher in Caracal (Romania), and then taught in a forestry college in Brănești (present-day Colegiul Silvic Branesti “Th. Pietraru”) near Bucharest. In 1899, he was appointed professor and principal of the Thessaloniki Commercial High School (Școala Comercială din Salonic, École commerciale romaine Salonique), where he stayed until 1912 (see Fig. 1 & 2, depicting his professional visiting card and his handwriting at that time). He started to be a professional plant trader distributing his material as sets of *Plantae Macedonicae* to important herbaria in Europe such as Vienna, Geneva, Budapest and London (Ștefureac 1986). When the First Balkan War broke out in 1912, he returned to Caracal as professor and, for a time, principal of the Ioniță Asan high school (present-day Colegiul Național “Ioniță Asan”). For unknown reasons, his private herbarium had remained in Thessaloniki and was stored in a chapel from the beginning of the Balkan wars. This entire collection burnt down during the Great Fire of Thessaloniki in 1917 (Longinescu 1935; Ștefureac 1984). Thus his scientific data compiled during 18 years of study on the Balkan flora was regrettably lost.

Dimonie never went back to North Macedonia or Greece but stayed in Romania until his death (Ștefureac 1984). The portrait (Fig. 3) shows Dimonie during the interwar period in Romania, when his botanical interest shifted from the Balkans to the flora of Oltenia in SW Romania, and to medicinal and economic plants (Ștefureac 1984). On the first topic, he only published minor articles such as the flora of Valea Batovei near Batovo (Dimonie 1934). On the second topic, he wrote a book on medicinal plants (Dimonie 1926), a paper on economic plants of Oltenia (Dimonie 1925a), and numerous articles in newspapers and in the popular science journal *Natura*, e.g. on medicinal plants such as *Viola odorata* L. (Dimonie 1919) and “hervea românească” (a herbal anti-rheumatic drug) (Dimonie 1934). He also published on insect communication (Dimonie 1925b) and even the production of ice cream (Dimonie 1933). In 1931, he wrote a manuscript entitled *Synopsis plantarum Scholae Polytechnicae* (Dimonie 1931), a compilation of the herbarium contents in the former botanical laboratory of the Polytechnic School in Bucharest (present-day Politehnica University of Bucharest), where his friend and mentor Nicolae Iacobescu (1863–1931) worked. At least



Fig. 1. Mihael Dimonie's visiting card from Dörfler's collection of letters from botanists kept in the University Library Uppsala, see Lack & Sydow (1984). – Reproduced by kind permission, © University Library Uppsala.

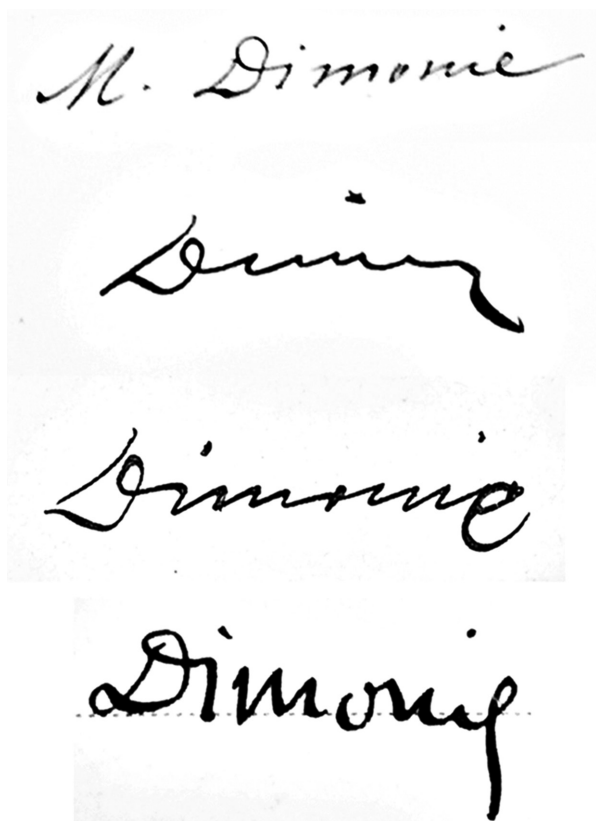


Fig. 2. Samples of Mihael Dimonie's handwriting. – Top: from a letter to Halácsy kept in the Dörfler collection in Uppsala, see Lack & Sydow (1984). Reproduced by kind permission, © University Library Uppsala. – Top middle: from a herbarium label of *Centaurea* sp. (WU-Halácsy-Europaeum 0102561). – Bottom middle: from a herbarium label of *Dryopteris pallida* (Bory Maire & Petitm. (WU-Halácsy-Europaeum 0103738)). – Bottom: from a herbarium label of *Ranunculus* sp. (BUCF 33205).

two lithographic copies exist in Bucharest libraries. For this manuscript, he contributed with his own vouchers to “fasc. 1 – *Ranunculaceae*” (Ștefureac 1984). Only a few vouchers of *Ranunculaceae* collected after the First Balkan War (1912–1913) have survived in the former Polytechnic School herbarium (Herbarul Școalei Politehnicei București / Laboratorul botanic). These are now stored in BUCF (Fig. 4), i.e. the Alexandru Beldie herbarium, which is owned by the Marin Drăcea National Institute



Fig. 3. Portrait of Mihael Dimonie (from Longinescu 1935). – Biblioteca Centrală Universitară “Lucian Blaga” Cluj-Napoca.

for Research and Development in Forestry (I.N.C.D.S) and situated in Voluntari near Bucharest (Vasile & al. 2016; Lucian Dinca, pers. comm. 2019). Dimonie had originally planned to prepare his doctorate under Nicolae Iacobescu based on the Balkan plant collections of his youth when he retired. However Iacobescu died in 1931, so this idea could not be further pursued (Longinescu 1935). In 1933, Dimonie retired from teaching but kept up his publication activity for the journal *Natura* (Longinescu 1935). In his last years, Dimonie, together with an English entrepreneur, established a large-scale business cultivating the fibre plant “ghiara pisiceii”, i.e. *Abutilon theophrasti* Medik. (Longinescu 1935; Drăgulescu 2018). They developed 200 hectares of farmland in Brăila county (SE Romania) for this purpose. Dimonie died unexpectedly in Bucharest on 8th December 1935 at the age of 65 (Longinescu 1935). During his lifetime, he wrote approximately 30 popular science articles, most of them outside the field of botany and none about the Balkan flora (Ștefureac 1984). A list of his articles for the journal *Natura* can be found in Longinescu (1936: 10).

Although he was a contributor to the *Flora Romaniae Exsiccata* (Cent. VII–XI) in the 1920s and 1930s (Borza 1935), his pre-war Balkan gatherings are more relevant for botanical science. His Balkan material kept in the herbarium of Grecescu was destroyed on 4th April 1944 when the Bucharest herbarium (now BUC) burned down after an Allied air raid (Ștefureac 1986; Văduva-Poenaru 2000).



Fig. 4. One of the few extant vouchers of Mihael Dimonie from after the First Balkan War: *Ranunculus constantinopolitanus* (DC.) d'Urv. (\equiv *R. villosus* subsp. *constantinopolitanus* (DC.) Elenevsky) collected at Pădurea Reșca near Caracal, Romania (BUCF 33172).

Dimonie's plant collections

The herbarium vouchers of Dimonie's *Plantae Macedonicae* series, collected in present-day Albania, Bulgaria, Greece and North Macedonia, can be found in the following herbaria [important collections partly kept separate are in parentheses, herbarium codes are according to Thiers (2019+)]: B (herb. Bornmüller), BEO, BEOU, BM (herb. Lacaita), BP (herb. Degen), BR, BRNM, BRNU, BUCF (post-war material), C, CHER, CL (post-war material), DR, E, FI, FR, G (herb. Delessert), GAT, GB (herb. Hayek), H, JE (herb. Haussknecht, incl. herb. Sagorski), K, L, LD, LY, M, MA, P (herb. Giraudias), PR, PRC (herb. Velenovský), S, SARA, STR, TIR, US, VT, W (herb. Sabransky), WU (herb. Halácsy) and Z. According to unpublished letters addressed to Eugen von Halácsy (1842–1913) written in French and deposited in Uppsala (Lack & Sydow 1984), Dimonie was in close contact with Halácsy, Arpád von Degen (1866–1934) and Josef Velenovský (1858–1949). Therefore, the collections in BP, PR, PRC, W and WU are particularly rich in Dimonie's gatherings. There even exists in WU a *Taraxacum* voucher of plants grown from seeds taken from Dimonie's voucher (WU 0104555) and collected by Heinrich von Handel-Mazzetti (1882–1940) (Zeisek & al. 2016: WU 0104556). In 1909, Dimonie offered the centuria 1–6 of his *Plantae regionis Salonicae et montis Athos* for 36 Goldmark each in a German magazine (Weigel 1909: 59). His widespread exsiccata series *Plantae Macedonicae* was traded by Weigel in Germany at least until 1918 (Hertel & Schreiber 1988: 300).

Nevertheless, in the *Index herbariorum* (Thiers 2019+), he is only mentioned for WU and his name is also ignored in the account of Balkan collectors by Křivka & Holubec (2010). Because none of the listed herbaria has its holdings fully catalogued in a database, we cannot know for certain how many specimens Dimonie ever collected and distributed. According to the records at W and WU documenting acquisitions, herbarium WU bought two tranches: 750 vouchers of "plants from Albania" for 225 Austro-Hungarian kronen in February 1909, and 700 vouchers of "plants from Macedonia" for 267.40 Austro-Hungarian kronen in February 1910, a total of 1450 herbarium vouchers. Herbarium W acquired 555 vouchers of *Plantae Macedonicae* in 1909 (Steindachner 1910: 30), and 641 vouchers from "Pflanzen aus Mazedonien" in 1910 (Steindachner 1911: 29), in total 1196 vouchers. Unfortunately, the number of Dimonie vouchers in WU-Hal-Europaeum has not been documented. Because the original price for one voucher around 1910 was approximately 3 kronen, this would now be 15 € at purchasing-power parity.

Apart from his commercial sets of *Plantae Macedonicae*, issued often with conspicuous pre-printed labels of blue indelible ink (Fig. 5, 8B, 10), Dimonie also sold specimens provided only with handwritten labels, especially those considered rare or more interesting than the

bulk of plants he distributed (Fig. 6, 8A, 11, 12). It should also be noted that Dimonie often distributed herbarium specimens without any identification (Fig. 5, 8A, 10).

Dimonie collected much material in North Macedonia, especially in the surroundings of Ohrid and Bitola, also in Struga, Sv. Naum, Resen, Debar and in the Baba, Galičica, Jablanica and Korab Mts. In Greece, he collected near Thessaloniki, Mt Athos, Mt Vermio, near Edessa, at the border region with North Macedonia (Voras Mts/Nidže Mt, Mt Tzena/Kožuf, near Gevgelija), and on the N Aegean islands of Limnos and Thasos. Approximately 320 taxa have been registered for the *Flora Hellenica Database* (Kit Tan, unpublished; Strid & Tan 2017). A list of localities based on verified extant material is provided in Table 1. A map of Dimonie's collecting localities based on specimens as well as publications (Grecescu 1899, 1907) can be found in Fig. 7. According to the *Flora Hellenica Database*, some of his collections are new for Greece, e.g. *Primula elatior* (L.) L. collected in April 1909 in a forest near the Prodromos monastery on Mt Athos (WU 0104412), and at Mt Doxa/Mt Vermio (WU 0104413). This information had already been published by Fritsch (1916: 295–296), but was overlooked for a long time (Eleftheriadou & Raus 1996).

Dimonie collected in the European part of the late Ottoman Empire, but not within the Kingdom of Greece. His collections are therefore not mentioned in Halácsy's *Conspectus florum graecae* (1901–1912), although Dimonie was in good contact with the Austro-Hungarian botanist and had visited him in Vienna in 1909 [unpublished letters kept in Uppsala; see Lack & Sydow (1984)]. Halácsy's Herbarium Europaeum (WU-Halácsy-Europaeum) contains a large number of plants collected by Dimonie.

In 1909, Dimonie was collecting in the Pirin Mts ("Perin Dagh") and the SW Rila Mts near Blagoevgrad in Bulgaria, at that time part of the Ottoman Empire. The Pirin Mts were, according to Velenovský (1911), a mountain range "almost unknown to botanists at that time". The SW Rila Mts formed the border to the newly independent Bulgaria, and Dimonie therefore repeatedly wrote "ad extremum finis Turco-Bulgariae" on his vouchers.

Even though Dimonie obviously was aware of country borders in his time, it often remains impossible to clarify if the specimens were gathered in present-day Albania, Bulgaria, Greece or North Macedonia. However, in Floras, monographic revisions or herbarium databases the assignment to one of these modern countries is often made in an arbitrary and uncritical manner. Dimonie often used Ottoman toponyms difficult to locate nowadays, e.g. Cara-tach, Gül-tepe, Keci-kaja, Kerici-köj, Nisi-dagi. The fact that he distributed his vouchers in a series named *Plantae Macedonicae* (referring to historical Macedonia) increased the confusion in later literature and in herbarium databases. Handel-Mazzetti (1923: 259) and Rohlena (1940), for example, mentioned vouchers of *Taraxacum bithynicum* DC. and *Aster alpinus* var. *cylleneus* Boiss.

Table 1. Dimonie's collecting localities in the southern Balkan Peninsula based on herbarium specimens verified to be extant. Current toponyms, if available, are in parentheses. – Country codes: AL = Albania; BG = Bulgaria; GR = Greece; MK = North Macedonia.

| Date | Country | Localities |
|----------|---------|---|
| 1907 | MK | Baba Mts: Pelister (Peristeri), label without month of collecting. |
| May 1907 | GR | Nomos Thessalonikis: Thessaloniki, Denibaylar/Deni Boglar/Ienibaglar/Kara tepé (Yenibaglar). |
| Jul 1907 | GR | Nomos Thessalonikis: Thessaloniki, Denibaylar/Deni Boglar, Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis). |
| Sep 1907 | MK | Galičica Mts: foothills near Ohrid ("In pascuis reg. inf. mtis. Galicitza op. Ohrida"). |
| Apr 1908 | GR | Nomos Thessalonikis: Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis) and several unspecified localities near Thessaloniki, e.g. "in collinis prope Thessalonicam". |
| May 1908 | GR | Nomos Chalkidikis: Mt Athos. – Nomos Thessalonikis: several unspecified localities near Thessaloniki, e.g. "in paludosis ad mare Thessalonica", "in collibus ad Thessalonica". |
| Jun 1908 | GR | Nomos Chalkidikis: Mt Athos, Ag. Anna (3 km SW of summit), Daphni (Dafni). – Nomos Thessalonikis: Capudčilar (Pylea). |
| Jul 1908 | GR | Nomos Chalkidikis: Mt Athos, Ag. Anna (3 km SW of summit). |
| Jul 1908 | MK/AL | Korab Mts: up to 2000–2100 m a.s.l. – Jablanica Mts: summit region ("in reg. superior"). |
| Jul 1908 | MK | Dibra (Debar), "in mtilems Dibra". – Korab Mts: up to 2100 m a.s.l. – Jablanica Mts: in forests along Belica river ("in silvis Jablonitza ad rivulos prope Belitza"). – Galičica Mts: foothills ("ad radices mt. Galicitza prope Ohrida", "in reg. infer m. Galicitza"); near Ohrid, e.g. "in incultis prope Ohrida", "in faucetis prope Ohrida"; near Struga ("ad ripas fluminis Drina prope Strauga"). |
| Mar 1909 | GR | Nomos Thessalonikis: Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis). |
| Apr 1909 | GR | Nomos Chalkidikis: Ag. Oros (Mt Athos), Prodromus monastery, Ag. Anna, Mt Vigla. – Nomos Imathias: Fetitza (Fitia) near Njausta (Naoussa), Mt Doxa (Mt Vermio). – Nomos Kavalas: N Aegean island of Thasos. – Nomos Lesvou: N Aegean island of Limnos. – Nomos Pellis: near Vodena (Edessa), Cara-tach/Karatash (Karataş) pag. Gramaticova (Ano Grammatiko) prope Vodena (Edessa). – Nomos Thessalonikis: Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis) and several unspecified localities near Thessaloniki, e.g. "in arenosis maritimis op. Thessalonica", "in collibus siccis [prope] Thessalonicam", "in herbicis reg. infer. et montanae op. Thessalonica". |
| Apr 1909 | GR/MK | Mt Porta pag. Huma op. Ghevgheli (Porta-Huma near Gevgelija), Mt Keci-kaja (Tzena/Kožuf) pag. Huma. |
| May 1909 | GR | Nomos Chalkidikis: Ag. Oros (Mt Athos), Prodromus monastery. – Nomos Kavalas: N Aegean island of Thasos. – Nomos Thessalonikis: Capudžilar/Kapugjilar (Pylea), Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis) and several unspecified localities near Thessaloniki, e.g. "in dumosis reg. inferioris collidae Thessalonicam", "in campis inter segetes Thessalonicam", "in siccis graminosis ad Thessalonicam". |
| May 1909 | GR/MK | Mt Suharpa/Suharupa (Suva Rupa), Mt Porta pag. Huma op. Ghevgheli (Porta-Huma near Gevgelija), Mt Keci-kaja (Tzena/Kožuf) pag. Huma. |
| Jun 1909 | GR | Nomos Chalkidikis: Ag. Oros (Mt Athos), Prodromus monastery. – Nomos Kavalas: N Aegean island of Thasos. – Nomos Pellis: near Vodena (Edessa), pag. Luguntza (Lagkadia) op. Ghevgheli (Gevgelija). – Nomos Thessalonikis: Capudčilar (Pylea), Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis). |
| Jun 1909 | GR/MK | Mt Kajmakcalan (Voras/Nidže), Mt Suharpa/Suharupa (Suva Rupa), Mt Porta pag. Huma op. Ghevgheli (Porta-Huma near Gevgelija), Ghevgheli (Gevgelija), Mt Keci-kaja (Tzena/Kožuf) pag. Huma. |
| Jun 1909 | BG | Blagoevgrad oblast: Jel-Tepe (Mt Vihren) in Pirin Mts. – Parangalitsa (nature reserve) near [Gorno/Upper] Osenovo, Smigelitsa/Smigelica (in SW Rila Mts, "ad extremum finis Turco-Bulgariae"). |
| Jul 1909 | GR | Nomos Imathias: Fetitza (Fitia) near Njausta (Naoussa), Njausta (Naoussa), Mt Doxa (Mt Vermio). – Nomos Pellis: Ostrovo (Vegoritits), near Vodena (Edessa), Cara-tach (Karataş) pag. Gramaticova (Ano Grammatiko) prope Vodena (Edessa); Batecina/Patecina (Panagitsa) Nisi-dagi (mountain near village of Nision/Nisi, which is SE of Panagitsa). – Nomos Chalkidikis: Ag. Oros (Mt Athos), Prodromus monastery. – Nomos Thessalonikis: Mt Gül-tepé (Mt Chortiatis) pag. Kerici-köj (Chortiatis) and several unspecified localities near Thessaloniki, e.g. "in vinetis op. Thessalonica", "in collibus aridis op. Thessalonica". |
| Jul 1909 | GR/MK | Lower slopes of Mt Kajmakcalan (Voras/Nidže). |
| Jul 1909 | BG | Blagoevgrad oblast: Jel-Tepe (Mt Vihren) in Pirin Mts. |
| Aug 1909 | BG | Blagoevgrad oblast: Jel-Tepe (Mt Vihren) in Pirin Mts. – Parangalitsa (nature reserve) near [Gorno/Upper] Osenovo, Mt. Germanica (Germanitsa/Dzhermanitsa, mountain east of Parangalitsa reserve, above Dobarsko village) in SW foothills of Rila Mts. – In reg. mont. oppido Dzumaza [Dzumaya/Dzumaja] (Blagoevgrad), all "ad extremum finis Turco-Bulgariae". |
| Jun 1910 | GR | Nomos Pellis: "in rivularibus silvaticis pag. Patecina [Batecina/Patecina (Panagitsa)] mt. Kaimakcelan [Mt Kajmakcalan (Voras)]". |



Fig. 5. Holotype of *Thymus pulvinatus* var. *perinicus* Velen. (PRC-Phanerogamae 452094), collected by Dimonie on Jel-tepe (Mt Vihren) in the Pirin Mts (Bulgaria) in August 1909. This Balkan endemic is now treated as *T. perinicus* (Velen.) Jalas (Euro+Med 2006+; Assyov & al. 2012; Genova 2015).

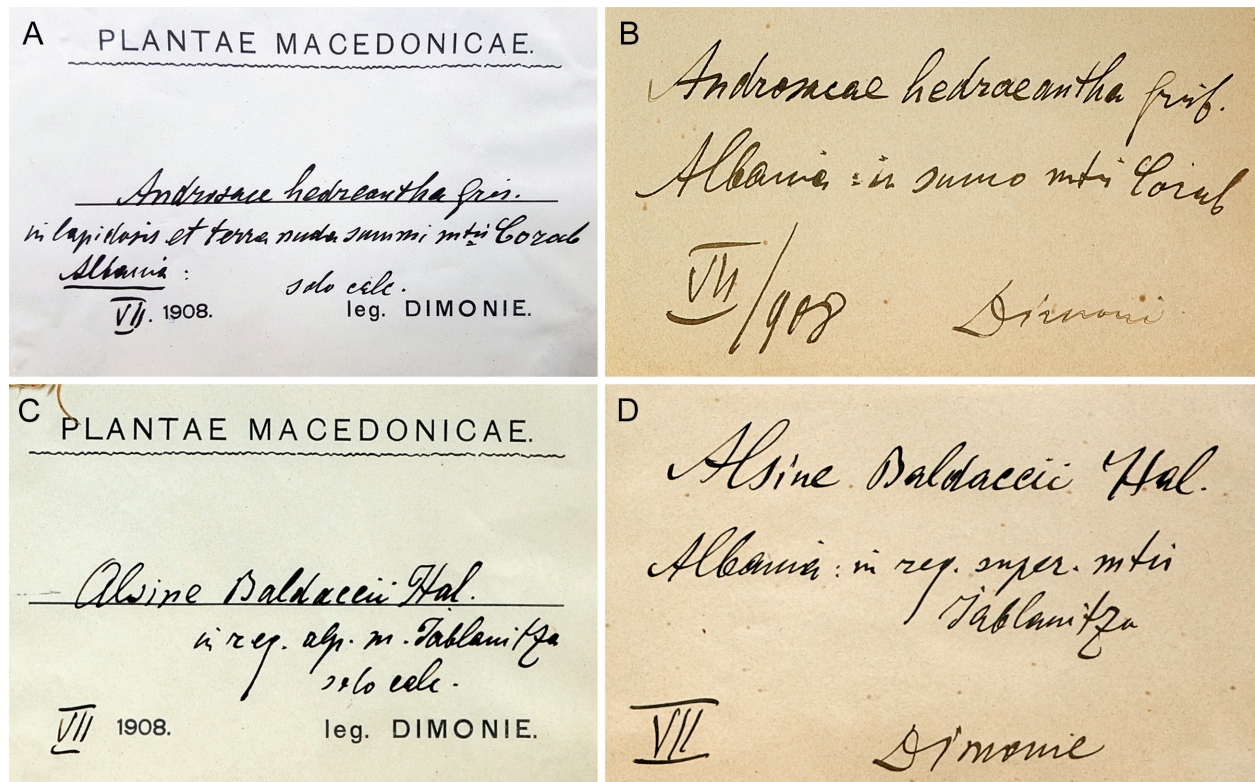


Fig. 6. Handwritten labels of Mihael Dimonie. – A and B: *Androsace hedraeantha* Griseb. from the alpine region of Mt Korab, collected in July 1908. According to Barina (2017) this species grows at 2000–2400 m above sea level. A: WU 0104753, see also Fritsch (1916: 305). B: WU-Halácsy-Europaeum 0103775. – C and D: *Minuartia baldaccii* (Halácsy) Mattf. (\equiv *Alsine baldaccii* Halácsy) from higher altitudes in the Jablanica Mts, collected in July 1908. C: WU 0059967. D: WU-Halácsy-Europaeum 0059783. In Dimonie's commercial set of *Plantae Macedonicae* (Fig. 6C) there is no indication that the specimen was collected in "Albania" and on the label in WU-Halácsy-Europaeum (Fig. 6D), the collecting year is absent.

& Orph., respectively, from "Jel-tepe, Perin Dagh" for North Macedonia, although they were collected on Mt Vihren in Bulgaria, on a peak called until 1942 El tepe or Jel-tepe. Information on his labels is likewise often scant, e.g. only "in m. Corab", "in reg. alp. m. Jablanitza" or "collibus ad extremum finis Turco-Bulgariae. alt. 400 m", referring to whole mountain ranges or a border region. Usually the labels are without the exact date, giving the year, or sometimes the year and month (e.g. VII. 1908 for July 1908 or 06/09 for June 1909), see Fig. 5, 6, 8, 9, 10, 11.

Dimonie is usually not categorized as a plant collector for Albania (Barnes & Hoda 2001; Barina 2017), although he was mentioned by Baldacci (1925: 96, 98) and Markgraf (1932: 127). His "Albanian" vouchers are exclusively from the border ridges of the Jablanica Mts (Vierhapper 1909: 148, fig. 6C & D, 11, 12; Handel-Mazzetti 1910: 10; Murbeck 1933: 145; Wagenitz 1983: 153) and the Korab Mts (Wagenitz 1983: 153; Baltisberger 1994; Polatschek 2013: 179; Krendl 2014: 126, 129, 139, 143, 148, fig. 6A & B, 8A). According to Jenő Béla Kümmerle (1876–1931), based on information from Dimonie himself, the latter could botanize in the "unknown" terrain of the Korab Mts by disguising himself in traditional Albanian costume; however, he failed to reach the peak of Korab (Kümmerle 1926: 30). This corroborates data

from his Korab herbarium vouchers, which were collected at a maximum altitude of 2000–2100 m (see Engler & Irmischer 1916: 314; Erben 1985: 689). In several of his *Plantae Macedonicae* sets "Albania" is inscribed by hand (Fig. 6A, 8A), although Albania and North Macedonia were both still part of the Ottoman Empire. Dimonie followed ethnical aspects, traditions and wisely, his customers' preferences (Wettstein 1892: 1; Vierhapper 1914: 243; Hayek 1924–1933: *Praefatio* p. V). The herbarium vouchers collected at low to medium altitudes (e.g. as cited in Krendl 2014 for Albania) were most likely collected in the ethnically Albanian part of present-day North Macedonia (e.g. *Satureja subspicata* var. *macedonica* Velen., Fig. 8A). Only gatherings from the mountain ridges of the Jablanica Mts and, with some reservation, of the Korab Mts, may have been collected in Albania or at least close to its border (Fig. 6).

Ranunculus crenatus Waldst. & Kit. collected in the Vranica Planina (Bosnia and Herzegovina) in 1901 by I. Dimonie and published in Baltisberger (1994: 236) can be ascribed to his brother Iancu Dimonie.

During Dimonie's lifetime, Velenovský (1911), Fritsch (1916, 1918), Bornmüller (1932), Murbeck (1933) and, after his death, Rechinger (1944) published a remarkable number of plant records from the Balkan Peninsula based on Dimonie's collections or described taxa from his ma-



Fig. 7. Map of Dimonie's collecting localities in the southern Balkan Peninsula. – Red lines: historical borders of the Ottoman Empire in 1908 sensu Kunz & al. (2003), kindly provided by Bogdan G. Popescu (Popescu 2017); green dots: data from Grecescu (1899, 1907); red dots: data from extant herbarium vouchers including data from the *Flora Hellenica Database*; question marks: exact localities not traceable; Dimonie's places of residence are underlined; mountains are in italics.

terial. Velenovský (1911), in particular, described 12 taxa within a single paper. From these, only five taxa are accepted today: *Anthyllis vulneraria* subsp. *vitellina* (Velen.) Kuzmanov (Kuzmanov 1976; Anchev 2006; Nanev 2012), *Saxifraga discolor* Velen. (Tkach & al. 2015, 2019), *Thymus perinicus* (Velen.) Jalas (Euro+Med 2006+; Markova 2006; Assyov & al. 2012; Genova 2015), *Viola frondosa*

(Velen.) Velen. (Dimopoulos & al. 2013; Raab-Straube & Henning 2018) and *Verbascum dimonieii* Velen. (Marhold 2011f; Dimopoulos & al. 2013). In the case of *Saxifraga discolor* (Fig. 8B), Dimonie presumed it could be new to science and wrote on the label of the specimen he sold to Velenovský: “[...] Si elle est nouvelle pourquoi ne la nommez pas *Dimoniana*!” [authors' translation: “If it is new

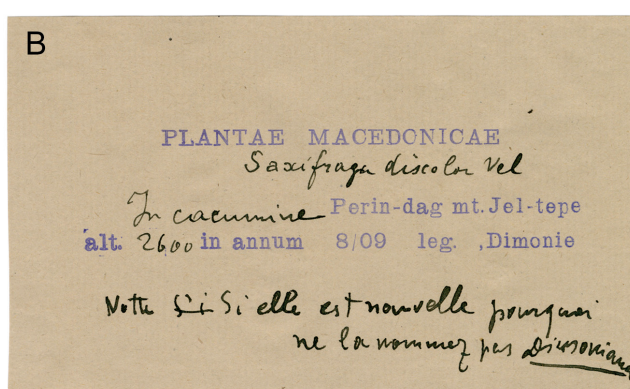
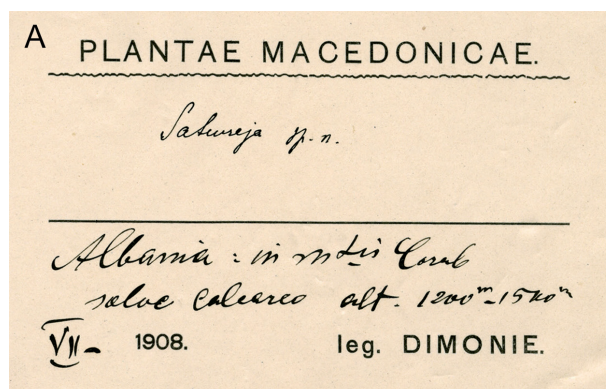


Fig. 8. A: Label of the holotype of *Satureja subspicata* var. *macedonica* Velen., collected in the Korab Mts in July 1908 (PRC-Phanerogamae 451330). “*Satureja* sp. n.” was written on the original label by J. Velenovský, who described the variety (Velenovský 1911). As often, Dimonie distributed the voucher without identification. Although he wrote “Albania”, the voucher more likely was collected in North Macedonia. – B: Label of the isolectotype of *Saxifraga discolor* Velen. (PRC-Phanerogamae 451704), see Appendix 1. Dimonie distributed it without identification, but with a request to have it named after him should it prove to be a novelty.



Fig. 9. Holotype of *Hesperis verroiana* F. Dvořák from the National Museum in Prague (PR 193244/11569), see Appendix 1. – Reproduced by kind permission, © National Museum Prague



Fig. 10. The holotype of *Verbascum dimonieii* Velen. is mounted on two sheets in PRC; this is one of them (PRC-Phanerogamae 451369). The type locality is Fetitza (Fitia) near Njausta (Naoussa) in the foothills of Mt Vermio in Greece.



Fig. 11. Lectotype of *Soldanella dimonieii* Vierh. (WU 0027910), see Appendix 1.

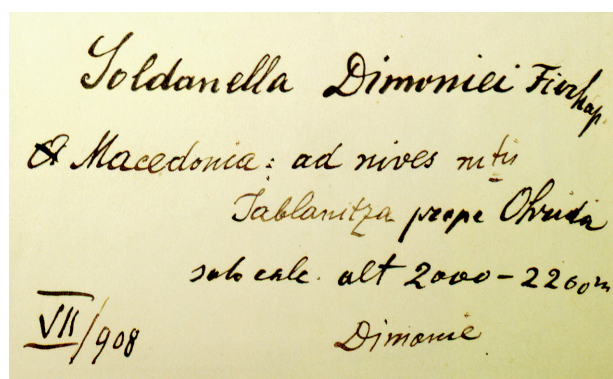


Fig. 12. Label of the isoelectotype of *Soldanella dimonieii* Vierh. (WU-Halácsy-Europaeum 0040240), see Appendix 1. Dimonie probably wrote the label by hand during his visit to Vienna in February 1909, when he knew from Vierhapper (misspelt as “Fierhap.”) that his collection represented a new species to be published soon, in April 1909; see Vierhapper (1909).

why not name it *Dimoniana!*”]. Velenovský (1911), however, did not obey the request and named the species after its bicoloured, whitish-purple petals.

It is not known how many taxa botanists have described based on Dimonie specimens. Since type material was often part of his *Plantae Macedonicae* series, isotypes and syntypes are available in many herbaria. More than two dozen type specimens and other authentic material mostly from W, WU and PRC can currently be viewed via Virtual Herbaria JACQ (<https://herbarium.univie.ac.at/database/search.php>). Additional specimens of Dimonie are available online, e.g. via the Dutch botanical collections of Naturalis, i.e. L (<http://bioportal.naturalis.nl/>), Sweden’s Virtual Herbarium, i.e. GB, LD, S (<http://herbarium.emg.umu.se/>), the herbarium catalogue of the Royal Botanic Garden Edinburgh, i.e. E (<https://data.rbge.org.uk/search/herbarium/>) and the database of the Smithsonian National Museum of Natural History, i.e. US (<https://collections.nmnh.si.edu/search/botany/>). In Appendix 1, we lectotypify seven names and present nomenclatural notes on six others that were described based on material collected by Dimonie, and lectotypify one name based on material collected by Ignaz Dörfler. In Appendix 2, we present a preliminary list of 29 names based on plant material collected by Dimonie.

According to Euro+Med (2006+), most of the taxa described based on Dimonie’s gatherings, especially those at infraspecific level by Velenovský (1911), are no longer accepted. This is also true for some described at a later stage, e.g. *Hesperis verroiana* F. Dvořák (Dvořák 1966; Appendix 1, Fig. 9), now included in *H. theophrasti* Borbás subsp. *theophrasti* by Tan & Suda (2002). Others are disputed, e.g. *Viola beckiana* subsp. *pascua* (W. Becker) Trinajstić, accepted in Euro+Med (2006+), but reduced to a synonym of *V. eximia* Formánek in Erben (1985: 459) and therefore not listed in Dimopoulos & al. (2013); see also Appendix 1.

To honour Dimonie, taxonomists of the early 20th century described several infraspecific entities of no cur-

rent taxonomic relevance, e.g. *Cerastium moesiacum* f. *dimonieii* Borza (Borza 1913: 57, as “*Dimonii*”), or as unpublished manuscript names, e.g. “*Potentilla dimonieii* Adam.” in sched. (Gandoger 1912; Urumov 1914), “*Potentilla subserica* var. *dimonieii* (Adam.) Bornm.” (Bornmüller 1928: 254) and “*Cerastium dimonieii*” (Soška 1939).

Of the four published species bearing his name (*Hieracium dimonieii* Zahn, *Hypericum dimonieii* Velen., *Soldanella dimonieii* Vierh., *Verbascum dimonieii* Velen.), only two are still accepted according to Euro+Med (2006+), viz. *Hieracium dimonieii* and *Verbascum dimonieii*.

Hieracium dimonieii was originally described based on material from the Korab Mts and is an intermediate species between *H. waldsteinii* Tausch and *H. pilosum* Froel. endemic to Albania, Greece, Kosovo and North Macedonia (Zahn 1910; Gottschlich & al. 2010; Szeląg 2015; Gottschlich 2016). The lectotype from PRC is depicted in Szeląg (2015: 46).

Hypericum dimonieii was described from Porta-Huma near Gevgelija (Kožuf/Tzena/Dzana Mts) at the borders of Greece and North Macedonia (Velenovský 1911) and is now synonymized with *Hypericum olympicum* L. (Marhold 2011c). Holotype: PRC-Phanerogamae 452062.

Soldanella dimonieii is a microspecies by Vierhapper (1909) described from the higher altitudes of the Jablanica Mts (North Macedonia); see Appendix 1 and Fig. 11, 12. Today it is accepted only by Barina (2017) and Barina & al. (2018). Markgraf (1931) considered it a variety of *Soldanella pindicola* Hausskn. and Meyer (1985) synonymized it with the latter, an opinion followed by Raus (1986), Micevski (1998), Zhang & Kadereit (2004), Marhold (2011d), Pils (2016) and Štubňová & al. (2017).

Verbascum dimonieii was described based on specimens from North Central Greece (Fetitza prope Njausta [Naoussa]) distributed by Dimonie as *Plantae Macedonicae* no. 327. It occurs in Greece and North Macedonia (Velenovský 1911) and is very similar to *V. graecum* Boiss., but was accepted in Marhold (2011f) and Dimopoulos & al. (2013). The holotype in PRC was mounted onto two sheets; the one with the original label is depicted in Fig. 10.

The identification of plant material from the Southern Balkans must have been daunting and challenging before the seminal works of Halácsy (1900–1912) and Hayek (1924–1933) appeared. Therefore, it is not surprising that Dimonie’s determinations were also criticized, e.g., by Handel-Mazzetti (1926) in a review of the first volume of Hayek’s *Prodromus florum balcanicae*: “Die leichtere Bereisbarkeit der Balkanländer hat das Interesse dafür gesteigert und beträchtliches zum guten Teile falsch bestimmtes (Adamović, Dimonie) Material hat sich in den größeren Herbarien angesammelt, [...]” [authors’ translation: “Ease of travel in the Balkan lands has increased both the interest [in collecting in this area] as well as

the considerable and erroneously determined material (Adamović, Dimonie) that has gathered in large herbaria, ...”]. An example of a Mediterranean species in *Apiaceae* difficult to determine is *Seseli arenarium* M. Bieb. (= *S. tortuosum* auct. fl. graec., non L.; Lyskov & al. 2018) originally named as *Hippomarathrum cristatum* (DC.) Boiss. (WU 0095813). Mattfeld & al. (1925) also wrote that Dimonie often confused localities in his exsiccata, a fact obviously known to his contemporaries.

As is often the case with large sets of material within series, his distributed exsiccata contain mixed gatherings. Persson (1999: 77) noted that in different herbaria sheets/vouchers of the presumably same *Colchicum* gathering collected in 1907 from the foothills of the Galičica Mts near Ohrid contained either *C. bivonae* Guss. or *C. haynaldii* Heuff. Villar & al. (2015) found *Tamarix parviflora* DC. and *T. hampeana* Boiss. & Heldr. on the same sheet in G, collected by Dimonie from coastal Thessaloniki. Polatschek (2013: 100, 104) indicated that a gathering of *Syrenia cana* (Piller & Mitterp.) Neilr., distributed as *Flora Romaniae Exsiccata* nr. 253b, comprised both *Erysimum canum* (Piller & Mitterp.) Polatschek and *E. quadrangulum* Desf. Franzén (1986) excluded Dimonie’s gatherings of *Achillea setacea* Waldst. & Kit. from Mt Athos (erroneously labelled as *A. ageratifolia* (Sm.) Boiss. subsp. *ageratifolia*) from his distribution map.

Nevertheless, the thousands of vouchers collected by Dimonie in the southern Balkan Peninsula between 1894 and 1912 render him one of the most important plant collectors of his time, even though only the commercial specimens from 1907 to 1910 are preserved. His contributions to the flora of Greece and North Macedonia are comparatively well known to science (Greuter 1975; Strid 1978; Matevski 2009), but those for the floras of the Albanian border regions (Fig. 6, 8, 11, 12) and for the Pirin and SW Rila Mts in Bulgaria (Fig. 5, 8B) are almost forgotten (see, however, Baldacci 1925; Stefanoff 1930; Stojanoff & Achtaroff 1935). In comparison to the privileged situation that many professional taxonomists at universities or museums enjoyed, Dimonie’s position as a plant trader and teacher did not permit him to publish his material himself. He was hindered by a lack of time, botanical literature and a large institutional herbarium where he could compare and identify his specimens. He was fully aware of these circumstances and, in a letter to Halácsy, regretted this as well as the high expenses incurred for his journeys and the low remuneration received for his specimens.

His private herbarium, probably one of the most comprehensive collections of the Balkan flora in his time, and his Balkan vouchers deposited in the herbarium Grecescu in BUC were destroyed in the two World Wars. What remains are his commercial vouchers from 1907 to 1910, which he had sold to herbaria all over Europe, and his contributions to Aromanian cultural heritage (*Codex Dimonie*, Aromanian plant names and ethnobotany). Despite all shortcomings, the scientific value of his *Plantae*

Macedonicae is obvious and his vouchers are still used by taxonomists. Košanin (1912: 208) already regretted that “Dimonie’s vouchers [from the Korab Mts] are stored unpublished in various herbaria”. Now we stand at the same position more than a hundred years later and only the complete digitization of major European herbaria including OCR-aided databasing of label information can help (Drinkwater & al. 2014; Soltis 2017; Besnard & al. 2018). This would contribute to a thorough knowledge of the extant gatherings of often forgotten historic collectors like Mihael Dimonie.

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Appendix 1: Typifications of, and nomenclatural notes on, selected taxa described from plant material collected by Mihael Dimonie

In this Appendix, we lectotypify seven names of taxa described from herbarium material collected by Mihael Dimonie, plus one by Ignaz Dörfler, and present their current taxonomic treatments. Lectotypification is not necessary for the majority of names published by Velenovský (1911), who, according to his introduction, worked only with the vouchers in PRC and usually only one voucher is extant there, therefore qualifying as the holotype. For other names, the holotype was already indicated in the protologue, e.g. *Anthyllis alpestris* subsp. *vitellina* W. Becker (Becker 1912), *Hesperis verroiana* Dvořák (Dvořák 1966) and *Viola pasqua* W. Becker (Becker 1928). Others have been lectotypified already, e.g. *Alyssum obtusifolium* subsp. *helioscopioides* Nyár. (Hartvig 2002: 222), or the lectotype was chosen from a syntype not collected by Dimonie, e.g. *Astragalus monachorum* Širj. (Strid 1986: 467). For *Cerastium fontanum* subsp. *balcanum* Gartner, we designate a voucher collected by Dörfler as the lectotype, because this is the best preserved and most representative among a number of available syntypes. Because several lectotypifications were previously done only in schedis, it should be mentioned that typifications are achieved only by effective publication (Turland & al. 2018: Art. 7.10). Apart from the lectotypifications, we present nomenclatural notes for six other taxa.

Alyssum obtusifolium var. *helioscopioides* Nyár. in Bul. Gräd. Bot. Univ. Cluj 9: 18–20. 1929. – Lectotype (designated by Hartvig in Strid & Tan, Fl. Hellen. 2: 222. 2002): [Greece, Nomos Kavalas], in saxosis aridis calcareis insula Thasos, Apr 1909, *M. Dimonie* (WU 0033164).

In the protologue, Nyárády (1929) did not indicate a type, but rather a single gathering by Dimonie in the herbaria Degen (today BP) and WU that he had consulted. Deposited in WU are two vouchers most likely originating from the same gathering and both annotated by Nyárády in 1926. Hartvig (2002) performed a (probably unintentional) lectotypification by indicating one of the two vouchers in WU as the type by its slightly different label text (cf. WU 0033165); see Turland & al. (2018: Art. 9.22). Additional isolectotypes can be found in the herbaria E (E00438386) and W (W 1910-0005921).

Current names: *Odontarrhena obtusifolia* (Steven ex DC.) C. A. Mey. (Marhold 2011a; Španiel & al. 2015) or *Alyssum sibiricum* Willd. [= *Odontarrhena sibirica* (Willd.) Španiel & al.] (Dimopoulos & al. 2013).

Alyssum punctatum Nyár. in Bul. Gräd. Bot. Univ. Cluj 7: 72–73. 1928. – **Lectotype (designated here)**: [Greece, Nomos Thessalonikis], in collinis prope Thessalonicum, Apr 1908, *M. Dimonie* (WU 0076276).

In the protologue, Nyárády (1928) cited several syntypes in the herbaria Formánek (today BRNM), Degen (today BP), Halácsy (today WU-Halácsy-Europaeum and -Graecum) and WU. All corresponding vouchers in

WU (including Halácsy-Europaeum and -Graecum) were annotated by Nyárády in 1926 (syntypes: WU 0090266, WU-Halácsy-Europaeum 0090425, WU-Halácsy-Graecum 0076178); the isolectotypes in W (W 1909-0006939, W 1909-0007222) lack these annotations.

Current names: *Odontarrhena chalcidica* (Janka) Španiel & al. (Marhold 2011a; Španiel & al. 2015) or *Alyssum chalcidicum* Janka (Dimopoulos & al. 2013).

Anthyllis alpestris subsp. *vitellina* W. Becker in Beih. Bot. Centralbl., Abt. 2, 29: 26. 1912 ≡ *Anthyllis vulneraria* var. *vitellina* (W. Becker) Hayek in Repert. Spec. Nov. Regni Veg. Beih. 30: 890. 1926. – Holotype: [Bulgaria, Blagoevgrad oblast], in saxosis alpinis Perin-dag mt. Jel-tepe, Aug 1909, *M. Dimonie* (WU 0104512).

In the protologue, Becker (1912) mentions Velenovský's variety ("A. *vulneraria* var. *vitellina* Vel. ?"). However, the question mark renders subsp. *vitellina* the validly published name of a new taxon, not a new combination. Becker cited the same gathering by Dimonie, like Velenovský (1911), but indicated the herbarium WU as the main source for his studies; therefore, the single voucher in this herbarium can be considered as the holotype and the duplicate vouchers in PRC and W as isotypes (see under *A. vulneraria* var. *vitellina* below).

Current name: *Anthyllis vulneraria* subsp. *vitellina* (Velen.) Kuzmanov (Kuzmanov 1976; Anchev 2006; Nanev 2012).

Anthyllis vulneraria var. *vitellina* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 4. 1911 ≡ *Anthyllis vulneraria* subsp. *vitellina* (Velen.) Kuzmanov in Taxon 22: 288. 1973. – **Lectotype (designated here):** [Bulgaria, Blagoevgrad oblast], in saxosis Perin-dag mt. Jel-tepe, Aug 1909, *M. Dimonie* 356 (PRC-Phanerogamae 451440).

In the protologue, Velenovský (1911) cited a single gathering by Dimonie. However, a set of at least two duplicates can be found in PRC: the lectotype designated here (PRC-Phanerogamae 451440) and an isolectotype (PRC-Phanerogamae 451439); two further isolectotypes are deposited in W (W 1910-0005668) and WU (WU 0104512).

Current name: *Anthyllis vulneraria* subsp. *vitellina* (Velen.) Kuzmanov (Kuzmanov 1976; Anchev 2006; Nanev 2012).

Astragalus monachorum Širj. in Repert. Spec. Nov. Regni Veg. 47: 242–243. 1939 ≡ *Astragalus thracicus* subsp. *monachorum* (Širj.) Strid, Mount. Fl. Greece 1: 467. 1986 ≡ *Astracantha thracica* subsp. *monachorum* (Širj.) Greuter in Willdenowia 15: 426. 1986. – Lectotype (designated by Strid, Mount. Fl. Greece 1: 467. 1986): [Greece, Nomos Chalkidikis], zwischen Steine und felsige Orte am Monte Athos, Aug 1873, *T. Pichler* 156 (G-Boiss!).

In the protologue, Širjaev (1939) cited syntypes collected by Friedrichsthal, Dimonie, Brener, Pichler, Janka, Sintenis and Bornmüller, all originating from the upper

regions of Mt Athos. Strid (1986) designated as the lectotype a voucher by Pichler in G-Boiss; however, it remains doubtful if the voucher in WU indicated as an isolectotype by Zarre in scheda in 1996 really belongs to the same gathering, because the given locality is slightly different and the voucher lacks a collecting number by Pichler (WU 0068226). The same holds true for the duplicates in E (E00021216) and PRC (PRC-Phanerogamae 452029) indicated as "isotype". Syntypes can be found in the herbaria B (B 100279205, B 100279206), LD (1793342), W (W 0026158, W 0026159) and WU (WU-Halácsy-Europaeum 0068224, WU 0068225, WU 0068227).

Current names: *Astragalus thracicus* subsp. *monachorum* (Širj.) Strid (Podlech 1987–2011, 2008; Dimopoulos & al. 2013) or *Astracantha thracica* subsp. *monachorum* (Širj.) Greuter (Roskov & al. 2006). *Astracantha* Podlech is polyphyletic and therefore taxonomically obsolete (Zarre & Podlech 1997); hence it is treated as a mere synonym of *Astragalus* L. (Podlech & Zarre 2013: 4).

Cerastium fontanum subsp. *balcanum* Gartner in Repert. Spec. Nov. Regni Veg. Beih. 113: 76. 1939. – **Lectotype (designated here):** [Albania, Shkodër], auf steinigem Boden auf dem Maranaj, nördl. von Skutari [Shkodra], 16 Jun [1916], *I. Dörfler* 49 (WU 0066100).

In the protologue, Gartner (1939) cited material by several collectors in the herbaria WU (including WU-Hal) and W, but none of the vouchers was annotated by him. Michael B. Wyse Jackson (TCD) annotated a specimen collected by Dörfler as the lectotype; however, this typification was never published, neither by him (see, e.g., Wyse Jackson 1992) nor by Vogt & al. (2018). We therefore publish here Wyse Jackson's in scheda choice of the lectotype. Syntypes can be found in the herbaria GZU, W and WU (GZU 000291987, WU 0066103), including some collected by Dimonie (W 1909-0007341, WU 0066100, WU 0066101, WU 0066102, WU-Halácsy-Europaeum 0104561), but in a worse state of preservation than the lectotype designated here.

Current names: *Cerastium fontanum* subsp. *vulgare* (Hartm.) Greuter & Burdet (Marhold 2011b) or *C. holosteoides* Fr. (Dimopoulos & al. 2013).

Hesperis verroiana Dvořák in Preslia 38: 59. 1966. – Holotype: [Greece, Nomos Imathias], in rupestribus declivum mt. Doxa pag. Doleni prope Caraferia, Apr 1909, *M. Dimonie* (PR 193244/11569 [Fig. 9]).

In the protologue, Dvořák (1966) indicated the holotype in PR, which was depicted in a low-quality black and white image in tab. IV(1) of that publication. The original, unmounted herbarium label of the holotype was later lost and an almost identical label from the isotype in PRC copied and mounted instead on the voucher in PR (Fig. 9). Isotypes can be found in the herbaria LD (LD 1002566), PRC (PRC-Phanerogamae 455747), W (W 1910-0005752) and WU (WU 0028099, WU 0028100).

Current name: *Hesperis theophrasti* Borbás subsp. *theophrasti* (Tan & Suda 2002; Dimopoulos & al. 2013).

Myosotis villicaulis Domin in Carpatica, Ser. B, 1(2): 296. 1940 [“1939”]. – **Lectotype (designated here):** [Greece or North Macedonia], in pascuis alpinis mt. Kajmakalan, Jul 1909, *M. Dimonie* 53 (PRC-Phanerogamae 454076).

For his revision, Domin (1940) consulted the herbaria of the Charles University (PRC) and the National Museum (PR) in Prague as well as the herbarium of the Masaryk University (BRNU) in Brno. In the protologue, Domin (1940) cited several gatherings by Dimonie. None of the syntypes could be found in the herbaria W and WU. Obviously, Domin (1940) was not aware of Vestergren’s work on *Myosotis sylvatica* (Vestergren 1939), published a year earlier, and neither did Vestergren (1939) know the material Domin used for his description of *M. villicaulis*. Because the specimen designated here as the lectotype exhibits acute nutlets, we consider it to be a hairy form of *M. sylvatica* subsp. *cyanea* (Hayek) Vestergren, according to Grau & Merxmüller (1972) and Strid (1991). A close relationship to *M. cyanea* (Hayek) Domin (\equiv *M. sylvatica* subsp. *cyanea*) was already anticipated by Domin (1940).

Current name: *Myosotis sylvatica* subsp. *cyanea* (Hayek) Vestergren. (Valdés 2011; Dimopoulos & al. 2013).

Saxifraga discolor Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 7. 1911 \equiv *Saxifraga adscendens* subsp. *discolor* (Velen.) Kuzmanov in Jordanov, Fl. Reipubl. Popularis Bulg. 4: 663. 1970. – **Lectotype (designated here):** [Bulgaria, Blagoevgrad oblast], in saxosis Perin-dag mt. Jel-tepe, Aug 1909, *M. Dimonie* 376 (PRC-Phanerogamae 451703).

In the protologue, Velenovský (1911) cited a single gathering by Dimonie. However, a set of at least two duplicates can be found in PRC: the lectotype designated here (PRC-Phanerogamae 451703) and an isolectotype (PRC-Phanerogamae 451704). The latter includes an interesting, handwritten remark of Dimonie, which is depicted in Fig. 8B. Additional isolectotypes are deposited in W (W 1910-0005689) and WU (WU 0104414).

Current names: *Saxifraga adscendens* subsp. *discolor* (Velen.) Kuzmanov (Marhold 2011e; Dimopoulos & al. 2013) or *S. discolor* Velen. (Tkach & al. 2015, 2019).

Silene perinica Hayek in Repert. Spec. Nov. Regni Veg. 19: 334. 1924. – **Lectotype (designated here):** [Bulgaria, Blagoevgrad oblast], in summo mtis Jel-tepe Perin dag, Jun 1909, *M. Dimonie* (W 1910-0005830).

When describing *Silene perinica* in his *Plantae novae orientales*, Hayek (1924) mentioned neither a type nor a herbarium, but only that his new species was collected in “Macedonia” on “Jel-Tepe Perindaghr” and distributed as *S. graminea* by “J. Dimonie”. Greuter & al. (1997) supposed the type specimens to be in WU or GB. In the treatment of *Euphorbia imperfoliata* Vis., another

species mentioned in the same paper, Hayek (1924: 334) stressed that he worked in the Natural History Museum, Vienna (W) for his account. Rechinger (1939: 167) stated that he had seen “Hayeks Original” and “Typus” in W. The lectotype chosen here even contains a handwritten annotation by Hayek: “*S. perinica* m. n. sp.”, whereas the type material in WU lacks annotations or revisions by Hayek (isolectotypes: WU 0104796, WU 0104798; syntypes: WU 0104797, WU 0104799).

Current name: *Silene ciliata* subsp. *graefferi* (Guss.) Nyman (Greuter & al. 1997; Dimopoulos & al. 2013).

Soldanella dimonie Vierh. in Österr. Bot. Z. 59: 148. 1909 \equiv *Soldanella pindicola* var. *dimonie* (Vierh.) Markgraf in Notizbl. Königl. Bot. Gart. Berlin 11: 221, 223. 1931. – **Lectotype (designated here):** [Albania or North Macedonia], ad nives liquescentes mt. Jablanitza, Jul 1908, *M. Dimonie* (WU 0027910 [Fig. 11]).

Although working in WU, Vierhapper (1909) did not indicate the type or a herbarium in his description of *S. dimonie*. Therefore, the “holotype” mentioned by Zhang & Kadereit (2004: 743) has to be designated as the lectotype. The mere handwritten designation on the voucher as “Original exemplare” and, by a later hand, “i.e. HOLO-TYPUS” (Fig. 11) does not achieve designation of a lectotype according to Turland & al. (2018: Art. 7.10); see also McNeill (2014). The “isotype” in WU mentioned by Zhang & Kadereit (2004: 743) is from the Halácsy herbarium, a private collection most likely not available to Vierhapper, because it was only later incorporated into WU (Lack 1980). “Macedonia” is indicated only on the label of the isolectotype in Halácsy’s herbarium (WU-Halácsy-Europaeum-0040240 [Fig. 12]), neither on the lectotype from the exsiccata series *Plantae Macedonicae* (Fig. 11) nor on the isolectotype in W (W 1909-0007371), nor in Vierhapper (1909), where the species is stated to have been collected “im zentralen Albanien” (in central Albania) (cf. Vierhapper 1914: 243).

Current name: *Soldanella pindicola* Hausskn. (Meyer 1985; Raus 1987; Micevski 1998; Zhang & Kadereit 2004; Marhold 2011d; Dimopoulos & al. 2013).

Vicia lutea var. *bicolor* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 5. 1911. – **Lectotype (designated here):** [Greece, Nomos Chalkidikis], in pratis St. Nil Hagion Oros prope coenobium Prodrom, Apr 1909, *M. Dimonie* 180 (PRC-Phanerogamae 451160).

In the protologue, Velenovský (1911) cited a single gathering (in PRC) collected by Dimonie near the Prodrom monastery at Mt Athos, Greece. However, a set of at least two duplicates with almost identical labels can be found in PRC (PRC-Phanerogamae 451159, PRC-Phanerogamae 451160). An additional specimen from Mt Athos, but from the Ag. Anna monastery, is deposited in W (W 1910-0005481). Because one of the vouchers in PRC (PRC-Phanerogamae 451159) also shows a label

with a handwritten correction of the printed “Aja-Anna” to “Prodromo”, we assume that the Vienna voucher also belongs to the type gathering. All the above cited type material morphologically corresponds to *Vicia laeta* Ces. (= *V. barbazitae* Ten. & Guss.) in inflorescence structure and size, glabrescent calyx, equal length of calyx lobes, ratio of calyx tube to calyx lobes, and the yellow corolla with blue wings (Ball 1968; Davis & Plitmann 1970; Coulot & Rabaute 2016), and not to *V. lutea* L. nor to *V. grandiflora* Scop.

Current name: *Vicia laeta* Ces. (Dimopoulos & al. 2013).

Viola pascua W. Becker in Bull. Inst. Jard. Bot. Univ. Belgrade 1: 34. 1928 ≡ *Viola beckiana* subsp. *pascua* (W. Becker) Trinajstić in Suppl. Fl. Anal. Jugosl. 3: 7. 1975. – Holotype: [Greece or North Macedonia], in pascuis alpinis mt. Porta pag. Huma op. Ghevgheli, Jun 1909, M. Dimonie 74 (PRC-Phanerogamae 454679).

Becker (1928) clearly indicated that the type was deposited in the Herbarium Velenovský (today in PRC) and annotated the second, similar gathering (same locality and date but no. 71) as *Viola orphanidis* Boiss., the latter specimen being the type of *V. zoysii* var. *frondosa* Velen. (see below). Erben, in 1983, annotated the first voucher as *V. eximia* Formánek and cited it as the holotype of *V. pascua* (Erben 1985). An isotype in WU (WU 0103968), lacking a number but with an identical locality, was annotated by Erben in 1984 and cited by him (Erben 1985), although he noted that two out of the three specimens are *V. eximia* and one is *V. eximia* × *V. frondosa* (Velen.) Velen. Additionally, a paratype in WU (WU 0103967) was determined by Erben in 1984 as *V. eximia* s.l. and cited by him (Erben 1985). In the herbarium W, another isotype and a specimen most likely belonging to the same paratype gathering cited above (but with the label information on altitude not in agreement with the protologue) are mounted on the same sheet (W 1910-0006006). All above-cited specimens, except the type of *V. zoysii* var. *frondosa* and the hybrid, morphologically fit the description and figures of *V. eximia* given by Erben (1985), who considered *V. pascua* to be a synonym of that species.

Current names: *Viola beckiana* subsp. *pascua* (W. Becker) Trinajstić (Raab-Straube & Henning 2018) or *Viola eximia* Formánek (Dimopoulos & al. 2013).

Viola zoysii var. *frondosa* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 3. 1911 ≡ *Viola frondosa* (Velen.) Velen., Reliq. Mrkvič.: 6. 1922. – Holotype: [Greece or North Macedonia], in pascuis alpinis mt. Porta pag Huma op Ghevgheli, Jun 1909, M. Dimonie 73 (PRC-Phanerogamae 455754).

In the protologue, Velenovský (1911) cited a single gathering by Dimonie deposited in PRC without giving a number. However, a set of at least three vouchers with almost identical labels (same locality and date but differing in the numbers (71, 73 and 74) can be found

in PRC. The voucher labelled no. 71 bears specimens of *Viola orphanidis* (PRC-Phanerogamae 452060). The one labelled no. 74 is the holotype of *V. pascua* (see above). The third voucher bears two labels, one with a determination as “*Viola zoysii* Wulf. var. *latisejala* Vel.”, handwritten by Dimonie and lacking a number, and one with a determination as “*Viola zoysii* Wulf. var. *frondosa* Vel.” (corrected from “var. *latisejala* Vel.”), handwritten by Velenovský and labelled with no. 73; they also slightly differ in the handwritten habitat description (“in graminosis alpinis” vs. “in pascuis alpinis”). But, because the material was kept together in one cover in PRC and was all seen by Velenovský, we can assume that it originated from the same gathering. Also, the specimens clearly fit the description and figures of *V. frondosa* given in Erben (1985). The voucher therefore qualifies as the holotype of *V. zoysii* var. *frondosa*. An additional isotype, again fitting the morphology, is deposited in WU (WU 0103969).

Current name: *Viola frondosa* (Velen.) Velen. (Dimopoulos & al. 2013). In Raab-Straube & Henning (2018) this taxon is cited as *V. frondosa* (Velen.) Hayek in Repert. Spec. Nov. Regni Veg. Beih. 30(1): 511. 1925, apparently neglecting the earlier combination of Velenovský (1922).

Appendix 2: Preliminary list of taxon names described (or partly described) from plant material collected by Mihael Dimonie

Alyssum obtusifolium var. *helioscopioides* Nyár. in Bul. Gräd. Bot. Univ. Cluj 9: 18–20. 1929.

Alyssum punctatum Nyár. in Bul. Gräd. Bot. Univ. Cluj 7: 72–73. 1928.

Anthyllis alpestris subsp. *vitellina* W. Becker in Beih. Bot. Centralbl., Abt. 2, 29: 26. 1912 ≡ *Anthyllis vulneraria* var. *vitellina* (W. Becker) Hayek in Repert. Spec. Nov. Regni Veg. Beih. 30: 890. 1926.

Anthyllis vulneraria var. *vitellina* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 4. 1911 ≡ *Anthyllis vulneraria* subsp. *vitellina* (Velen.) Kuzmanov in Taxon 22: 288. 1973.

Arabis mrkvickana Velen., Reliq. Mrkvič.: 4. 1922.

Astragalus monachorum Širj. in Repert. Spec. Nov. Regni Veg. 47: 242–243. 1939 ≡ *Astragalus thracicus* subsp. *monachorum* (Širj.) Strid, Mount. Fl. Greece 1: 467. 1986 ≡ *Astracantha thracica* subsp. *monachorum* (Širj.) Greuter in Willdenowia 15: 426. 1986.

Campanula pusilla var. *perinica* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 9. 1911.

Cerastium fontanum subsp. *balcanum* Gartner in Repert. Spec. Nov. Regni Veg. Beih. 113: 76. 1939.

Cerastium moesiacum f. *dimonieii* Borza in Bot. Közlem. 12: 57. 1913, ‘*Dimonii*’.

Hesperis verroiana F. Dvořák in Preslia 38: 59. 1966.

Hieracium dimonieii Zahn in Magyar Bot. Lapok 8: 299. 1909.

- Hieracium mrkvickanum* Velen., Reliq. Mrkvič.: 17. 1922.
- Hypericum dimonieii* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag., Math.-Naturwiss. Cl. 1910(8): 3. 1911.
- Leontopodium alpinum* var. *perinicum* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag., Math.-Naturwiss. Cl. 1910(8): 8. 1911.
- Myosotis villicaulis* Domin in Carpatia, Ser. B, 1(2): 296. 1940 [“1939”].
- Salvia officinalis* var. *thasia* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag., Math.-Naturwiss. Cl. 1910(8): 10. 1911.
- Satureja subspicata* var. *macedonica* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag., Math.-Naturwiss. Cl. 1910(8): 11. 1911.
- Saxifraga discolor* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 7. 1911 ≡ *Saxifraga adscendens* subsp. *discolor* (Velen.) Kuzmanov in Jordanov, Fl. Reipubl. Popularis Bulg. 4: 663. 1970.
- Silaus tenellus* Velen., Reliq. Mrkvič.: 14. 1922 ≡ *Silaum tenellum* (Velen.) M. Hiroe, Umbelliferae World: 773. 1979.
- Silene perinica* Hayek in Repert. Spec. Nov. Regni Veg. 19: 334. 1924.
- Soldanella dimonieii* Vierh. in Österr. Bot. Z. 59: 148. 1909 ≡ *Soldanella pindicola* var. *dimonieii* (Vierh.) Markgraf in Notizbl. Königl. Bot. Gart. Berlin 11: 221, 223. 1931.
- Thymus balcanus* var. *albiflorus* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 11. 1911.
- Thymus pulvinatus* var. *perinicus* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 11. 1911 ≡ *Thymus perinicus* (Velen.) Jalas in Ann. Bot. Fenn. 11: 262. 1974.
- Trichera hybrida* var. *pinnatifida* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 9. 1911.
- Verbascum dimonieii* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 10. 1911.
- Vicia lutea* var. *bicolor* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 5. 1911.
- Viola pascua* W. Becker in Bull. Inst. Jard. Bot. Univ. Belgrade 1: 34. 1928 ≡ *Viola beckiana* subsp. *pascua* (W. Becker) Trinajstić in Suppl. Fl. Anal. Jugosl. 3: 7. 1975.
- Viola serresiana* Erben in Bot. Chron. (Patras) 13: 51. 2000.
- Viola zoysii* var. *frondosa* Velen. in Sitzungsber. Königl. Böhm. Ges. Wiss. Prag, Math.-Naturwiss. Cl. 1910(8): 3. 1911 ≡ *Viola frondosa* (Velen.) Velen., Reliq. Mrkvič.: 6. 1922.

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