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Synopsis of Caucasian Campanulaceae

MARINE OGANESIAN

RÉSUMÉ

OGANESIAN, M. (1995). Synopsis des Campanulacées caucasiennes. *Candollea* 50: 275-308. En anglais, résumés français et anglais.

Révision de la famille des Campanulacées Juss. dans le Caucase (sur le territoire de l'ancienne U.R.S.S.). Dans cette région la famille est représentée par 79 espèces se rapportant à 6 genres, dont le plus grand, *Campanula* L., comprend 67 espèces réparties en 10 sous-genres. Le genre *Legousia* Durande est composé de 4 espèces, *Asyneuma* Griseb. & Schenk de 5 espèces, *Gadellia* Shulkina, *Michauxia* L'Hér. et *Muehlbergella* Feer chacun de 1 espèce. Pour chaque espèce sont données la synonymie, le type et la distribution. Quelques combinaisons nouvelles de taxon, à différents rangs, sont également présentées.

ABSTRACT

OGANESIAN, M. (1995). Synopsis of Caucasian Campanulaceae. *Candollea* 50: 275-308. In English, French and English abstracts.

Revision of *Campanulaceae* Juss. in the Caucasus (within the borders of the former Soviet Union). The family is represented in the region by 79 species belonging to 6 genera. The largest genus, *Campanula* L., is represented by 67 species belonging to 10 subgenera. *Legousia* Durande is represented by 4, *Asyneuma* Griseb. & Schenk by 5, *Gadellia* Shulkina by 1, *Michauxia* L'Hér. by 1, and *Muehlbergella* Feer by 1 species. For each species the main synonyms, types and distribution is given. A number of new combinations for taxa of different ranks is published.

KEY-WORDS: *CAMPANULACEAE* — Taxonomy — Caucasus — Distribution.

Introduction

This work is the result of the account of *Campanulaceae* family for the project "The Synopsis of the Caucasian Flora". The work has been conducted mainly by comparative-morphological and geographical methods on the herbaria B (partially), BAK (partially), E (partially), ERE, LE, LENUD, MW, SAV (partially), SUCH, TBI, TGM, W (partially) specimens and our own collection in Southern Transcaucasia. The photographs of the types from herbaria BM (Herb. Cliff.), FI, G and LINN have also been studied. It should be noted that the work had been fulfilled before the war in Abkhasia and the lot of herbarium SUCH at present is unknown — it might have perished just as well.

The investigation of a vast number of herbarium specimen and observations in nature allowed to reconsider the value of traditional morphological taxonomical features and to establish their great variability. For the systematics of *Campanulaceae*, for such critical groups as *Involucratae* (Fomin) Char., *Sibiricae* (Fomin) Char., *Cordifoliae* (Fomin) Char., *Symphyandriiformes* (Fomin) Char. sections, *Scapiflorae* (Boiss.) Oganessian subgenus of *Campanula* L. in particular, all the complex of features should be taken into account, including the geographical. Taking in consideration the latest investigations, features of life-form were more widely used (SHULKINA, 1974, 1975,



Map. 1. — The floristic districts of the Caucasus (MENITSKY, 1991).

- 1, WCC; 1a, Az.-Kub.; 1b, W. Stavr.**
2, ECC; 2a, E. Stavr.; 2b, Ter.-Kum.; 2c, Ter.-Sul.
3, WC; 3a, Adag.-Pshish.; 3b, Bel.-Lab.; 3c, Urup.-Teb.; 3d, U. Kub.
4, CC; 4a, U. Kum.; 4b, Malk.; 4c, U. Ter.
5, EC; 5a, Ass.-Arg.; 5b, U. Sul.; 5c, Man.-Sam.; 5d, Kubin.
6, NWTC; 6a, Anap.-Gel.; 6b, Pshad.-Dzhubg.
7, WTC; 7a, Tuap.-Adl.; 7b, Abkh.; 7c, Ing.-Rion; 7d, Rion-Kvir.; 7e, Adzh.
8, CTC; 8a, Kart.-S. Oss.; 8b, Trial.-L. Kart.; 8c, Lori.
9, ETC; 9a, Alaz.-Agrich.; 9b, Shirv.; 9c, Ior.-Shek.; 9d, Murgh.-Murovd.; 9e, L. Kur.; 9f, Karab.
10, SWTC; 10a, Meskh.; 10b, Dzhev.-U. Akhur.; 10c, Arag.
11, STC; 11a, Erev.; 11b, Sev.; 11c, Dar.; 11d, Nakh.; 11e, Zang.; 11f, Megr.-Zan.; 11g, S. Karab.
12, T.
 -|-|-|- = limits of districts.
 ————— = limits of subdivisions.

1977, 1978, 1980, 1984, 1986, 1988), features of fruit (KOLAKOVSKY, 1976, 1979a, 1979b, 1980a, 1980b, 1980c; KOLAKOVSKY & SERDJUKOVA, 1980; KOLAKOVSKY, 1981, 1982a, 1982b, 1982c; KOLAKOVSKY & SERDJUKOVA, 1983, 1984; KOLAKOVSKY, 1984a, 1984b, 1985a, 1985b, 1986a, 1986b, 1987, 1988, 1991) and features of the seeds (THULIN, 1975; GESLOT, 1980; BELYAYEV, 1984a, 1984b, 1985; OGANESIAN, 1985; SERDJUKOVA, 1985; BELYAYEV, 1986; SHETLER & MORIN, 1986). Such features as pubescence, the size and shape of the calyx appendages are of no importance due to their variety. The coalescence of the anthers into a tube, owing to the peculiarities of the development of the *Campanulaceae* flowers, easily and independently occurs in completely different groups (Symphyandriiformes section of genus *Campanula*, *Campanula odontosepala* Boiss., *Campanula lezgina* (Alexeenko) Kolak. & Serdjukova). This is the reason to why these species were included by a number of authors in genus *Symphyandra* A. DC.

The species composition of the family was newly examined from the angle of a polytypic concept of species, which makes the work considerably different from those of Caucasian authors, who, with the exception of FOMIN (1903-1907) were consistent monotypists. Owing to this approach 79 species (100 taxa) are accepted, including in a number species, described lately, instead of 120-130 species accepted before by FEDOROV (1957), CHARADZE (1976), KOLAKOVSKY (1991) in the Caucasus. The number may yet decrease, as some of the very rare species known only by one or two specimens want further study (*Campanula panjutinii* Kolak., *C. imeritina* Rupr., *C. czerepanovii* Fed., *C. jadvigae* Kolak., *C. kolakovskiyi* Char., *C. zeyensis* Amirchanov & Tavasiev, *C. kadargavanica* Amirchanov & Komzha, *C. songutica* Amirchanov). The growth of *C. lyrata* Lam. in Adsharia (DAVITADZE, 1973) was not confirmed. The specimen found by Davitadze (TBI!) was simply a specimen of *C. sibirica* L. with 5-locular ovary. Doubtful is also the occurrence in the Caucasus (Alagir) of *Legousia speculum-veneris* (L.) Chaix.

Though the main goal of this investigation has been to add more precision at the species level, some changes have been made in the system of the family as well.

The largest monographs and monographic treatments of the *Campanulaceae* family in regional "Floras" are the following: CANDOLLE (1830, 1839); BOISSIER (1875, 1888); FOMIN (1903-1907); GROSSHEIM (1949); CHARADZE (1949, 1952); FEDOROV (1957, 1961); RECHINGER & SCHIMAN-CZEIKA (1965); DAMBOLDT (1970); CHARADZE (1976); FEDOROV & KOVANDA (1976); FEDOROV (1978); DAMBOLDT (1979); GALUSHKO (1980); KOLAKOVSKY (1980d); DAVIS & al. (1988); DMITRIEVA (1990); KOLAKOVSKY (1991).

The distribution of the species in Turkey and Iran is quoted as accepted in corresponding "Floras" (DAVIS, 1965; RECHINGER & SCHIMAN-CZEIKA, 1965).

The distribution in the Caucasus (whithin the borders of the former Soviet Union) is quoted according to the floristic districts accepted for the project "The Synopsis of the Caucasian Flora" (MENITSKY, 1991; Map 1). All these regions belong to the mountain system of the Great and Minor Caucasus and only the Talysh belongs to the Elburs mountain system.

The floristic districts are as follows:

- Western Ciscaucasia (WCC). *Districts*: Azov-Kuban (Az.-Kub.), Western Stavropol (W. Stavr.).
- Eastern Ciscaucasia (ECC). *Districts*: Eastern Stavropol (E. Stavr.), Terek-Kuma (Ter.-Kum.), Terek-Sulak (Ter.-Sul.).
- Western Caucasus (WC). *Districts*: Adagum-Pshish (Adag.-Pshish), Belaja-Laba (Bel.-Lab.), Urup-Teberda (Urup-Teb.), Upper Kuban (U. Kub.).
- Central Caucasus (CC). *Districts*: Upper Kuma (U. Kum.), Malka (Malk.), Upper Terek (U. Ter.).
- Eastern Caucasus (EC). *Districts*: Assa-Argun (Ass.-Arg.), Upper Sulak (U. Sulak), Manas-Samur (Man.-Sam.), Kubin (Kubin).
- North-Western Transcaucasia (NWTC). *Districts*: Anapa-Gelendzhik (Anap.-Gel.), Pshada-Dzhubga (Pshad.-Dzhubg.).

- Western Transcaucasia (WTC). *Districts:* Tuapse-Adler (Tuap.-Adl.), Abkhasia (Abkh.), Inguri-Rion (Ing.-Rion), Rion-Kvirila (Rion-Kvir.), Adzharia (Adzh.).
- Central Transcaucasia (CTC). *Districts:* Kartalinia-Southern Ossetia (Kart.-S. Oss.), Trialetia-Lower Kartalinia (Trial.-L. Kart.), Lori (Lori).
- Eastern Transcaucasia (ETC). *Districts:* Alazan-Agrichai (Alaz.-Agrich.), Shirvan (Shirv.), Iori-Sheki (Ior.-Shek.), Murghuz-Murovdagh (Murgh.-Murovd.), Lower Kura (L. Kur.), Karabakh (Karab.).
- South-Western Transcaucasia (SWTC). *Districts:* Meskhetia (Meskh.), Dzhavakhetia-Upper Akhurian (Dzhav.-U. Akhur.), Aragats (Arag.).
- Southern Transcaucasia (STC). *Districts:* Erevan (Erev.), Sevan (Sev.), Daralegis (Dar.), Nakhitshevan (Nakh.), Zangezur (Zang.), Megri-Zangelan (Megr.-Zan.), Southern Karabakh (S. Karab.).
- Talysh (T). No subdivisions.

CAMPANULACEAE Juss.

Gen. 1. — **Campanula** L. 1753, Sp. Pl. 1: 163;
idem, 1754, Gen. Pl. ed. 5: 77.

- Subgen. 1. — **Quinqueloculares** (C. Koch) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 16, descr. emend. Char. 1976, Not. Syst. Geogr. Tphilis. 32: 46.
- Gen. *Quinquelocularia* C. Koch 1850, Linnaea 23: 630.
 - *Campanula* subsect. *Quinqueloculares* Boiss. 1875, Fl. Or. 3: 893.
 - Sect. *Quinqueloculares* (Boiss.) Phitos 1976, in Damboldt, Notes Roy. Bot. Gard. Edinb. 35: 40 [synonymy of the sections and subgenera is cited only when first applied here].

Typus: *C. crispa* Lam. 1785, Encycl. Méth. Bot. 1: 581.

1. **Campanula crispa** Lam. 1785, Encycl. Méth. Bot. 1: 581.

Described from NE. Turkey (Kars). **Typus:** “*Campanula orientalis*, foliorum crenis amplioribus et crispis, flore patulo”, Tournefort (P, Herb. Tourn. 335).

Distribution. — Caucasus [CTC: Kart.-S. Oss. (Borzhomi); CWTC: all districts; STC: Erev.], E. Anatolia, NW. Iran.

Subgen. 2. — **Campanula.**

Typus: *C. latifolia* L. 1753, Sp. Pl. 1: 165.

Sect. 1. — **Spinulosae** (Fomin) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 17.

- Ser. *Spinulosae* Fomin 1904, Fl. Cauc. Crit. 4, 6: 21.

Sectio monotypica.

2. *Campanula mirabilis* Albov 1895, Bull. Herb. Boiss. 3: 228.

Described from Abkhasia. **Lectotypus** (designated here): “Abkhasie: localité Aschempydge, 2100 mètres, roches calcaires. 2 Septembre 1894. N. Alboff” [G (N 4296/27, photo!), iso. G (N4, photo!), TGM 1677 (Alboff N 258)!, TBI (Albov N 258)!].

Distribution. — Caucasus [WTC: Abkh. (Gagra ridge and canyon of Bzyb river)]. Narrow endemic.

Sect. 2. — **Paradoxae** (Kolak.) Kolak. 1991, Kolokolchikovye Kavkaza: 63.

— Subsect. *Paradoxae* Kolak. 1976, Bull. Glavn. Bot. Sada AN SSSR, 102: 39.

Sectio monotypica.

3. *Campanula paradoxa* Kolak. 1976, Bull. Glavn. Bot. Sada AN SSSR, 102: 39.

Described from Abkhasia. **Lectotypus** (designated here): “Abkhasia, Bzyb canyon, 3-rd km of the highway to the Ritsa, in the fissures of limestone rocks, 31.V.1975, E. V. Zhirnova” (TBI!) [the labels quoted in English are Russian in the original].

Distribution. — Caucasus [WTC: Abkh.]. Known only from the locus classicus.

Note. — The holotype (SUCH) was destroyed during the fire. Isotype selected as a lectotype.

Sect. 3. — **Involucratae** (Fomin) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 30, p. max. p., excl. ser. *Macrochlamydae* Char. & Fed. ex Char. 1976, Not. Syst. Geogr. Tphilis. 32: 49.

— Ser. *Involucratae* Fomin 1906, Fl. Cauc. Crit. 4, 6: 100.

Typus: *C. glomerata* L. 1753, Sp. Pl. 1: 166.

4. *Campanula glomerata* L. 1753, Sp. Pl. 1: 166.

Distribution. — Europe (except N. and extreme S.), W. and E. Siberia, C. Asia (except S.), Caucasus, Anatolia, NW. Iran, N. America (introduced).

4a. *C. glomerata* subsp. *glomerata*

— *C. glomerata* L. var. *typica* Trautv. 1879, Acta Horti Petropol. 6, 1: 68.

— *C. glomerata* L. var. *speciosa* auct. non A. DC.: Trautv. 1879, l.c.: 69, p.p.

— *C. glomerata* L. var. *elliptica* auct. non A. DC.: Trautv. 1879, l.c.: 69.

— *C. glomerata* L. var. *typica* Fomin 1906, Fl. Cauc. Crit. 4, 6: 100, p.p.

— *C. glomerata* L. var. *symphytifolia* auct. non Albov: Fomin 1906, l.c.: 105, p.p.

— *C. glomerata* L. var. *semgensis* Gussejnov 1970, Bot. Žurn. (Leningrad) 55, 10: 1501.

Described from Europe: “In Anglia, Gallia, Suecia”. **Syntypi:** LINN 221.44 (photo!); BM, Herb. Cliff. 64, C.4 (photo!); UPS, Herb. Burser IV: 40; cited Hermann’s illustration.

Distribution. — Caucasus [WC: Bel.-Lab. (E.), Urup.-Teb. (valley of Teberda river), U. Kub. (W.); CC: Malk., U. Ter.; EC: U. Sulak, Kubin; WTC: Ing.-Rion (Racha-Lechkhumi), Rion-Kvir. (SE.), Adzh. (E.); CTC: all the districts; ETC: Alaz.-Agrich., Murgh.-Murovd., Karab.; STC: Erev.(NW.), Zang.], throughout the range of the species, except Anatolia and NW. Iran. (?)

4b. *C. glomerata* subsp. *symphytifolia* (Albov) Oganessian, **comb. & stat. nov.**

- *C. glomerata* L. var. *symphytifolia* Albov 1895, Prodr. Fl. Colch.: 161.
- *C. symphytifolia* (Albov) Kolak. 1949, Fl. Abkh. 4: 180.

Described from Abkhasia. **Typus:** "Abkhasia. Mt. Mamdzyshkha, pâturages alpins. 31 Août 1894. N. Alboff N 265" (G, photo!).

Distribution. — Caucasus [WTC: Abkh. (Gagra and Bzyb ranges)]. Narrow endemic.

4c. *C. glomerata* subsp. *maleevii* (Fed.) Oganessian, **comb. & stat. nov.**

- *C. maleevii* Fed. 1957, Fl. URSS 24: 462.
- *C. glomerata* L. var. *hispida* Fomin 1906, Fl. Cauc. Crit. 4, 6: 104, non *C. glomerata* L. f. *hispida* Witasek ex Zederbauer 1905, Ann. Naturh. Mus. Wien 20: 419, nec *C. glomerata* L. subsp. *hispida* (Witasek ex Zederbauer) Hayek 1930, Feddes Repert., (Beih.) 20: 532.

Described from NW. Transcaucasia. **Typus:** "Ad viam inter Tuapse et Dzhubga in prate occidentale Caucasi Magni. In pratulis inter silvas frondoses ad pedem montium. 3.VII.1952. Al. Theodorov, An. Fedorov, M. Kirpicznikov" (LE!, iso. LE!).

Distribution. — Caucasus [WCC: Az.-Kub. (Armavir), W. Stav. (Stavropol); ECC: E. Stav. (Burlatskoje, Edessia), Ter.-Kum. (Shelkozavodskoje); WC: Adag.-Pshish., Bel.-Lab. (N.), Urup-Teb. (N.); CC: all the districts (N.); EC: U. Sulak (Burtunaj); NWTC: all the districts; WTC: Tuap.-Adl. (Tuapse)]. Endemic.

4d. *C. glomerata* subsp. *oblongifolioides* (Galushko) Oganessian, **comb. & stat. nov.**

- *C. oblongifolioides* Galushko 1971, Novit. Syst. Pl. Vasc.: 267.
- *C. glomerata* L. var. *coriacea* Fomin 1906, Fl. Cauc. Crit. 4, 6: 104, p.p., quoad pl. cauc., non sibiricae.

Described from Central Caucasus. **Typus:** "Northern Caucasus, valley of Podkumok river, 45 km above Kislovodsk, 1500 m, 12.VIII.1964. A. Galushko" (LE!, iso. LE!).

Distribution. — Caucasus [WC: Urup-Teb. (NE.), U. Kub. (NE.); CC: U. Kum., Malk. (Nalchik)]. Endemic.

4e. *C. glomerata* subsp. *caucasica* (Trautv.) Oganessian, **comb. & stat. nov.**

- *C. glomerata* L. var. *caucasica* Trautv. 1873, Acta Horti Petropol. 2,2: 564.
- *C. trautvetteri* Grossh. 1949, Opredelitel' rast. Kavk.: 422.
- *C. glomerata* L. var. *speciosa* auct. non A. DC.: Trautv. 1879, Acta Horti Petropol. 6, 1: 69, p.p.
- *C. glomerata* L. var. *typica* Fomin 1906, Fl. Cauc. Crit. 4, 6: 100, p.p.

Described from Armenia (Vardenis range). **Lectotypus** (Fedorov, 1953, in litt.): "Gösaldara. Armenia. 2.VII.1871. G. Radde N 319" (LE!, iso. LE!, para. LE!, TGM 1649!).

Distribution. — Caucasus [WC: Bel.-Lab. (S.), Urup-Teb.; CC: Malk., U. Ter.; EC: all the districts; WTC: Ing.-Rion (Racha-Lechkhumi, Svaneti), Rion-Kvir. (SE.); CTC: all the districts; ETC: Alaz.-Agrich., Shirv. (NW.), Murgh.-Murovd., Karab.; SWTC: all the districts; STC: Erev. (NW. and E.), Sev., Dar. (rare), Zang.; T (Zuvand)], NE. Anatolia, NW. Iran(?).

- 4f. *C. glomerata* subsp. *oblongifolia* (C. Koch) Fed. 1972, in Takht. & Fed., Fl. Erevana: 267.
 — *C. glomerata* L. var. *oblongifolia* C. Koch 1850, Linnaea 23: 639.
 — *C. oblongifolia* (C. Koch) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 30.
 — *C. glomerata* L. var. *cervicarioides* auct.: Trautv. 1873, Acta Horti Petropol. 2, 2: 564, p.p., Fomin 1906, Fl. Cauc. Crit. 4, 6: 105, p.p., non A. DC., nec *C. cervicarioides* Roem. & Schult.

Described from E. Turkey. **Typus:** "Campanula armena, sphaerocephalos, angustiore folio, flore coeruleo" (B, Herb. Gundelsheimer).

Distribution. — Caucasus [CTC: Kart.-S. Oss. (Tbilissi), Lori; ETC: Murgh.-Murovd., Karab.; SWTC: all the districts; STC: all the districts; T (Zuvand)], E. Anatolia, NW. Iran.

5. *Campanula panjutinii* Kolak. 1947, Proc. Acad. Sci. Armenian SSR 7, 5: 223.

Described from Abkhasia. **Typus:** "Western Transcaucasia, Abkhasia, Bzyb ridge, Kopshikho pasture, 27.VII. 1936, P. Panjutin" (SUCH, destroyed).

Distribution. — Caucasus [WTC: Abkh.]. Known only from the locus classicus.

Note. — Dubious species, close to *C. glomerata* subsp. *caucasica*. The type is destroyed by the fire. Neither the topotype (LE!), nor the drawing (Kolak., l.c.: 224!) fits the description and can be chosen the lectotype. Needs further investigation in the nature.

Sect. 4. — **Campanula.**

Typus: *C. latifolia* L. 1753, Sp. Pl. 1: 165.

6. *Campanula latifolia* L. 1753, Sp. Pl. 1: 165.

Distribution. — Europe (except the extreme N.), W. Siberia, C. Asia, Caucasus, N. Anatolia, N. and C. Iran.

6a. *C. latifolia* subsp. *latifolia*

— *C. eriocarpa* Bieb. 1808, Fl. Taur.-Cauc. 1: 149.

Described from Europe: "In Anglia, Suecia". **Syntypi:** LINN 221.29 (photo!); BM, Herb. Cliff. 64, C.5 (2 sheets, photo!); UPS, Herb. Burser IV: 29.

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: all the districts; EC: all the districts; WTC: all the districts; CTC: all the districts; ETC: Alaz.-Agrich., Murgh.-Murovd., Karab.; SWTC: Meskh., Arag. (E.); STC: Erev. (NW.), Sev., Dar., Nakh. (E.), Zang., Megr.-Zan.; T], Europe (except the extreme N.), W. Siberia, C. Asia, N. Anatolia, N. and C. Iran.

6b. *C. latifolia* subsp. *megrelica* (Manden. & Kuthath.) Oganessian, **comb. & stat. nov.**

— *C. megrelica* Manden. & Kuthath. 1955, Not. Syst. Geogr. Tphilis. 18: 62.

Described from W. Georgia. **Lectotypus** (Mandenova, 1970, in litt.): "Georgia. Megrelia, Gegechkori reg., mount. Migaria. Subalpine meadow. 22.VIII.1952. I. Mandenova, Sch. Kuthatheladze" (TBI!, iso. TBI!, LE!).

Distribution. — Caucasus [WTC: Tuap.-Adl. (mount. Dva Brata), Abkh., Ing.-Rion (Megrelia)]. Endemic.

7. *Campanula odontosepala* Boiss. 1849, Diagn. Pl. Or. ser. 1, 11: 66.

- *Symphandra odontosepala* (Boiss.) Esfandiari 1980, Notes Roy. Bot. Gard. Edinb. 38(3): 447.
- *S. repens* Karpissonova 1979, Bull. Mosk. o-va isp. prir. otd. biol. 84, 6: 123.
- *Campanula faucium* Ponert 1972, Preslia 44, 1: 50.

Described from N. Iran. **Typus:** "In sylvis excelsioribus Ghilani, Aucher N. 4907" (G, photo!, iso. W).

Distribution. — Caucasus [T], N. and NW. Iran.

8. *Campanula rapunculoides* L. 1753, Sp. Pl. 1: 165.

- *C. cordifolia* C. Koch 1847, Linnaea 19: 22.
- *C. grossheimii* Char. 1949, Not. Syst. Geogr. Tphilis. 15: 29.
- *C. foliosa* Galushko 1970, Novit. Syst. Pl. Vasc. 8: 268, non *C. foliosa* Ten. 1811-1815.

Described from Europe: "In Helvetia, Gallia". **Syntypi:** LINN 221.30 (photo!), ?LINN 221.31 (photo!), Morrison's cited illustration.

Distribution. — Caucasus [WCC: W. Stavr.; WC: all the districts; CC: all the districts; EC: all the districts; NWTC: all the districts; WTC: all the districts; CTC: all the districts; ETC: Alaz.-Agrich., Shirv., Murgh.-Murovd., Karab.; SWTC: all the districts; STC: all the districts; T], Europe (except N.), W. Siberia, C. Asia (N.), N. Anatolia, NW. and N. Iran, N. America (introduced).

9. *Campanula bononiensis* L. (1753), Sp. Pl. 1: 165.

- *C. ruthenica* Bieb. 1808, Fl. Taur.-Cauc. 1: 151.

Described from Italy: "In Baldi Lessinensium jugis, Bononiae".

Distribution. — Caucasus [WCC: W. Stavr.; ECC: E. Stavr.; WC: all the districts; CC: all the districts; EC: Ass.-Arg., Man.-Samur (N.), Kubin; NWTC: all the districts; WTC: Tuap.- Adl.; CC: all the districts; ETC: Alaz.-Agrich., Shirv. (NW.), Ior.-Shek. (Shiraki), Murgh.-Murovd., Karab.; SWTC: all the districts; STC: all the districts except S. Karab.; T], C., S. and E. Europe, W. Siberia, C. Asia (W.), NE. Anatolia, NW. and N. Iran.

Sect. 5. — **Sibiricae** (Fomin) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 24.

- Ser. *Sibiricae* Fomin 1904, Fl. Cauc. Crit. 4, 6: 22.

Typus: *C. sibirica* L. 1753, Sp. Pl. 1: 167.

10. *Campanula komarovii* Maleev 1930, Bull. Jard. Bot. Princip. URSS 29, 3-4: 424.

Described from NW. Transcaucasia. **Typus:** "Western slopes of the mountain ridge near Gelendzhik. 20.V.1909. L. M. Reinke" (holo. YALT? iso TGM 1650!).

Distribution. — Caucasus [NWTC: Anap.-Gel., Pshad.-Dzhubg.]. Endemic.

11. *Campanula longistyla* Fomin 1904, Trav. Inst. Bot. Tiflis 6, 3: 37.

- *C. sibirica* var. *major* auct. non Boiss.: Albov 1895, Prodr. Fl. Colch.: 154, p.p.
- *C. schischkinii* Kolak. & Sachok. 1953, Shed. Herb. Fl. URSS 12: 133.
- *C. bzybica* Jabr.-Kolak. 1958, Trudy Sukhumsk. bot. sada 11: 457.

Described from NW. or W. Transcaucasia without pointing to any specimens. **Neotypus** (Fedorov, 1952, in litt.): "Pass von. Novo-Michailovski aug chan Tu Ipola Woy... Olginsky, Bayern (LE!, iso. LE!).

Distribution. — Caucasus [NWTC: Pshad.-Dzhubg.; WTC: Tuap.-Adl., Abkh.]. Endemic.

12. *Campanula sibirica* L. 1753, Sp. Pl. 1: 167.

Described from Siberia and Italy: "In Sibiria et Messanae".

Distribution. — C., E. (except N.) and S. Europe, Crimea, W. Siberia, C. Asia (N.), Caucasus, NE. and E. Anatolia, NW. Iran.

12a. *C. sibirica* subsp. **elatiior** (Fomin) Fed. 1973, Bot. Journ. Linn. Soc. (London) 67, 3: 281.

- *C. sibirica* L. f. *elatiior* Fomin 1904, Fl. Cauc. Crit. 4, 6: 23.
- *C. elatiior* (Fomin) Grossh. 1949, Opredeletel' rast. Kavk.: 418, non *C. elatiior* Hoffmg. & Link 1840.
- *C. praealta* Galushko 1980, Fl. Severn. Kavk. 3: 147, nom nov.
- *C. sibirica* L. var. *divergens* Trautv. 1874, Acta Horti Petropol. 4,1: 164, p.p.; Fomin 1904, Fl. Cauc. Crit. 4, 6: 24, p.p.
- *C. divergens* auct. non Willd.: Grossh. 1949, Opredeletel' rast. Kavk.: 418, p.p.
- *C. taurica* auct. non Juz.: Fed. 1957, Fl. URSS 24: 178, p.p.
- *C. sibirica* L. subsp. *taurica* (Juz.) Fed. 1973, Bot. Journ. Linn. Soc. (London) 67,3: 281, p.p. excl. typ.
- *C. sibirica* L. var. *typica* Fomin 1904, Fl. Cauc. Crit. 4, 6: 22.

Described from W. Caucasus. **Lectotypus** (Fedorov, 1953, in litt.): "Kuban reg. Kavkazskaja. 22.V.1892. V. Lipsky" (LE!).

Distribution. — Caucasus [WCC: Az.-Kub. (S.), W. Stavr. (S.); ECC: E. Stavr. (W.); WC: Adag.-Pshish., Bel.-Lab., Urup-Teb.; CC: all the districts; EC: Ass.-Arg. (N.) NWTC: Anap.-Gel.], E. Europe (S.)

12b. *C. sibirica* subsp. **ciscaucasica** (Char.) Oganessian, **comb. & stat. nov.**

- *C. ciscaucasica* Char. 1953, Not. Syst. Geogr. Tphilis. 17: 100.
- *C. sibirica* L. var. *divergens* Fomin 1904, Fl. Cauc. Crit. 4,6: 24, p.p.
- *C. divergens* auct. non Willd.: Grossh. 1949, Opredeletel' rast. Kavk.: 418, p.p.
- *C. taurica* auct. non Juz.: Fed. 1957, Fl. URSS 24: 178, p.p.; Galushko 1980, Fl. Severn. Kavk. 3: 178, p.p.

Described from W. Caucasus (environs of Cherkessk). **Typus**: "Environs of Klukhori. Right bank of Kuban river. NW. slope, behind the suspensions bridge. 1.VIII. 1946. L. Kemularia-Nathadze, Sch. Kuthatheladze, L. Chintibidze" (TBI!, iso. TBI!).

Distribution. — Caucasus [WC: Urup-Teb. (SW.), U. Kub.; CC: U. Kum. (S.), Malk. (S.)]. Endemic.

12c. *C. sibirica* subsp. **hohenackeri** (Fisch. & C. A. Mey.) Damboldt 1976, Notes Roy. Bot. Gard. Edinb. 35: 45.

- *C. hohenackeri* Fisch. & C. A. Mey. 1844, Suppl. Index Sem. Hort. Bot. Petropol. 9: 9.
- *C. schelkownikowii* Grossh. 1947, Proc. Acad. Sci. Armenian SSR 7: 120.
- *C. darjalica* Char. 1953, Not. Syst. Geogr. Tphilis. 17: 104.

- *C. hohenackeri* Fisch. & C. A. Mey. var. *darjalica* (Char.) Serdjukova 1982, Not. Syst. Geogr. Tphilis. 38: 20.
- *C. fedorovii* Char. 1956, Not. Syst. Geogr. Tphilis. 19: 36.

Described from Georgia. **Typus:** "Prope Kobi legit Hohenacker" (LE!, iso. TGM 44682!).

Distribution. — Caucasus [CC: Malk., U. Ter.; EC: all the districts; CTC: all the districts; ETC: Alaz.-Agrich., Shirv. (NW.), Ior.-Shek. (NW.), Murgh.-Murovd., Karab.; SWTC: all the districts; STC: Erev. (N.), Sev., Dar., Zang., Megr.-Zan., S. Karab.], NE. and E. Anatolia, NW. Iran (Karadagh ridge).

12d. *C. sibirica* subsp. *charadzae* (Grossh.) Oganessian, **comb. & stat. nov.**

- *C. charadzae* Grossh. 1947, Proc. Acad. Sci. Armenian SSR 7: 168.
- *C. longistyla* Fomin 1904, Fl. Cauc. Crit. 4,6: 21, p. min. p.
- *C. longistyla* f. *parviflora* Fomin 1904, l.c.: 21.

Described from Georgia (Tusheti). **Typus:** "Dzhwari-Woseli, 13.VII.1875, G. Radde N 316" (LE!, iso. LE!, TGM 1673!).

Distribution. — Caucasus [EC: Ass.-Arg. (S.), U. Sulak (SW.); CTC: Kart.-S. Oss. (NE.); ETC: Alaz.-Agrich. (NW.)]. Endemic.

12e. *C. sibirica* subsp. *brassicifolia* (Somm. & Levier) Oganessian, **comb. & stat. nov.**

- *C. brassicifolia* Somm. & Levier 1895, Nuov. Giorn. Bot. Ital.: 94.
- *C. imeretina* auct. non Rupr.: Fomin 1904, Fl. Cauc. Crit. 4,6: 29, p.p.; Char. 1952, Fl. Georg. 8: 162, p.p.
- *C. sibirica* L. var. *imeretina* Trautv. 1876, Acta Horti Petropol. 4,2: 388, et 1879, Acta Horti Petropol. 6, 1: 62, non *G. imeretina* Rupr.

Described from W. Georgia. **Typus:** "Colchis — ad flumen Phasim (Rion). Kutais. In rupestribus siccis prope Urbem. 2 Julii 1890. S. Sommier & E. Levier. Iter Caucasicum (Asia) N 878" (FI, photo!, iso. FI, photo!, TGM 1640!).

Distribution. — Caucasus [WTC: Ing.-Rion, Rion-Kvir.]. Endemic.

13. *Campanula imeretina* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 193.

Described from W. Georgia. **Typus:** "Colchis. Imeretia. Pr. Kutais, in sylvaticus rupes, ad rivul. Rubrum (fl. Ziteli). 15 Nov. 1861. Ruprecht" (LE!).

Distribution. — Caucasus [WTC: Ing.-Rion (Kutaissi)]. Narrow endemic.

Note. — Besides the type, known only by three specimens (LE!, TBI!) from the locus classicus. Needs further investigations in the nature.

14. *Campanula daghestanica* Fomin 1904, Fl. Cauc. Crit. 4,6: 29.

Described from Daghestan. **Lectotypus** (Fedorov, 1950, in litt.): "Chechnja, Chirkey aul, on the rocks, 17.V.1889, Kuznetsov" (LE!).

Distribution. — Caucasus [EC: U. Sulak, Man.-Samur]. Endemic.

15. *Campanula caucasica* Bieb. 1798, Tabl. Prov. Casp.: 112.

— *C. sibirica* var. *caucasica* Trautv. 1879, Acta Horti Petropol. 6,1: 61.

Described from Azerbaijan: "In obruptis sterilissimis lapidosis circa Kurt-Bulak". **Typus:** "Ex Caucaso" (LE!).

Distribution. — Caucasus [EC: Man.-Samur (S.), Kubin (S.); ETC: Alaz.-Agrich. (NE.) Shirv. (NW.)]. Endemic.

16. *Campanula czerepanovii* Fed. 1965, Novit. Syst. Pl. Vasc. 2: 237.

Described from Daghestan. **Typus:** "Daghestania, in districtu Akuscha, inter pagos Akuscha et Ameterkmacha, ad viam versus Gergobel, in fissuris rupium, 10.VII.1961, S. Czerepanov N 3138" (LE!).

Distribution. — Caucasus [EC: U. Sulak (Akuscha), Man.-Samur (Madzhalis)]. Narrow endemic.

Note. — Known only from two localities. Closely related to *C. daghestanica* and *C. caucasica*. Needs investigations in the nature.

Sect. 6. — **Cordifoliae** (Fomin) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 21.

— Ser. *Cordifoliae* Fomin 1904, Fl. Cauc. Crit. 4,6: 32.

— Subsect. *Cordifoliae* (Fomin) Fed. 1957, Fl. URSS 24: 213.

— Subsect. *Latilimbus* Fed. 1957, l.c.: 464.

— Sect. *Latilimbus* (Fed.) Char. subsect. *Latilimbus* Char. 1976, Not. Syst. Geogr. Tphilis. 32: 42.

— Sect. *Latilimbus* (Fed.) Damboldt 1976, Notes Roy. Bot. Gard. Edinb. 35, 1: 41, comb. superfl.

— Subsect. *Trigonophyllon* (Fed.) Char. ser. *Dzyschricae* Fed. ex Char. 1976, l.c.: 50.

— Subsect. *Elatae* (Boiss.) Rech. fil. & Schimann-Czeika 1965, Fl. Iran. 13: 33.

— Sect. *Elatae* (Boiss.) Damboldt 1976, l.c.: 41.

— Gen. *Mzymtella* Kolak. 1981, Bull. Acad. Sci. Georg. 103, 1: 150.

Typus: *C. alliariifolia* Willd. 1797, Sp. Pl. 1: 910.

17. *Campanula alliariifolia* Willd. 1797, Sp. Pl. 1: 910.

Distribution. — Caucasus, N. Anatolia.

17a. *C. alliariifolia* subsp. *alliariifolia*.

— *C. lamiifolia* Adam 1805, in Weber fil. & Mohr, Beitr. Naturk. 1: 48.

— *C. macrophylla* Sims 1806, Bot. Mag.: tab. 912.

— *C. alliariifolia* Willd. subsp. *ochroleuca* Kem.-Nath. 1938, Trav. Inst. Bot. Tiflis 2: 136.

— *C. ochroleuca* (Kem.-Nath.) Kem.-Nath. 1949, Not. Syst. Geogr. Tphilis. 15: 10.

— *C. makaschvilii* E. Busch 1938, Not. Syst. (Leningrad) 7, 6: 128.

— *C. leskovii* Fed. 1953, Not. Syst. (Leningrad) 15: 378.

— *C. kirpicznikovii* Fed. 1953, l.c.: 379.

Described from N. Anatolia. **Typus:** "Campanula alliariae folio, flore oblongo purpurecente", Gundelsheimer (B, Herb. Willd. 3843).

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: all the districts; EC: Ass.-Arg., U. Sulak, Man.-Samur (NW.); NWTC: Anap.-Gel.; WTC: all the districts; CTC: all the districts; ETC: Alaz.-Agrich. (W.), Murgh.-Murovd.; SWTC: Meskh., Dzhav.-U. Akhur. (N.)], N. Anatolia E. of 36°E.

17b. *C. alliariifolia* subsp. *letschchumensis* (Kem.-Nath.) Oganessian, **comb. & stat. nov.**

— *C. letschchumensis* Kem.-Nath. 1949, Not. Syst. Geogr. Tphilis. 15: 11.

Described from W. Georgia. **Lectotypus** (designated here): "Georgia. Prov. Kutais. Distr. Letschumi. Fauces fl. Ladzhanura, loc. Orpili, ad rup. calcar., 10.VII.1929, L. Kemularia-Nathadze" (TBI!).

Distribution. — Caucasus [WTC: Ing.-Rion (Racha-Lechkhumi)]. Endemic.

18. *Campanula dolomitica* E. Busch 1930, Trav. Mus. Bot. Acad. Sci. URSS 22: 215.

Described from C. Caucasus. **Lectotypus** (Fedorov, 1953, in litt.): "Digoria, Tators (Digor-Tors), subapine meadow, 2600 m, 12.VIII.1927, E. and N. Busch" (LE!, iso. LE!, TBI!).

Distribution. — Caucasus [CC: Malk. (Balkaria), U. Ter. (Digoria)]. Narrow endemic.

Note. — Closely related to *C. alliariifolia*.

19. *Campanula sclerotricha* Boiss. 1849, Diagn. Pl. Or. ser. 1, 2: 66.

Described from N. Iran. **Typus:** "In hortis umbrosis Persiae borealis prope Derbend jugi Elbur-sensis, 12.VII.1843, Kotschy 502" (G, iso. K, LE!).

Distribution. — Caucasus [STC: Nakh. (environs of Ordubad)], E. Anatolia, N., NW. and C. Iran, NW. and E. Afghanistan.

20. *Campanula sarmatica* Ker-Gawl. 1817, Bot. Reg.: tab. 237.

— *C. betonicaefolia* Biehler 1807, Pl. nov. herb. Spreng.: 14; Bieb. 1808, Fl. Taur.-Cauc. 1: 153, non Sibth. & Smith 1806.

Distribution. — Caucasus. Endemic.

20a. *C. sarmatica* subsp. *sarmatica*

— *C. sarmatica* Ker-Gawl. var. *subtomentosa* Trautv. 1879, Acta Horti Petropol. 6: 67.

— *C. sarmatica* Ker-Gawl. var. *glabra* A. DC. 1830, Monogr. Camp.: 240.

— *C. sarmatica* Ker-Gawl. var. *gracilis* Fomin 1904, Fl. Cauc. Crit. 4, 6: 37, p.p.

— *C. siegismundii* Fed. 1957, Fl. URSS 24: 464.

Described from cultivated material without indication of the origin of seeds (probably, C. Caucasus). **Typus:** Ker-Gawl. 1817, Bot. Reg.: tab. 237!

Distribution. — Caucasus [WC: Bel.-Lab. (NE.), Urup-Teb.; CC: all the districts; EC: all the districts; CTC: Kart.-S. Oss. (N.); ETC: Alaz.-Agrich. (extreme NW. and E.)]. Endemic.

20b. *C. sarmatica* subsp. *woronowii* (Char.) Oganessian, **comb. & stat. nov.**

- *C. woronowii* Char. 1949, Not. Syst. Geogr. Tphilis. 15: 22.

Described from W. Caucasus. **Typus**: “Plants of Circassia. NE. slopes of the Fischt mountain, rocks, 5.IX.1927, G. Woronow, W. Steup” (LE!, iso. LE!).

Distribution. — Caucasus [WC: Bel.-Lab. (S.), Urup-Teb. (SW.); WTC: Tuap.-Adl. (mount. Dva Brata)]. Endemic.

20c. *C. sarmatica* subsp. *ramosissima* (Somm. & Levier) Oganessian, **comb. & stat. nov.**

- *C. sarmatica* Ker-Gawl. var. *ramosissima* Somm. & Levier 1900, Acta Horti Petropol. 16: 316.
 — *C. sarmatica* Ker-Gawl. f. *tenuicaulis* Somm. & Levier 1900, l.c.: 317.
 — *C. sarmatica* Ker-Gawl. var. *gracilis* Fomin 1904, Fl. Cauc. Crit. 4, 6: 37, p.p.
 — *C. sarmatica* Ker-Gawl. var. *gracilis* Fomin f. *ramosissima* (Somm. & Levier) Fomin 1904, l.c.: 37.
 — *C. sommieri* Char. 1947, Not. Syst. Geogr. Tphilis. 13: 46.

Described from W. Caucasus. **Lectotypus** (designated here): “In ditione Kuban, ad flumen Kuban, in rupibus inter Indisch et Chumara-Kriepost, 14 Sept. 1890, S. Sommier & E. Levier. D. Sommier Juglio 1902” [FI, photo (phototeca 656/B)!, iso. FI, photo (phototeca 656/A)!, LE!, TGM 1725!].

Distribution. — Caucasus [WC: Urup-Teb. (basin of Teberda river), U. Kub.]. Endemic.

20d. *C. sarmatica* subsp. *calcareea* (Albov) Oganessian, **comb. & stat. nov.**

- *C. sarmatica* Ker-Gawl. var. *calcareea* Albov 1895, Prodr. Fl. Colch.: 155.
 — *C. calcareea* (Albov) Char. 1947, Not. Syst. Geogr. Tphilis. 13: 44.

Described from Abkhasia. **Lectotypus** (Charadze, 1947, Not. Syst. Geogr. Tphilis. 13: 45): “Abchasia, mt. Kopeimye, patur. alp. 2200 m, 2.IX.1894, Alboff N 257” [TBI (label in Russ.)!, iso. LE!, TGM 1641!].

Distribution. — Caucasus [WTC: Abkh. (Gagra and W. part of Bzyb ridges)]. Endemic.

Note. — Though CHARADZE (1947, l.c.) does not cite the type for *C. calcareea* (Albov) Char., she undoubtedly has in mind the specimen from TBI herbarium, which should be considered the lectotype.

21. *Campanula sclerophylla* (Kolak.) Oganessian, **comb. nov.**

- *Mzymtella sclerophylla* Kolak. 1981, Bull. Acad. Sci. Georg. 103, 1: 151.

Described from W. Transcaucasia. **Lectotypus** (designated here): “Adler reg., canyon of Mzymta, fissures of limestone rocks, 7.VIII.1979, Z. I. Adzinba” (TBI!, iso. SUCH!). The holotype (SUCH) was destroyed during the fire.

Distribution. — Caucasus [WTC: Tuap.-Adl. (Mzymta canyon)]. Known only from the locus classicus.

Note. — Closely related to *C. sarmatica* subsp. *woronowii* and *C. dzyschrica*. Needs further investigations.

22. *Campanula dzyschrica* Kolak. 1951, Not. Syst. Geogr. Tphilis. 16: 57.

Described from Abkhasia. **Typus:** "Abkhasia, Bzyb ridge, mount. U. Dzyschra, fissures of limestone rocks, 2400 m, 27.VIII.1948, A. Kolakovskiy, V. Jabrova" (LE!, iso. LE!, SUCH!, TBI!).

Distribution. — Caucasus [WTC: Abkh. (Bzyb ridge)]. Narrow endemic.

23. *Campanula jadvigae* Kolak. 1953, Not. Syst. (Leningrad) 15: 22.

Described from Abkhasia. **Typus:** "Gagra ridge, mount. M. Arabik, fissures of limestone rocks, 2300 m, 31.VIII.1947, A. Kolakovskiy, V. Jabrova" (LE!).

Distribution. — Caucasus [WTC: Abkh. (mount. M. Arabik)]. Known only by the type.

Note. — Dubious species, very closely related to *C. dzyschrica*. Needs further investigations in the nature.

24. *Campanula kolakovskiyi* Char. 1947, Not. Syst. Geogr. Tphilis. 13: 108.

Described from Abkhasia. **Typus:** "Abkhasia, canyons of Gega river, rocks in the lower forest belt, 18.VI.1946, A. Kolakovskiy" (TBI!, iso. TBI!).

Distribution. — Caucasus [WTC: Abkh. (canyons of Gega and Jupshara rivers on the Bzyb ridge)]. Very rare and narrow endemic.

Note. — Closely related to *C. dzyschrica*. Needs further investigations in the nature.

25. *Campanula collina* Sims 1806, Curtis's Bot. Mag. 24: tab. 927.

— *C. collina* Bieb. 1808, Fl. Taur.-Cauc. 1: 152.

Distribution. — Caucasus, NE. Anatolia.

25a. *C. collina* subsp. *collina*

— *C. annae* Kolak. 1951, Not. Syst. Geogr. Tphilis. 16: 55.

— *C. collina* Bieb. subsp. *gapschimensis* Gussejnov 1970, Bot. Žurn. (Leningrad) 55, 10: 1500.

— *C. nefedovii* Galushko 1971, Novit. Syst. Pl. Vasc.: 268.

— *C. galushkoi* Prima 1974, Bot. Žurn. (Leningrad) 59, 3: 369.

Described from cultivated material grown from the seeds collected in the Caucasus. **Typus:** Sims 1806, Curtis's Bot. Mag. 24: tab. 927!.

Distribution. — Caucasus [WC: Bel.-Lab., Urup.-Teb., U. Kub. (rare, on the boundaries of the reg.); CC: all the districts; EC: all the districts; WTC: Ing.-Rion (Svanetia), Rion-Kvir., Adzh.; CTC: all the districts; ETC: Alaz.-Agrich., Shirv. (NW.), Murgh.-Murovd. (rare); SWTC: Meskh., Dzhav.-U. Akhur., Arag. (on the boundaries with Dzhav.-U. Akhur. and Lori); CTC: Erev. (NW.) Sev. (NW., rare)], NE. Anatolia.

25b. *C. collina* subsp. *sphaerocarpa* (Kolak.) Oganessian, **comb. & stat nov.**

— *C. sphaerocarpa* Kolak. 1947, Bull. Acad. Sci. Georg. 8, 4: 238.

— *C. sphaerocarpa* var. *grandiflora* Kolak. 1947, l.c.: 239.

— *C. sphaerocarpa* var. *multiflora* Kolak. 1949, Fl. Abkh. 4: 171.

- *C. collina* Bieb. var. *abchazica* auct.: Fomin 1904, Fl. Cauc. Crit. 4, 6: 44, non Albov 1894, Bull. Herb. Boiss. 2: 118.
- *C. schistosa* Kolak. 1951, Not. Syst. Geogr. Tphilis. 16: 58.
- *C. schistosa* var. *uniflora* Kolak. 1951, l.c.: 58.
- *C. kluchorica* Kolak. 1951, l.c.: 56.
- *C. albovii* Kolak. 1951, l.c.: 54.

Described from Abkhasia. **Lectotypus** (Fedorov, 1950, in litt.): “W. Transcaucasia, Abkhasia, Gagra mountain massif, limestone rocks on the mount. Arbika, 8100’; 30.VII.1905, G. Woronow N 561” (LE!, iso. TBI!).

Distribution. — Caucasus [WC: Bel.-Lab. (Fischt and Oshten massifs); WTC: Tuap.-Adl. (mount. Dva Brata, upper flow of Mzymta), Abkh., Ing.-Rion (Megrelia and Racha-Lechkhumi)]. Endemic.

Note. — The first taxon, described from the area of subsp. *sphaerocarpa*, is *C. collina* Bieb. var. *abchastica* Albov 1894, Bull. Herb. Boiss. 2: 118, but the diagnosis of Albov does not fit *C. collina* subsp. *sphaerocarpa*. The type of var. *abchastica* Albov (“In Abchasia ad rupes calcareas jugi Bzybici (in valle Hécziguara prope montem Czipshira), alt. 1900-1950 m. Flor. Sept. et Octobr. N. Alboff, 1892, 1893”) I have not seen.

25c. *C. collina* subsp. *fondervisii* (Albov) Oganessian, comb. & stat. nov.

- *C. fondervisii* Albov 1894, Bull. Herb. Boiss. 2: 117.
- *C. collina* Bieb. var. *fondervisii* (Albov) Albov 1895, Prodr. Fl. Colch.: 155.
- *C. collina* Bieb. var. *fondervisii* (Albov) Lipsky 1899, Trav. Jard. Bot. Tphilis. 4: 372, comb. superfl.
- *C. migarica* B. Schischk. 1933, Tr. Azerb. otd. Zak. fil. Akad. Nauk SSSR, sect. bot. 1: 49.
- *C. irinae* Kuthath. 1953, Not. Syst. Geogr. Tphilis. 17: 95.

Described from W. Georgia. **Typus:** “In Mingrelia ad rupes calcareas monte Dzhvari, prope pagum Kurdzu, alt. 2000 m, aug. 1893, N. Alboff” (G?).

Distribution. — Caucasus [WTC: Ing.-Rion (Megrelia and Racha-Lechkhumi)]. Endemic.

- Sect. 7. — **Symphyandriiformes** (Fomin) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 17.
- Ser. *Symphyandraeiformes* Fomin 1905, Fl. Cauc. Crit. 4, 6: 73.
 - Subsect. *Symphyandriiformes* (Fomin) Fed. 1957, Fl. URSS 24: 238.
 - Gen. *Symphyandra* A. DC. 1830, Monogr. Camp.: 365, p.p., excl. typ.
 - *Campanula* L. subsect. *Trigonophyllon* Fed. 1957, Fl. URSS 24: 465, p.p., excl. typ.
 - Sect. *Latilimbus* (Fed.) Char. subsect. *Trigonophyllon* Fed. ser. *Antiquae* Kolak. ex Char. 1976, Not. Syst. Geogr. Tphilis. 32: 50.
 - Sect. *Rupestres* (Boiss.) Char. 1949, l.c.: 24, p. min. p., excl. typ.
 - Sect. *Rupestres* (Boiss.) Char. subsect. *Rupestres* Char. 1976, l.c.: 51, p. min. p., excl. typ.

Typus: *C. kolenatiana* C. A. Mey. ex Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 216.

26. *Campanula pendula* Bieb. 1808, Fl. Taur.-Cauc. 1: 154.

- *Symphyandra pendula* (Bieb.) A. DC. 1830, Monogr. Camp.: 366.
- *S. pendula* (Bieb.) A. DC. var. *transcaucasica* Somm. & Levier 1900, Acta Horti Petropol. 16: 313.
- *S. transcaucasica* (Somm. & Levier) Grossh. 1949, Opredelitel’ rast. Kavk.: 424.

- *Campanula transcaucasica* (Somm. & Levier) Kolak. & Serdjukova 1980, Not. Syst. Geogr. Tphilis. 36: 46.
- *Symphyandra antiqua* Kolak. 1978, Trudy Sukhumsk. bot. sada 24: 99.
- *Campanula antiqua* (Kolak.) Kolak. & Serdjukova 1980, in Kolak., Fl. Abkh. 1: 130.
- *Symphyandra borissovae* Char. in litt.

Described from N. Caucasus: "In rupestribus Caucasi, circa thermae Constantinomontanas et acidulam Narzana". **Lectotypus** (designated here): "Ex Caucaso" (LE!, iso. MW: "Cauc.", Herb. Trin. N 5379!).

Distribution. — Caucasus [WC: Bel.-Lab. (SE.), Urup-Teb., U. Kub. (W.); CC: all the districts; EC: all the districts; WTC: Tuap.-Adl. (Mzymta canyon), Abkh. (canyons of Jupshara and Kodor rivers), Ing.-Rion, Rion-Kvir. (N.)]. Endemic.

Note. — The specimen "Ad thermas Constantinomontanas. Com. Zykof a. 1825" (LE!) selected by Fedorov as a lectotype (1952, in litt.) was obtained by Bieberstein, as is evident from the label, after *C. pendula* species has been published, so it cannot be a lectotype.

C. pendula is closely related to *Campanula lazica* (Boiss. & Bal.) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 18 (= *Symphyandra lazica* Boiss. & Bal. 1875, in Boiss., Fl. Or. 3: 888) from N. Anatolia.

27. *Campanula ossetica* Bieb. 1819, Fl. Taur.-Cauc. 3: 145.

- *Symphyandra ossetica* (Bieb.) A. DC. 1830, Monogr. Camp.: 368.

Described from Georgia. **Typus:** "Ex monte Kaischaur. Com. Fischer a. 1817" (LE!).

Distribution. — Caucasus [CC: U. Ter.; EC: Ass.-Arg. (W.)]. Endemic.

28. *Campanula raddeana* Trautv. 1867, Bull. Acad. Sci. Pétersb. 10: 395.

- *C. brotheri* Somm. & Levier 1897, Nuov. Giorn. Bot. Ital. 4, 2: 199.
- *C. kemulariae* Fomin 1936, Acta Inst. Bot. Acad. Sci. URSS, ser. 1,3: 289.

Described from Georgia. **Typus:** "Caucasus. Kartalinia. Borshom. 7.VI.1865. G. Radde N 28" [LE!, iso. (G. Radde NN 14, 22) LE!].

Distribution. — Caucasus [WTC: Rion-Kvir. (Basin of Kvirila river); CTC: Kart.-S. Oss. (Borzhom); SWTC: Meskh., Dzhav.-U. Akhur. (Akhalkalak)]. Endemic?

Note. — Very probably to be found in the frontier area of Turkey.

29. *Campanula kolenatiana* C. A. Mey. ex Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 216.

- *C. achverdovii* Char. 1949, Not. Syst. Geogr. Tphilis. 15: 18.

Described from E. Caucasus. **Typus:** "Flora Caucasicca. Ssalawat. 13.VIII.1843. Dr. Kolenati N 1127" (on the same sheet cultivated plant with the label: "Semina in monte Ssalawat legit Dr. Kolenati. Cult. in h. b. Petropolitanae 1847"), LE!, iso. LE!).

Distribution. — Caucasus [WC: Bel.-Lab. (mount. Bedeno), Urup-Teb. (Chilik-skala); EC: U. Sulak, Man.-Samur; ETC: Alaz.-Agrich.]. Endemic.

30. *Campanula armena* Stev. 1812, Mém. Soc. Nat. Moscou 3: 256.

- *Symphyandra armena* (Stev.) A. DC. 1830, Monogr. Camp.: 376.
- *S. armena* (Stev.) A. DC. var. *serratosepala* Fomin 1907, Fl. Cauc. Crit. 4, 6: 152.
- *S. daralaghezica* Grossh. 1933, Trudy Azerb. otd. Zak. fil. Akad. Nauk SSSR, sect. bot. 1: 56.

- *S. armena* (Stev.) A. DC. subsp. *daralaghezica* (Grossh.) Fed. 1972, in Takht. & Fed., Fl. Erevana: 267.
- *Campanula daralaghezica* (Grossh.) Kolak. & Serdjukova 1980, Not. Syst. Geogr. Tphilis. 36: 46.

Described from Azerbaijan. **Typus:** "In rupium fissuris circa Gandsham, Steven" (H?).

Distribution. — Caucasus [ETC: Murgh.-Murovd., Karab.; SWTC: Arag. (E.); STC: Erev. (N.), Sev., Dar., Nakh. (E.), Zang., Megr.-Zan., S. Karab.; T (Zuvand)], E. Anatolia (Ararat mount.), NW. (Karadagh ridge) and N. Iran.

- 31. *Campanula zangezura*** (Lipsky) Kolak. & Serdjukova 1980, Not. Syst. Geogr. Tphilis. 36: 46.
— *Symphindra zangezura* Lipsky 1894, Acta Horti Petropol. 13,2: 317.

Described from Armenia. **Typus:** "Prov. Elisabethpol, distr. Zangezur, Pirdaudan, 23.VII.1893, V. Lipsky" (LE!).

Distribution. — Caucasus [STC: Nakh. (SE.), Zang. (S.), Megr.-Zan.], NW. Iran (Karadagh ridge).

- 32. *Campanula bayerniana*** Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 188.
— *C. bayerniana* var. *andina* auct.: Trautv. 1873, Acta Horti Petropol. 2,2: 563, non *C. andina* Rupr.
— *C. bayerniana* Rupr. var. *trautvetteri* Fomin 1902, Trav. Jard. Bot. Tiflis 4,2: 7.
— *C. choziatowskyi* Fomin 1904, Trav. Jard. Bot. Tiflis 6,3: 38.
— *C. bayerniana* Rupr. subsp. *choziatowskyi* (Fomin) Oganessian 1980, Uchenye zapiski Erev. Univ. 3(145): 114.
— *C. elegantissima* Grossh. 1933, Trudy Azerb. otd. Zak. fil. Akad. Nauk SSSR, sect. bot. 1: 56.
— *C. takhtadzhianii* Fed. 1953, Not. Syst. (Leningrad) 15: 374.
— *C. savalanica* Fed. 1953, l.c.: 375.
— *C. betulifolia* auct. non C. Koch: Parsa, var. *glaberrima* Parsa 1948, Kew Bull.: 209.

Described from S. Karabakh. **Typus:** "Karabach, in alpinis ad Tuman [Tumas], prope Schachaus ex oriente ab urbe Ordubad, 1881, Bayern" (LE!).

Distribution. — Caucasus [STC: Erev. (N. and E.), Sev. (W. and S.), Dar., Nakh. (N.), Zang. (NW.), S. Karab. (Tumas)], NW. Iran (Savalan mount.).

- 33. *Campanula andina*** Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 189.
— *C. gumbetica* Boiss. 1875, Fl. Or. 3: 914.
— *C. andina* Rupr. var. *alexeenkoi* Fomin 1902, Trav. Jard. Bot. Tiflis 6,2: 5.

Described from Daghestan (Andi ridge). **Typus:** "Caucasus orientalis. Gumbet. Pr. Danuch. 891 hex. 26 Jul. 1861. Owerin" (LE!).

Distribution. — Caucasus [CC: U. Ter. (SE.); EC: Ass.-Arg., U. Sulak]. Endemic.

34. *Campanula engurensis* Char. 1938, Not. Syst. Geogr. Tphilis. 1: 7.

Described from W. Georgia. **Lectotypus** (Charadze, 1968, in litt.): “Upper Svanetia. Environs of Khaishi. Canyon of Tkheishi river, on the rocks. 23.VII.1937. L. Kemularia-Nathadze, A. Charadze” (TBI!, iso. TBI!).

Distribution. — Caucasus [Ing.-Rion (NW.)]. Narrow endemic, known only from 3 localities in Svanetia.

35. *Campanula calcarata* Somm. & Levier 1895, Nuov. Giorn. Bot. Ital.: 96.

Described from W. Caucasus. **Typus**: “In ditone Kuban inter pagum Utschkulan et Indisch, regio sylvatica, circ. 1300 m. In rupibus, 14 Sept. 1890. S. Sommier & E. Levier. Iter Caucasicum (Europa) N 880” (FI, photo!, iso. FI, photo!, LE!).

Distribution. — Caucasus [WC: U. Kub. (canyon of Kuban river)]. Narrow endemic.

36. *Campanula suanetica* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 190.

— *C. suanetica* Rupr. var. *appendiculata* Somm. & Levier 1900, Acta Horti Petropol. 16: 323.

Described from W. Georgia. **Typus**: “Suanetia ad fl. Zchenis, pr. Muri, 255 hex., 16.VI.1864, G. Radde N 207” [LE!, iso. LE (G. Radde N 288)!, TGM 44996!].

Distribution. — Caucasus [WTC: Ing.-Rion (Svaneti and Lechkhumi ridges)]. Endemic.

37. *Campanula autraniana* Albov 1894, Bull. Herb. Boiss. 2: 115.

Described from W. Caucasus. **Lectotypus** (designated here): “Transcaucasia. Plantes de district. Tschernomorsky (Province de la Mer Noire). M. Fischt, frontière de la forêt, 1800 mètres, 14 Septembre 1893, N. Alboff N 401” [G (photo)!], iso. G: “Mt. Fischt. 1893. N. Alboff N 401” (2 sheets, photo)!].

Distribution. — Caucasus [WC: Bel.-Lab. (Fischt and Oshten massifs); WTC: Tuap.-Adl. (mount. Dva Brata)]. Rare and narrow endemic.

Sect. 8. — ***Kantschaveliae*** (Fed. ex Char. & Serdjukova) Oganessian, **comb. & stat. nov.**

— Subsect. *Oreocodon* Fed. ser. *Kantschaveliae* Fed. 1957, Fl. URSS 24: 247, diagn. ross.

— Sect. *Symphyandriiformes* (Fomin) Char. subsect. *Symphyandriiformes* ser. *Kantschaveliae* (Fed. ex Char. & Serdjukova) Char. & Serdjukova 1973, Not. Syst. Geogr. Tphilis. 30: 38.

Sectio monotypica.

38. *C. kantschavelii* Zagareli 1936, Bot. Žurn. (Leningrad) 21,3: 285.

Described from E. Georgia. **Lectotypus** (Charadze, 1972, in litt.): “Department of living flora (former Department of Caucasian flora). Planted by author, by the same person collected flowering specimens. 10.VI.1934. P. Zagareli” (TBI!).

Distribution. — Caucasus [ETC: Alaz.-Agrich. (Kakheti, Gremi village)]. Known only from the locus classicus.

Sect. 9. — **Petrocodonia** (Fed.) Oganessian, **comb. nov.**

— Gen. *Symphyandra* A. DC. sect. *Petrocodonia* Fed. 1957, Fl. URSS 24: 468.

Sectio monotypica.

39. **Campanula lezgina** (Alexeenko) Kolak. & Serdjukova 1980, Not. Syst. Geogr. Tphilis. 36: 46.
— *Symphyandra lezgina* Alexeenko 1902, in Lipsky, Trav. Jard. Bot. Tiflis 6, 1: 68.

Described from Azerbaijan. **Typus:** “N. A. Busch, B. B. Markovicz, G. N. Woronow. Flora Caucasica exsiccata N 49. Prov. Baku. Distr. Schemacha. Ad parietes rupium verticalium angustiarum supra p. Mūdshi. 4100'. 30/13. VII/VIII. 1900. Th. Alexeenko” (TBI!, iso. LE!, TGM 1749!, MW).

Distribution. — Caucasus [EC: Kubin; ETC: Alaz.-Agrich. (E.), Shirv. (Babadag mount.)]. Endemic.

Sect. 10. — **Oreocodon** (Fed.) Oganessian, **comb. & stat. nov.**

— Subsect. *Oreocodon* Fed. 1957, Fl. URSS 24: 465, p. max. p.

— Sect. *Saxicolae* (Boiss.) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 20, p. max. p.

— Subsect. *Saxicolae* (Boiss.) Rech. fil. & Schiman-Czeika 1965, Fl. Iran. 13: 21.

Typus: *C. incanescens* Boiss. 1846, Diagn. Pl. Or. ser. 1, 7: 16.

40. **Campanula coriacea** P. H. Davis 1962, Notes Roy. Bot. Gard. Edinb. 24: 29.
— *C. radula* Fisch. ex Fenzl 1860, in Tchich., Asie Mineure 3,2: 29, p.p., excl. typ.
— *C. radula* var. *minor* Boiss. 1875, Fl. Or. 3: 909.
— *C. coriacea* Boiss. & Kotschy 1859, in Kotschy, Iter Cilic.-Kurd. N 472, nom. nud.

Described from Turkey. **Typus:** “Prov. Bitlis: Adilcevas, 1900 m, limestone crevices, 25.VIII.1954, Davis & Polunin, D 24608” (E!, iso. ERE 28574!).

Distribution. — Caucasus [STC: Erev. (Urts ridge), Dar., Zang. (NW.), Nakh. (N.)], SE. Anatolia (basin of Van lake), NW. Iran (Khoy).

41. **Campanula massalskyi** Fomin 1905, Fl. Cauc. Crit. 4,6: 78.
— *C. ketzkhovellii* Sosn. ex Grossh. 1934, Fl. Cauc. 4: 69.

Described from Turkey. **Typus:** “Region Kars, district Kaghyzman, by the river Digor-chai, Besh-Kilisa, on the rocks, 7.VII.1886, V. Massalsky” (LE!, iso. LE!, TBI!).

Distribution. — Caucasus [SWTC: Arag. (Arteni mount.)], NE. Anatolia (Digor-chai, Tortum lake). Known only from three localities.

42. **Campanula kachetica** Kantsch. 1931, Monit. Jard. Bot. Tiflis, nov. ser. 5: 2.

Described from E. Georgia. **Neotypus** (designated here): “Krasnye Kolodzi. 1.VIII.1932. P. Zagareli” (TBI!).

Distribution. — Caucasus [ETC: Ior.-Shek. (Shiraki, village Ziteli-Zkharo)]. Known only from the locus classicus.

Note. — The holotype (“Prov. Tphilisi. Distr. Kachetia, loc. Shiraki (Kachetia orientalis). Pag. Tukurmisha, in fissuris rupium prope ruinas arcis Thamara. 25.VIII.1928”, Kantschaveli) has probably been lost. The neotype defined was determined by Zagareli, not by Kantschaveli.

Sect. 11. — **Hypopolion** (Fed.) Oganessian, **comb. & stat. nov.**

— Subsect. *Hypopolion* Fed. 1957, Fl. URSS 24: 467.

Sectio monotypica.

43. Campanula hypopolia Trattuv. 1876, Acta Horti Petropol. 4,2: 389.

— *Hemisphaera hypopolia* (Trautv.) Kolak. & Serdjukova 1991, in Kolak., Kolokolchikovye Kavkaza: 124.

Described from Georgia. **Typus:** “Ossetia. Gudaur. Aug. 1875. G. Radde” (LE!, iso. LE!).

Distribution. — Caucasus [CC: U. Ter. (upper flow of Ardon river); WTC: Ing.-Rion (upper flows of rivers Geske, Lukunizskali and Sukty-zun); CTC: Kart.-S. Oss. (N.)]. Endemic.

Subgen. 3. — **Scapiflorae** (Boiss.) Oganessian 1993, Bot. Žurn. (Leningrad) 78,3: 146.

— *Grex Scapiflorae* Boiss. 1875, Fl. Or. 3: 894.

— Sect. *Scapiflorae* (Boiss.) Char. 1949, Not. Syst. Geogr. Tphilis. 15: 25.

— Subsect. *Scapiflorae* (Boiss.) Fed. 1957, Fl. URSS 24: 256.

— Sect. *Rupestres* (Boiss.) Char. 1949, l.c.: 24, p.p., incl. typ.

— Subsect. *Rupestres* (Boiss.) Fed. 1957, l.c.: 465, 282, p.p., incl. typ.

— Subsect. *Dasy stigma* Fed. 1957, l.c.: 461, 186.

— Gen. *Hemisphaera* Kolak. 1984, Okhrana prirody Gruzii 12: 161.

Typus: *C. ciliata* Stev. 1812, Mém. Soc. Nat. Moscou 3: 256.

44. Campanula petrophila Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 186.

— *Hemisphaera petrophila* (Rupr.) Kolak. & Serdjukova 1991, in Kolak., Kolokolchikovye Kavkaza: 123.

Described from Daghestan. **Lectotypus** (Fedorov, 1950, in litt.): “Caucas. oriental. Tindal, montes Bogos. Pr. Zawagadar, in reg. rup. subalp. 1070-1110 hex. 12. Jul. 1861. Ruprecht” (LE!, iso. LE!).

Distribution. — Caucasus [CC: Malk. (Elbrus mount., upper flow of Bezenga river), U. Ter.; EC: all the districts; WTC: Ing.-Rion (Svanetia and Racha-Lechkhumi, rare); CTC: Kart.-S. Oss. (N.); ETC: Alaz.-Agrich., Shirv. (NW.)]. Endemic.

45. Campanula saxifraga Bieb. 1808, Fl. Taur.-Cauc. 1: 115.

— *Hemisphaera saxifraga* (Bieb.) Kolak. 1984, Okhrana prirody Gruzii 12: 167.

Distribution. — Caucasus, N. and E. Anatolia, NW. and N. (Gilan, Mazanderan), Iran.

45a. *C. saxifraga* subsp. *saxifraga*

- *C. saxifraga* Bieb. var. *leptorrhiza* Somm. & Levier 1900, Acta Horti Petropol. 16: 318.

Described from N. Caucasus. **Typus:** “Ex summo monte Beschtau” (LE!).

Distribution. — Caucasus [WC: Bel.-Lab. (SE.), Urup-Teb., U. Kub.; CC: all the districts; WTC: Ing.-Rion; CTC: Kart.-S. Oss. (N.)]. Endemic.

45b. *C. saxifraga* subsp. *argunensis* (Rupr.) Oganessian 1993, Bot. Žurn. (Leningrad) 78,3: 148.

- *C. argunensis* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 181.
 — *Hemisphaera argunensis* (Rupr.) Kolak. & Serdjukova 1984, in Kolak., Okhrana prirody Gruzii 12: 162.
 — *Campanula aucheri* auct. non A. DC.: Boiss. 1875, Fl. Or. 3: 905, p.p.
 — *C. doluchanovii* Char. 1947, Not. Syst. Geogr. Tphilis. 13: 54.
 — *Hemisphaera doluchanovii* (Char.) Kolak. 1984, l.c.: 158.

Described from E. Caucasus (Inguschetia). **Typus:** “Argun bei Jevdokimovskoje. 1860. Bayern” (LE!).

Distribution. — Caucasus [CC: U. Ter. (E. of Terek river); EC: all the districts; CTC: Kart.-S. Oss. (NE.); ETC: Alaz.-Agrich.]. Endemic.

45c. *C. saxifraga* subsp. *meyerana* (Rupr.) Oganessian 1993, Bot. Žurn. (Leningrad) 78,3: 148.

- *C. meyerana* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 178.
 — *Hemisphaera meyerana* (Rupr.) Kolak. & Serdjukova 1984, in Kolak., Okhrana prirody Gruzii 12: 166.
 — *Campanula anomala* Fomin 1905, Fl. Cauc. Crit. 4,6: 53, p. min. p., excl. typ.
 — *C. fominii* Grossh. 1933, Trudy Azerb. fil. Acad. Nauk. SSSR 1: 56.
 — *Hemisphaera fominii* (Grossh.) Kolak. & Serdjukova 1984, in Kolak., l.c.: 166.

Described from E. Caucasus. **Syntypi:** “Tufandagh, Schachdagh, d. 30 julii 1830 [C. A. Meyer] Enum. Cauc. Casp. N 701” (LE!), “In alpebus Schachdagh, Tufandagh, d. 30, 31 julii m. 1830, [C. A. Meyer] Enum. Cauc. Casp. N 701” (LE!), “[C. A. Meyer] Enum. Cauc. Casp. N 701” (LE!).

Distribution. — Caucasus [EC: Kubin (Schachdagh mount., basin of Kusarchai river)]. Narrow endemic.

45d. *C. saxifraga* subsp. *aucheri* (A. DC.) Oganessian 1993, Bot. Žurn. (Leningrad), 78,3: 149.

- *C. aucheri* A. DC. 1839, in DC., Prodr. 7,2: 460.
 — *Hemisphaera aucheri* (A. DC.) Kolak. 1984, Okhrana prirody Gruzii 12: 163.
 — *Campanula ruprechtii* Boiss. 1875, Fl. Or. 3: 905.
 — *C. gilanica* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 182, non *C. ghilanensis* Pall. ex Roem. & Schult. 1819.
 — *C. pubiflora* Rupr. 1867, l.c.: 179.
 — *C. fallax* Rupr. 1867, l.c.: 184.
 — *C. saxifraga* Bieb. var. *transcaucasica* Rupr. 1867, l.c.: 184.
 — *C. pilosa* var. *pontica* C. Koch 1850, Linnaea 23: 638.
 — *C. alpigena* C. Koch 1850, l.c.: 638.
 — *C. tridentata* var. *pubiflora* Aznav. 1819, Mag. Bot. Lapan. 17: 17.
 — *C. aucheri* A. DC. var. *compacta* Fomin 1905, Fl. Cauc. Crit. 4,6: 61.
 — *C. armazica* Char. 1947, Not. Syst. Geogr. Tphilis. 13: 15.

- *Hemisphaera armazica* (Char.) Kolak. 1984, l.c.: 163.
- *Campanula froedinii* Rech. fil. 1940, Anzeig. Acad. Wiss. (Wien) 87: 195.

Described from Turkey. **Typus**: “In montibus Armeniae, Aucher” (G, photo!).

Distribution — Caucasus [WTC: Rion-Kvir. (E.), Adzh.; CTC: Kart.-S. Oss. (S.), Trial.-L. Kart., Lori; ETC: Murgh.-Murovd., Karab.; SWTC: all the districts; STC: Erev. (NW.), Sev., Dar., Nakh. (E.), Zang., Megr.-Zan., S. Karab. (N.)], N. and E. Anatolia, NW. and N. (Gilan, Mazandaran) Iran.

- 46. *Campanula besenginica*** Fomin 1902, Trav. Jard. Bot. Tiflis 6,2: 8, descr. emend. Oganessian 1993, Bot. Žurn. (Leningrad) 78,3: 150.
- *Hemisphaera bezenginica* (Fomin) Kolak. & Serdjukova 1984, in Kolak., Okhrana prirody Gruzii 12: 163.

Described from C. Caucasus (Balkaria). **Lectotypus** (Fedorov, 1950, in litt.): “Terek region, Bezengi glacier, 6000', 25.VII.1892, V. Lipsky” (LE!, para. LE!).

Distribution. — Caucasus [WC: U. Kub. (Uchkulan); CC: U. Kum. (Bermamut mount.), Malk.]. Endemic.

- 47. *Campanula kryophila*** Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 184.
- *C. ardonensis* var. *kryophila* (Rupr.) Boiss. 1875, Fl. Or. 3: 906.
 - *Hemisphaera kryophila* (Rupr.) Kolak. 1984, Okhrana prirody Gruzii 12: 166.

Described from C. Caucasus (Ossetia). **Typus**: “Caucasus. Distr. Alagir. Ad glaciem pr. Zei, 1000-1070 hex. 5 Sept. 1861, Ruprecht” (LE!, iso. LE!).

Distribution. — Caucasus [CC: U. Ter. (upper flow of Ardon river)]. Narrow endemic.

- 48. *Campanula zeyensis*** Amirchanov & Tavasiev 1974, Bull. Mosk. obsch. ispit. prir., Otd. biol. 84, 6: 119.

Described from C. Caucasus (Ossetia). **Typus**: “North Ossetian ASSR, Alagir region, upper flow of Zeydon river, N. slope of Kalper ridge, 2000 m, mound of granite blocks, 6.VII.1977, A. M. Amirchanov” (MW!, iso. MW!).

Distribution. — Caucasus [CC: U. Ter. (Zeydon river)]. Known only from the type gatherings.

Note. — Very closely related to *C. kryophila*. Needs further investigation.

- 49. *Campanula kadargavanica*** Amirchanov & Komzha 1984, Botanicheskie issledovania v zapovednikakh RSFSR: 138.

Described from C. Caucasus (Ossetia). **Typus**: “North Ossetia, Rocky ridge, canyon of Fiagdon river (Kadargavan canyon), fissures of limestone rocks in the forest belt. E. slope, 1000 m, 24.VI.1982, A. M. Amirchanov” (MW!, iso. MW!, LE!).

Distribution. — Caucasus [CC: U. Ter. (Tbaukhokh, Karnukhokh and Khionkhokh mountain massifs)]. Narrow endemic.

Note. — Closely related to *C. kryophila*.

- 50. *Campanula ardonensis*** Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 185.
 — *C. ardonensis* Rupr. var. *latifolia* Fomin 1905, Fl. Cauc. Crit. 4,6: 67.
 — *Hemisphaera ardonensis* (Rupr.) Kolak. & Serdjukova 1984, in Kolak., Okhrna prirody Gruzii 12: 162.

Described from C. Caucasus (Ossetia). **Typus**: “Caucasus. Ossetia, districtus Alagir. Ad fl. Ardon infra Misurtzy. 520 hex. 21 Majo 1861. Ruprecht” (LE!, iso. LE!, TGM 1634!).

Distribution. — Caucasus [CC: U. Ter. (upper flow of Ardon river)]. Endemic.

- 51. *Campanula bellidifolia*** Adam 1805, in Weber fil. & Mohr, Beitr. Naturk. 1: 47.
 — *C. adami* Bieb. 1808, Fl. Taur.-Cauc. 1: 155.
 — *Hemisphaera bellidifolia* (Adam) Kolak. & Serdjukova 1984, in Kolak., Okhrana prirody Gruzii 12: 163.
 — *Campanula bellidifolia* Adam var. *londisejala* Fomin 1905, Fl. Cauc. Crit. 4,6: 65.
 — *C. sosnowskyi* Char. 1947, Not. Syst. Geogr. Tphilis. 13: 109.
 — *Hemisphaera sosnowskyi* (Char.) Kolak. 1984, l.c.: 167.

Described from C. Caucasus (Ossetia): “In Ossetia”.

Distribution. — Caucasus [CC: U. Ter. (SE.); EC: Ass.-Arg. (SW.); CTC: Kart.-S. Oss. (NE.)]. Endemic.

- 52. *Campanula circassica*** Fomin 1905, Fl. Cauc. Crit. 4,6: 52, descr. emend. Oganessian 1993, Bot. Žurn. (Leningrad) 78,3: 151.
 — *Hemisphaera circassica* (Fomin) Kolak. & Serdjukova 1984, in Kolak., Okhrana prirody Gruzii 12: 166.
 — *Campanula anomala* Fomin 1905, l.c.: 53.
 — *Hemisphaera anomala* (Fomin) Kolak. & Serdjukova 1984, in Kolak., l.c.: 162.
 — *Campanula saxifraga* var. *tridentata* auct.: Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 184, non *C. tridentata* Schreb., nec. *C. saxifraga* Bieb.
 — *C. saxifraga* auct. non Bieb.: Albov 1895, Prodr. Fl. Colch.: 157, p.p.
 — *C. aucheri* auct. non A. DC.: Albov 1895, l.c.: 157, p.p.

Described from W. Caucasus. **Typus**: “Alpine meadow on the mountain Pseashkho, 14, 27.VII.1901. Grinevetsky” (TU?, iso. TBI!).

Distribution. — Caucasus [WC: Bel.-Lab. (SE.); WTC: Tuap.-Adl. (mount. Dva Brata, Pseashkho pass), Abkh., Ing.-Rion]. Endemic.

- 53. *Campanula radchensis*** Char. 1947, Not. Syst. Geogr. Tphilis. 13: 53.
 — *Hemisphaera radchensis* (Char.) Kolak. 1984, Okhrana prirody Gruzii 12: 167.

Described from W. Georgia. **Lectotypus** (Charadze, 1968, in litt.): “Satsalike mount. Racha district. Kutaissi province. On the rocks. 2.VII.1916. I. Buachidze” (TBI!, iso. TBI!).

Distribution. — Caucasus [WTC: Ing.-Rion (Megrelia and Racha-Lechkhumi)]. Endemic.

- 54. *Campanula songutica*** Amirchanov 1984, Botanicheskie issledovania v zapovednikakh RSFSR: 136.

Described from C. Caucasus (Ossetia). **Typus:** "North Ossetia, basin of Uruk river, N. slope of Zey ridge, moraine of the glacier Minor Songuty, 3100 m, 25.VIII.1980, A. M. Amirchanov, N. D. Filonov, A. A. Scherbakov" (MW!, iso. MW!).

Distribution. — Caucasus [CC: U. Ter. (glacier Minor Songuty)]. Known only from the type gathering.

- 55. *Campanula tridentata*** Schreb. 1766, Icon. Descr. Pl. Dec. 1: 3, Tab. 2.

— *Hemisphaera tridentata* (Schreb.) Kolak. 1991, Kolokolchikovye Kavkaza: 115.

Distribution. — Caucasus, N., E. and SW. (Antalya) Anatolia.

- 55a. *C. tridentata*** subsp. ***tridentata***

— *C. tridentata* Schreb. var. *gracilis* Fomin 1904, Fl. Cauc. Crit. 4,6: 51.

— *C. bithynica* A. DC. 1839, in DC., Prodr. 7,2: 460.

Described from Turkey. **Typus:** "In Cappadocia, Tournefort".

Distribution. — Caucasus [WTC: Adzh. (mount. Arsian); CTC: Lori; ETC: Murgh.-Murovd., Karab.; SWTC: Meskh. (NE.), Dzhav.-U. Akhur., Arag.; STC: Sev., Dar., Nakh. (E.), Zang., Megr.-Zan.], N., E. and SW. (Antalya) Anatolia.

- 55b. *C. tridentata*** subsp. ***biebersteiniana*** (Roem. & Schult.) Oganessian 1981, Bot. Žurn. (Leningrad), 66,3: 403.

— *C. biebersteiniana* Roem. & Schult. 1819, Syst. Veg. 5: 147.

— *C. rupestris* Bieb. 1808, Fl. Taur.-Cauc. 1: 154, non Smith 1806.

— *C. tridens* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 175.

— *Hemisphaera tridens* (Rupr.) Kolak. 1984, Okhrana prirody Gruzii 12: 168.

— *Campanula tridentata* Schreb. f. *typica* Fomin 1905, Fl. Cauc. Crit. 4,6: 47.

— *C. tridentata* Schreb. var. *barbata* Fomin 1905, l.c.: 50.

— *C. akuschensis* Gussejnov 1970, Bot. Žurn. (Leningrad), 55, 10: 1500.

— *C. scapifolia* Khokhr. in litt.

Described from Great Caucasus: "In rupestribus alpium caucasicarum". **Lectotypus** (Fedorov, 1953, in litt.): "Ex Iberia comm. Adam" (LE!).

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: all the districts; EC: all the districts; WTC: Tuap.-Adl., Abkh., Ing.-Rion, ?Rion-Kvir.; CTC: Kart.-S. Oss., Trial.-L. Kart. (N.); ETC: Alaz.-Agrich., ?Shirv.; SWTC: Meskh. (NE.)]. Endemic.

- 56. *Campanula ciliata*** Stev. 1812, Mém. Soc. Nat. Moscou 3: 256.

— *Campanula ciliata* Stev. var. *pontica* Albov 1894, Bull. Herb. Boiss. 2: 118.

— *Hemisphaera ciliata* (Stev.) Kolak. 1984, Okhrana prirody Gruzii 12: 163.

Described from E. Caucasus (Azerbaijan). **Typus:** "In rupibus circa Chinalug, Steven" (H?, iso.: "Steven, in petros Chinalug, 1811", LE!).

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: all the districts; EC: all the districts; WTC: Abkh. (Chipshira mount., Khechiguara river), Ing.-Rion (villages Gurshevi and Glola); ETC: Alaz.-Agrich. (villages Leze and Kuzun)]. Endemic.

Subgen. 4. — **Theodorovia** (Kolak.) Oganessian, **comb. & stat. nov.**

- Gen. *Theodorovia* Kolak. 1985, Bot. Žurn. (Leningrad) 70,1: 7.
- Gen. *Fedorovia* Kolak. 1980, Bull. Acad. Sci. Georg. 97,3: 687, non Yakovl. 1971.

Subgenus monotypicus.

57. **Campanula karakuschensis** Grossh. 1939, Izv. Azerb. fil. Akad. Nauk SSSR 1-2: 118.

- *C. minsteriana* Grossh. 1936, Trudy Bot. Inst. Azerb. fil. Akad. Nauk SSSR 2: 256, nom. propter monstrositatem typi rejiciendum (proposal to reject *C. minsteriana* is sent to relevant IAPT Committee).
- *C. hakkiarica* P. H. Davis 1962, Notes Roy. Bot. Gard. Edinb. 24,1: 32.
- *Fedorovia karakuschensis* (Grossh.) Kolak. 1980, Bull. Acad. Sci. Georg. 97,3: 687, non *Fedorovia* Yakovl. 1971.
- *Theodorovia karakuschensis* (Grossh.) Kolak. 1985, Bot. Žurn. (Leningrad) 70,1: 7.

Described from Nakhichevan. **Typus:** “Transcaucasia, resubpublica Nachitschevan, prope p. Karakusch, in calcareis, 30.V.1934, L. Prilipko” (BAK!, iso. LE!, ERE 30139!, TBI!).

Distribution. — Caucasus [STC: Dar. (S.), Nakh.], SE. Anatolia (Hakkiari), NW. Iran (Maku — Bazorgan, Savalan mount.).

Subgen. 5. — **Pseudocampanula** (Kolak.) Oganessian, **comb. & stat. nov.**

- Gen. *Pseudocampanula* Kolak. 1980, Bull. Acad. Sci. Georg. 97, 2: 417.

Subgenus monotypicus.

58. **Campanula dzaaku** Albov 1894, Bull. Herb. Boiss. 2: 114.

- *Pseudocampanula dzaaku* (Albov) Kolak. 1980, Bull. Acad. Sci. Georg. 97,2: 414.

Described from W. Georgia and Abkhasia. **Lectotypus** (designated here): “N. Alboff. Transcaucasie (1893). Plantes de Mingrelie. Localité: Mt. Djvari, pâturages alpins. 25 Août” (G, sheet with printed label, photo!; iso. G, sheet with hand-written label, photo!; LE!).

Distribution. — Caucasus [WTC: Abkh. (extreme E.), Ing.-Rion (Megrelia and Racha-Lechkhmi)]. Endemic.

Subgen. 6. — **Annaea** (Kolak.) Oganessian, **comb. & stat. nov.**

- Gen. *Annaea* Kolak. 1979, Bull. Acad. Sci. Georg. 94,1: 163.

Subgenus monotypicus.

59. **Campanula hieracioides** Kolak. 1947, Bull. Acad. Sci. Georg. 8,4: 236.
 — *Annaea hieracioides* (Kolak.) Kolak. 1979, Bull. Acad. Sci. Georg. 94,1: 163.

Described from Abkhasia. **Lectotypus** (designated here): "Abkhasia, canyon of Gega river, on the limestone rocks, 18.VI.1946, A. Kolakovsky" (SUCH!).

Distribution. — Caucasus [WTC: Abkh. (canyon of Gega river)]. Known only from the locus classicus.

Note. — If the lectotype at present is destroyed, as a neotype have to be chosen the specimen: "Abkhasia, canyon of Gega, in the fissures of limestone rocks in the forest belt, 800-900 m, 7.VII.1949, A. Kolakovsky" (TBI!, iso. SUCH!).

- Subgen. 7. — **Megalocalyx** Damboldt 1976, Notes Roy. Bot. Gard. Edinb. 35: 43.
 — Gen. *Megalocalyx* (Damboldt) Kolak. 1987, Bot. Žurn. (Leningrad) 72,12: 1576, comb. invalid.

Typus: *C. strigosa* Banks & Sol. 1794, in Russell, Aleppo, ed. 2, 2: 246.

60. **Campanula propinqua** Fisch. & C. A. Mey. 1835, Index Sem. Hort. Bot. Petropol. 2: 32.
 — *Roucela propinqua* (Fisch. & C. A. Mey.) Char. 1976, Not. Syst. Geogr. Tphilis. 32: 55.
 — *Megalocalyx propinqua* (Fisch. & C. A. Mey.) Kolak. 1991, Kolokolchikovye Kavkaza: 125.

Described from NW. Iran. **Typus:** "In locis siccis aridis distr. Khoi, 11.V.1828, Szovits" (LE!, iso: LE!).

Distribution. — Caucasus (STC: Dar., Nakh., Megr.-Zan.), S. and E. Anatolia, NW. Iran, Syrian Desert.

- Subgen. 8. — **Roucela** (Dumort.) Damboldt 1976, Notes Roy. Bot. Gard. Edinb. 35: 43.
 — Gen. *Roucela* Dumort. 1822, Comm. Bot.: 14.

Lectotypus (Damboldt, 1976, Notes Roy. Bot. Gard. Edinb. 35: 43): *C. erinus* L. 1753, Sp. Pl. 1: 169.

61. **Campanula erinus** L. 1753, Sp. Pl. 1: 169.
 — *Roucela erinus* (L.) Dumort. 1822, Comm. Bot.: 14.
 — *Erinia campanulata* Noulet 1837, Fl. Pyr.: 407.

Described from Italy and France: "In Italia, Galloprovincia, Monspelii".

Distribution. — Caucasus [STC: Megr.-Zan. (Aldara, Zangelan), S. Karab. (mount. Dashkesan)], Mediterranean area, eastwards to S. and C. Iran.

- Subgen. 9. — **Brachycodonia** (Fed.) Damboldt 1976, Notes Roy. Bot. Gard. Edinb. 35: 44.
 — Gen. *Brachycodonia* Fed. 1961, Fl. Azerb. 8: 163.
 — Gen. *Brachycodon* Fed. 1957, Fl. URSS 24: 468, non Progel 1865.

Subgenus monotypicus.

62. **Campanula fastigiata** Dufour 1830, in A. DC., Monogr. Camp.: 340.
 — *Brachycodon fastigiatus* (Dufour) Fed. 1957, Fl. URSS 24: 342.
 — *Brachycodonia fastigiata* (Dufour) Fed. 1961, Fl. Azerb. 8: 163.

Described from Spain. **Typus:** "In Aragonia, Dufour" (G).

Distribution. — Caucasus [WTC: Alaz.-Agrich. (Nukha), Murgh.-Murovd. (Gandzha); STC: S. Karab. (Agalu)], Spain, N. Africa, S. Anatolia (Anti-Taurus), C. Asia (Pamir-Alay).

- Subgen. 10. — **Rapunculus** (Boiss.) Char. 1976, Not. Syst. Geogr. Tphilis. 32: 54.
 — Sect. *Rapunculus* Boiss. 1875, Fl. Or. 3: 895.
 — Gen. *Rapunculus* Fourr. 1869, Ann. Soc. Linn. Lyon, N.S. 17: 11, nom. nud., non Tourn. ex Mill. 1752.
 — Gen. *Neocodon* Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 27.

Typus: *C. rapunculus* L. 1753, Sp. Pl. 1: 164.

63. **Campanula rapunculus** L. 1753, Sp. Pl. 1: 164.
 — *Neocodon rapunculus* (L.) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 28.

Described from Europe: "In Helvetia, Anglia, Gallia". **Syntypi:** ?LINN 221.10 (photo!); BM, Herb. Cliff. 65, C.8 (photo!); UPS, Herb. Burser IV: 4; cited plate.

Distribution. — Mediterranean area, Atlantic and Eastern (S.) Europe, Caucasus, N. Turkey, NW., N. and C. Iran.

- 63a. **C. rapunculus** subsp. **lambertiana** (A. DC.) Rech. fil. 1965, Fl. Iran. 13: 34.
 — *C. lambertiana* A. DC. 1830, Monogr. Camp.: 327.
 — *C. rapunculus* L. var. *lambertiana* (A. DC.) Boiss. 1875, Fl. Or. 3: 940.
 — *C. rapunculus* L. var. *spiciformis* Boiss. 1875, l.c.: 939.
 — *C. hyrcanica* Wettst. 1885, Denkschr. Acad. Wiss. (Math.-Naturw. Wien) 50(20): 69.
 — *Neocodon lambertianus* (A. DC.) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 29.

Described from N. Iran. **Typus:** "In provincia persica dicta Ghilan, Lambert".

Distribution. — Caucasus [WCC: Az.-Kub. (Taman); WC: Adag.-Pshish, Bel.-Lab., Urup-Teb. (Nevinnomysskaya); CC: U. Kum.; EC: Man.-Samur, Kubin; NWTC: Anap.-Gel. (Sukko); WTC: Tuap.-Adl. (Krasnaya Poljana), Abkh., Adzh. (Nonus-ogly); ETC: Ior.-Shek. (extreme E.), Shirv. (NW.), Murgh.-Murovd. (Boz-dagh), Karab.; STC: Zang. (Nerkin And), Megr.-Zan. (Shvanidzor), S. Karab.; T), S. Bulgaria (Stara-Zagora), N. Turkey, N. and C. (Elburs ridge) Iran.

64. **Campanula olympica** Boiss. 1844, Diagn. Pl. Or. ser. 1,4: 34.
 — *C. hemschinica* C. Koch 1850, Linnaea 23: 644.
 — *Neocodon hemschinicus* (C. Koch) Kolak. & Serdjukova 1984; Not. Syst. Geogr. Tphilis. 40: 28.

Described from Turkey (Bursa, Ulu Dag). **Typus:** "Olympi Bithyni regione inferiori, in sylvaticus, Julio 1842, Boissier" (G, photo!, iso. G, photo!).

Distribution. — Caucasus [WTC: Rion-Kvir. (E.), Adzh.; CTC: Kart.-S. Oss. (Borzhom); SWTC: Meskh.], N. and adjacent Inner Anatolia.

65. *Campanula persicifolia* L. 1953, Sp. Pl. 1: 164.

— *Neocodon persicifolius* (L.) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 29.

Described from N. Europe: "In Europae septentrionalis". **Syntypi:** LINN 221.11 (photo!); BM, Herb. Cliff. 65, C.7 (photo!); UPS, Herb. Burser IV: 14.

Distribution. — Caucasus [WCC: W. Stav. (Stavropol)], Europe (except extreme N. and W.), W. Siberia, NW. Turkey.

66. *Campanula stevenii* Bieb. 1819, Fl. Taur.-Cauc. 3: 138.

— *C. simplex* Stev. 1812, Mém. Soc. Nat. Moscou 3: 225, non DC. 1806.

— *C. steveniana* Roem. & Schult. 1819, Syst. Veg. 5: 91.

— *C. vittinghoffiana* Roem. & Schult. 1819, l.c.: 102.

— *Neocodon stevenii* (Bieb.) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 29.

Distribution. — E. Europe (except N. and Crimea), W. Siberia, Caucasus, NE. and E. Anatolia, NW. and N. Iran.

66a. *C. stevenii* subsp. *stevenii*

Described from E. Caucasus (Azerbaijan). **Typus:** "In subalpinis ditionis Kubensis versus Chinalug, Junio 1810", Steven (H?; ?iso. MW: "E Daghestan. Herb. Hoffm. 1531"!; ?iso. MW: "Herb. Trin. 5405"!).

Distribution. — Caucasus [WC: Bel.-Lab. (Zakan mount.), U. Kub.; CC: U. Kum., Malk. (Elbrus mount.), U. Ter. (basins of Fiagdon and Terek); EC: U. Sulak, Man.-Samur, Kubin; WTC: Abkh. (Ritsa lake); CTC: all the districts; ETC: Alaz.-Agrich. (E.), Shirv. (NW.), Murgh.-Murovd., Karab.; SWTC: all the districts; STC: Erev. (NW. and E.) Sev., Dar. (N.), Nakh. (E.), Zang., Megr.-Zan., ?S. Karab. (N.); T (Zuvand)], NE. and E. Anatolia, NW. and N. Iran.

66b. *C. stevenii* subsp. *beauverdiana* (Fomin) Rech. fil. & Schiman-Czeika 1965, Fl. Iran. 13: 36.

— *C. beauverdiana* Fomin 1905, Monit. Jard. Bot. Tiflis. 1: 12.

— *C. stevenii* Bieb. var. *vesiculosa* Bornm. 1907, Bull. Herb. Boiss. 7: 774.

— *Neocodon beauverdianus* (Fomin) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 28.

Described from S. Transcaucasia without pointing the type. **Neotypus** (Rechinger & Schiman-Czeika, 1965, Fl. Iran. 13: 36): "Armenia turcica, czandshak Gümuschkhane, Kirkpauli, in montosis, 28.V.1894, P. Sinenis N 5647" (W, iso. B, E, L, D, TGM 3280!).

Distribution. — Caucasus [EC: Kubin; CTC: Kart.-S. Oss. (environs of Gori and Mtskhét); SWTC: Arag. (Shirak); STC: Erev., Sev., Dar., Nakh., Megr.-Zan.; T (Zuvand)], N. (rare) and E. Anatolia, NW. and N. Iran.

67. *Campanula pontica* Albov 1894, Bull. Herb. Boiss. 2: 116.

— *Neocodon ponticus* (Albov) Kolak. & Serdjukova 1984, Not. Syst. Geogr. Tphilis. 40: 27.

Described from Turkey (Adzharian frontier). **Typus:** "Bortscho. 13.V.1893. Radde N 12" (G, photo!; ?iso.: "Bortscho-Zinges (Bortscha). 10/22.V.1893. Radde & Koenig", TGM 44782!, TGM 44783!).

Distribution. — Caucasus [WTC: Ing.-Rion (Racha-Lechkhumi), Adzh.], NE. Anatolia.

Gen. 2. — **Legousia** Durande 1782, Fl. Bourg. 2: 26.

Typus: *L. speculum-veneris* (L.) Chaix 1786,
in Vill., Hist. Pl. Dauph. 1. 338.

1. **Legousia falcata** (Ten.) Fritsch. 1907, Mitt. Nat. Ver. Univ. Wien 5: 100.
— *Prismatocarpus falcatus* Ten. 1812, Prodr. Fl. Nap. 1: 16, Tab. 20.

Described from Italy. ?**Typus:** “Presso Napoli, nelle vicinaze del lago de Agnano”, Tenore.

Distribution. — Caucasus [?CC: U. Ter. (Alagir); WTC: Abkh.; STC: Zang. (Kegnja-Pirchevan); Megr.-Zan. (Shvanidzor)], Mediterranean area, SE. Anatolia, N. Iraq, W., NE. and S. Iran.

Note. — The gatherings of Lagowsky from Alagir (LE!) are very doubtful. Lagowsky's collections are generally notorious for his messed up labels.

2. **Legousia hybrida** (L.) Delarbre 1800, Fl. Avergne, ed. 2, 2: 47.
— *Campanula hybrida* L. 1753, Sp. Pl. 1: 168.

Described from England and France: “In Anglia, Gallia”. **Syntypi:** LINN 221.71 (photo!); cited Morrisons's illustration.

Distribution. — Caucasus [NWTC: Anap.-Gel. (Novorossijsk); ETC: L. Kur. (Karadaghly); STC: S. Karab. (Gamzaly); T (Lerik, Eshakchy)], Europe (except NE.), NW. Africa, Cyprus, Anatolia, NW. Iran.

3. **Legousia speculum-veneris** (L.) Chaix 1786, in Vill., Hist. Pl. Dauph. 1: 338.
— *Campanula speculum-veneris* L. 1753, Sp. Pl. 1: 168.
— *Specularia speculum* A. DC. 1830, Monogr. Camp.: 346.
— *Legousia speculum* Fisch. ex A. DC. 1830, l.c.: 347.

Described from S. Europe: “Inter segetes Europae australis”. **Syntypi:** LINN 221.68 (photo!); BM, Herb. Cliff. 65, C.13 (photo!); UPS, Herb. Burser XII: 54.

Distribution. — Caucasus [?CC: U. Ter. (Ardon)], C. and S. Europe, N. Africa, Cyprus, W. Syria, Anatolia, N. Iraq, W. Iran.

Note. — Locality on the Central Caucasus (“Upper flow of Ardon. Dr. Lagowsky”, LE!) is doubtful. This specimen was probably collected in Kars, as in the same herbaria there are very resembling gatherings of Lagowsky from Kars (NE. Turkey).

4. **Legousia pentagonia** (L.) Thellung 1907, Vierteljahr. Naturf. Ges. Zürich 52: 465.
— *Campanula pentagonia* L. 1753, Sp. Pl. 1: 169.

Described from Greece. **Typus:** “In Thracia” (BM, Herb. Cliff.).

Distribution. — Caucasus [WTC: Adzh. (Batumi)], Spain, S. France, Balkans, Outer and E. Anatolia, W. Syria, N. Iraq, W. Iran.

Gen. 3. — **Asyneuma** Griseb. & Schenk 1852,
Arch. Naturgesch. 18,1: 335.

Typus: *A. canescens* (Waldst. & Kit.) Griseb. & Schenk 1852,
Arch. Naturgesch. 18,1: 335.

1. **Asyneuma amplexicaule** (Willd.) Hand.-Mazz. 1913, Ann. Naturh. Mus. (Wien) 27: 431.
— *Phyteuma amplexicaulis* Willd. 1797, Sp. Pl. 1: 925.

Distribution. — Caucasus, Anatolia, NW. Iraq, N. and W. Iran.

1a. **A. amplexicaule** subsp. **amplexicaule**

- *A. talyschense* Fed. 1957, Fl. URSS 24: 473, 407.

Described from Turkey(?). **Typus:** “*Rapunculus orientalis, campanulae pratensis folio*”, Tournefort (B, Herb. Willd. 3898).

Distribution. — Caucasus [WTC: Adzh. (SE.); CTC: Kart.-S. Oss. (Borzhomi), Lori (extreme W.); SWTC: all the districts; STC: Nakh. (E), Zang. (SW.), Megr.-Zan. (NW.); T (Zuvand)], N., Inner and S. Anatolia, N. Iraq, N. Iran.

2. **Asyneuma campanuloides** (Bieb. ex Sims) Bornm. 1921, Beih. Bot. Centralbl. 38,2: 340.

- *Phyteuma campanuloides* Bieb. ex Sims 1807, Curtis's Bot. Mag.: Tab. 1015.
— *Phyteuma campanuloides* Bieb. 1808, Fl. Taur.-Cauc. 1: 156.
— *Asyneuma campanuloides* (Bieb. ex Sims) Bornm. var. *gracilis* Manden. & Kuthath. 1955, Not. Syst. Geogr. Tphilis. 18: 64.

Described from cultivated material, seeds received from the Great Caucasus. **Typus:** Curtis's Bot. Mag.: Tab. 1015!

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: all the districts; EC: all the districts; WTC: Tuap.-Adl., Abkh., Ing.-Rion, ?Adzh. (E.); CTC: all the districts; ETC: Alaz.-Agrich., Murgh.-Murovd., Karab. (N.); SWTC: all the districts; STC: Erev. (NW.), Sev., Zang.]. Endemic?

Note. — Though no reliable specimen is known from Turkey, the species very probably could be found on the border with SW. Transcaucasia.

3. **Asyneuma rigidum** (Willd.) Grossh. 1949, Opredelitel' rast. Kavk.: 426.

- *Phyteuma rigida* Willd. 1798, Sp. Pl. 1: 925.

Distribution. — Caucasus, Anatolia, N. Iraq, NW. Iran, W. Syria, Sinay, Algeria.

3a. **A. rigidum** subsp. **rigidum**

- *Phyteuma lanceolata* Willd. 1798, Sp. Pl. 1: 924, non Villars 1787.
— *Asyneuma lanceolata* (Willd.) Hand.-Mazz. 1913, Ann. Naturh. Muz (Wien) 27: 431.
— *A. grossheimii* Karjagin ex Grossh. 1949, Opredelitel' rast. Kavk.: 425.
— *A. salignum*, *A. salicifolium*, *Podanthum salicifolium*, *P. canescens* var. *salicifolium* auct. cauc., non *Phyteuma salignum* Kit. ex Besser 1809, Prim. Fl. Galic. 1: 368, in observ., nec *Phyteuma canescens* Waldst. & Kit. 1802, Pl. Rar. Hung. 1: 12.

Described from Turkey. **Typus**: “*Rapunculus armenus altissimus folio glabro et rigido*”, Tournefort (B, Herb. Willd. 3894, iso. P, Herb. Tourn. 366).

Distribution. — Caucasus [EC: Man.-Samur (Mekege, Kurush, Jaluzhokh), Kubin (mountains Kjalakhoudagh and Shakhhdagh); CTC: Kart.-S. Oss. (Borzhom, Ateni, Tbilissi), Trial.-L. Kart. (Tabazkuri lake), Lori; ETC: Murgh.-Murovd. (Ziarat mount.); SWTC: all the districts; STC: all the districts, except S. Karab.], N., Inner and S. Anatolia, N. Iraq, NW. Iran.

4. ***Asyneuma pulchellum*** (Fisch. & C. A. Mey.) Bornm. 1921, Beih. Bot. Centralbl. 38,2: 348.
— *Phyteuma pulchellum* Fisch & C. A. Mey. 1835, Index Sem. Hort. Bot. Petropol. 1: 35.

Described from Talysh: “In locis aridis lapidosis montys Talüsç prope pagos Siwirs et Swant, alt. 670-1100 hexap.” (Meyer 1831, Enum. Pl. Cauc. Casp.: 89, N 698). **?Typus**: “Juny ... in Swant” (LE!).

Distribution. — Caucasus [STC: Erev., Dar., Nakh., Zang., Megr.-Zan., S. Karab., T (Zuvand)], SE. Anatolia, N. Iraq, NW., W. and N. Iran.

5. ***Asyneuma virgatum*** (Labill.) Bornm. 1921, Beih. Bot. Centralbl. 38,2: 351.
— *Campanula virgata* Labill. 1791, Icon. Pl. Syr. Rar. 2: 11, Tab. 6.

Distribution. — Caucasus, Anatolia (except SE.), N. Iraq, W. and N. Iran, Lebanon.

- 5a. ***A. virgatum*** subsp. ***virgatum***
— *Phyteuma leianthum* Trautv. 1874, Acta Horti Petropol. 3: 274.

Described from Lebanon. **Typus**: “In Libano, Labillardière” (G, iso. G).

Distribution. — Caucasus [SWTC: Arag. (Shirak, rare)], S. and Inner Anatolia, W. Iran, Lebanon.

Gen. 4. — ***Gadellia*** Shulkina 1979,
Novit. Syst. Pl. Vasc. 16: 177.

Genus monotypicus.

1. ***Gadellia lactiflora*** (Bieb.) Shulkina 1979, Novit. Syst. Pl. Vasc. 16: 178.
— *Campanula lactiflora* Bieb. 1808, Fl. Taur.-Cauc. 1: 153.
— *C. biserrata* C. Koch 1847, Linnaea 19: 29.
— *C. celtidifolia* Boiss. & Huet 1856, in Boiss., Diagn. Pl. Or., ser. 2,3: 111.

Described from C. Caucasus. **Syntypi**: “Wladi-Kawkas. Kaischaur” (LE!, sub *C. aspera*); “Ex Caucaso”, Herb. Trin. 5367 (MW!).

Distribution. — Caucasus [WC: Bel.-Lab., Urup-Teb., U. Kub.; CC: Malk., U. Ter.; EC: all the districts (rare); WTC: all the districts; CTC: Kart.-S. Oss., Trial.-L. Kart. (N.); ETC: Alaz.-Agrich.; SWTC: Meskh.], NE. Anatolia, ?N. Iran.

Note. — Contrary to many authors, the species does not occur at the mountains Aragats and Arteni (Bogutlu) in Armenia. Doubtful are also the gatherings from mount. Ararat and N. Iran.

Gen. 5. — **Michauxia** L'Hér. 1788,
Monogr. 2: Tab. 295, nom. cons.

Typus: *M. campanuloides* L'Hér. ex Aiton 1789,
Hort. Kew. ed. 1, 2: 8.

1. Michauxia laevigata Vent. 1800, Hort. Cels.: 81.

— *Mindium laevigatum* (Vent.) Rech. fil. & Schiman-Czeika 1965, Fl. Iran. 13: 47.

Described from N. Iran. **Typus:** "Perse, sur le mont Alburs, Brugière & Olivier" (P).

Distribution. — Caucasus [STC: Erev. (SW.), Dar., Nakh., Zang. (S.), Megr.-Zan., S. Karab. (S.); T (Zuvand)], SE. Anatolia, N. Iraq, N., W., C. and S. Iran.

Gen. 6. — **Muehlbergella** Feer 1890,
Bot. Jahrb. 12: 615.

Genus monotypicus.

1. Muehlbergella oweriniana (Rupr.) Feer 1890, Bot. Jahrb. 12: 616.

— *Edrajanthus owerinianus* Rupr. 1867, Bull. Acad. Sci. Pétersb. 11: 173 ("*Hedranthus*").

Described from Daghestan: "Daghestania bor., in prov. Koissubu, infra montes Erpeli, in fissuris rupium calcarearum regionis "Machi", in umbrosis, fine Julii ... D. Owerin". **Typus:** "Erpeli, in ... Herbarium Trautvetter" (LE!).

Distribution. — Caucasus [EC: U. Sulak (Gimri, Erpeli, Upper Botlikh)]. Narrow endemic known only from three localities.

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