

## THE GENUS *CAMPANULA* (*CAMPANULACEAE*) IN IRAN

F. AGHABEIGI<sup>1</sup> & M. ASSADI<sup>2</sup>

The genus *Campanula* L. (*Campanulaceae*) in Iran has been revised in preparation for the treatment in the Flora of Iran. In Iran the genus consists of five subgenera (*Campanula*, *Megalocalyx*, *Roucela*, *Brachycodonia* and *Rapunculus*), 10 sections (*Quinqueloculares*, *Campanula*, *Sibirica*, *Involucrata*, *Cordifoliae*, *Rupestres*, *Scapiflora*, *Saxicolae*, *Dictyocalyx* and *Rapunculus*) and 44 species. Since the *Flora Iranica* treatment by Rechinger & Schiman-Czeika in 1965 eight additional species (*Campanula crispa*, *C. sibirica*, *C. coriacea*, *C. hakkiarica*, *C. lamondiae*, *C. conferta*, *C. hermannii* and *C. fastigiata*) have been recorded from Iran. *Campanula savalanica* is a synonym of *C. bayerniana*. A key to the species in Iran is presented and the endemic species are highlighted.

*Keywords.* *Campanula*, *Campanulaceae*, Iran, key.

### INTRODUCTION

The genus *Campanula* L. is one of the largest in the *Campanulaceae*. Because of the large number of species and the similarity of many of them, identification of the species and classification of the genus and its subdivisions has been difficult.

Linnaeus (1753) recorded 34 different species of *Campanula*, of which seven are known from Iran. Boissier (1875) recorded 125 species of *Campanula* in *Flora Orientalis*, of which 19 are known from Iran. Parsa (1943) recorded 43 species from Iran. Fedorov (1957) recorded 150 species of *Campanula* for the USSR, of which eight species are known from Iran.

Rechinger & Schiman-Czeika (1965), in the last comprehensive study on the genus in Iran, recorded 57 species of *Campanula* in the *Flora Iranica* area of which 36 were reported from Iran. Rechinger (1972, 1980) recorded *Campanula lamondiae* from Kurdistan province and *C. hermannii* from western Iran, respectively. Damboldt (1978) recorded 95 species of *Campanula* in the *Flora of Turkey* of which 29 are known from Iran. Esfandiari (1980) reported new species and a transfer out of *Campanula* for Iran. He made the new combination *Symphyanandra odontosepala* (Boiss.) Esfand. based on *Campanula odontosepala* Boiss., showing that the anthers in this species are definitely attached to each other, a character of the genus

<sup>1</sup> Department of Botany, Iranian Research Institute of Plant Protection, PO Box 1454, Tehran, Iran.  
E-mail: faghabeigi@yahoo.com

<sup>2</sup> Department of Botany, Research Institute of Forests and Rangelands, PO Box 13185-116, Tehran, Iran.  
E-mail: assadi1950@yahoo.com

*Symphyandra* A.DC. Aghabeigi & Assadi (2005) placed *Campanula savalanica* Fed. in synonymy of *C. bayerniana*.

This study reviews the taxonomy of *Campanula* based on new collections since the publication of the *Flora Iranica* account, and also on field studies. An identification key and list of species are given. The sequence of species is mainly based on Damboldt (1976, 1978) but Victorov (2002) and Organesian (1995) were considered where necessary. Subgeneric classification of the genus needs further investigation, particularly through the use of molecular data. Recent phylogenetic and taxonomic studies on the family have shown that the species of the genus *Symphyandra* are nested in different groups of *Campanula* (Organesian, 1995; Eddie *et al.*, 2003). However, we are following the traditional delimitation of *Campanula* until the infra-generic division of the genus *Campanula*, possibly to include *Symphyandra*, is more stable. Notes on some of the species, especially those reported from Iran after the publication of *Flora Iranica*, are given.

#### MATERIALS AND METHODS

Existing *Campanula* specimens in the Iranian herbaria IRAN, KAR, TARI, TEH and TUH, and also in local herbaria in the western Iranian provinces of West and East Azerbaijan, Ardebil, Gilan, Kurdistan, Hamadan and Kermanshah, were studied. Fresh material was collected in the field, especially from the type localities and the classic localities of earlier collectors mentioned in the literature. This allowed us to examine morphological variation in species in the field.

#### *Identification key for Campanula species in Iran*

- |   |                          |
|---|--------------------------|
| 1a. Calyx appendages present _____  | 2                        |
| 1b. Calyx appendages absent _____   | 21                       |
| 2a. Stigmas 5 _____   | 1. <i>C. crispa</i>      |
| 2b. Stigmas 3 _____   | 3                        |
| 3a. Annuals _____   | 4                        |
| 3b. Biennials or perennials _____   | 6                        |
| 4a. Corolla more than 15 mm long; calyx appendages obtuse, longer than the ovary _____                            | 5                        |
| 4b. Corolla less than 15 mm long; calyx appendages acute, shorter than the ovary _____                            | 33. <i>C. propinqua</i>  |
| 5a. Calyx lobes lanceolate, 12–20 mm long, abruptly subulate at the tip; corolla 12–35 mm long _____              | 35. <i>C. reuteriana</i> |
| 5b. Calyx lobes lanceolate to ovate-lanceolate, 6–12 mm long, not subulate at the tip; corolla 7–30 mm long _____ | 34. <i>C. strigosa</i>   |
| 6a. Stem 1-flowered _____   | 7                        |

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- 6b. Stem few- to many-flowered \_\_\_\_\_ 9
- 7a. Stems short, branched and woody at base, less than 8 cm long \_\_\_\_\_  
 \_\_\_\_\_ 31. *C. gilliatii*
- 7b. Stems long, not branched and not woody at base, more than 8 cm long \_\_\_\_\_  
 \_\_\_\_\_ 8
- 8a. Corolla pubescent outside, basal and middle leaves crenate or dentate \_\_\_\_\_  
 \_\_\_\_\_ 19. *C. aucheri*
- 8b. Corolla glabrous outside, basal leaves entire or often dentate at the apex \_\_\_\_\_  
 \_\_\_\_\_ 20. *C. ruprechtii*
- 9a. Inflorescence capitate \_\_\_\_\_ 7. *C. involucrata*
- 9b. Inflorescence not capitate \_\_\_\_\_ 10
- 10a. Plant caespitose \_\_\_\_\_ 11
- 10b. Plant not caespitose \_\_\_\_\_ 19
- 11a. Basal leaves in a rosette \_\_\_\_\_ 12
- 11b. Basal leaves not in a rosette \_\_\_\_\_ 13
- 12a. Plant pubescent \_\_\_\_\_ 12. *C. minsteriana*
- 12b. Plant glabrous \_\_\_\_\_ 11. *C. hakkiarica*
- 13a. Plant short, 3–6 cm high; calyx 2–2.5 mm long \_\_\_\_\_ 13. *C. lamondiae*
- 13b. Plant more than 6 cm high; calyx more than 2.5 mm long \_\_\_\_\_ 14
- 14a. Style exserted; leaves oblong-elliptic \_\_\_\_\_ 10. *C. coriacea*
- 14b. Style included; leaves ovate to cordate \_\_\_\_\_ 15
- 15a. Plant velvety, with curved and short hairs; upper leaves petiolate \_\_\_\_\_  
 \_\_\_\_\_ 14. *C. candida*
- 15b. Plant not velvety; upper leaves sessile or subsessile \_\_\_\_\_ 16
- 16a. Calyx appendage equalling the calyx tube or a little longer \_\_\_\_\_  
 \_\_\_\_\_ 15. *C. kermanica*
- 16b. Calyx appendage shorter than the calyx tube, small and sometimes inconspicuous \_\_\_\_\_ 17
- 17a. Leaves ovate-triangular, cuneate or cordate-truncate at base \_\_\_\_\_  
 \_\_\_\_\_ 16. *C. bayerniana*
- 17b. Leaves ovate-orbicular, cuneate to attenuate at base \_\_\_\_\_ 18
- 18a. Corolla divided to  $\frac{1}{2}$  of its length, to 11 mm long; calyx appendages short and conspicuous \_\_\_\_\_ 17. *C. incanescens*
- 18b. Corolla divided to  $\frac{1}{3}$  of its length, less than 11 mm long; calyx appendages inconspicuous \_\_\_\_\_ 18. *C. khorasanica*
- 19a. Upper and middle leaves amplexicaul; flowers sessile \_\_\_\_\_ 32. *C. stricta*
- 19b. Upper and middle leaves not amplexicaul; flowers petiolate \_\_\_\_\_ 20

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- 20a. Stems numerous, striate, branched; basal leaves oblanceolate to ovate \_\_\_\_\_  
 \_\_\_\_\_ 6. *C. sibirica*
- 20b. Stems not numerous and striate, simple; basal leaves broadly ovate to cordate  
 \_\_\_\_\_ 9. *C. sclerotricha*
- 21a. Calyx lobes longer, equal to or a little shorter than the corolla \_\_\_\_\_ 22
- 21b. Calyx lobes much shorter than the corolla ( $\frac{1}{2}$  to  $\frac{1}{3}$ ) \_\_\_\_\_ 25
- 22a. Calyx lobes equalling or a little shorter than the corolla; root napiform; capsule  
 striate \_\_\_\_\_ 38. *C. rapunculus* var. *lambertiana*
- 22b. Calyx lobes longer than the corolla; root not napiform; capsule not striate  
 \_\_\_\_\_ 23
- 23a. Stem fastigiate, branched from base,  $\pm$  succulent; flowers crowded at the apex  
 of branches, sessile \_\_\_\_\_ 37. *C. fastigiata*
- 23b. Stem slender, flexuous or ascending; flower solitary, long pedicellate \_\_\_\_\_ 24
- 24a. Plant small, to 15 cm tall; corolla small, c.10 mm long, campanulate; calyx  
 lobes lanceolate, not setaceous \_\_\_\_\_ 39. *C. flaccidula*
- 24b. Plant more than 15 cm tall; corolla more than 10 mm long, obconical; calyx  
 lobes linear, setaceous \_\_\_\_\_ 40. *C. ghilanensis*
- 25a. Inflorescence glomerate and dense \_\_\_\_\_ 26
- 25b. Inflorescence spicate, raceme-like or paniculate \_\_\_\_\_ 27
- 26a. Stem ascending; flowers 3(-5)-fascicled; corolla 10 mm long \_\_\_\_\_  
 \_\_\_\_\_ 21. *C. conferta*
- 26b. Stem erect; flowers with more than 5 fascicles; corolla more than 20 mm long  
 \_\_\_\_\_ 8. *C. glomerata* subsp. *hispid*
- 27a. Capsule opening by basal pores or valves \_\_\_\_\_ 28
- 27b. Capsule opening by apical or lateral pores or valves \_\_\_\_\_ 41
- 28a. Annual, dichotomously branched from base; calyx lobes spreading-stellate  
 \_\_\_\_\_ 36. *C. erinus*
- 28b. Biennials or perennials; stem simple, paniculate or racemose; calyx lobes not  
 spreading-stellate \_\_\_\_\_ 29
- 29a. Plant erect, more than 30 cm tall \_\_\_\_\_ 30
- 29b. Plant decumbent, shorter \_\_\_\_\_ 33
- 30a. Plant greyish; upper leaves amplexicaul, leaves curved and canescent-tomentose  
 beneath \_\_\_\_\_ 2. *C. bononiensis*
- 30b. Plant green; upper leaves not amplexicaul and curved, pubescent or hispid  
 \_\_\_\_\_ 31
- 31a. Corolla more than 30 mm long, divided to  $\frac{1}{4}$  of its length \_\_\_\_\_  
 \_\_\_\_\_ 3. *C. latifolia*
- 31b. Corolla less than 30 mm long, divided to  $\frac{1}{3}$  of its length \_\_\_\_\_ 32

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- 32a. Leaves bidentate, triangular-cordate, pale beneath; flowers not secund \_\_\_\_\_ 4. *C. trachelium*
- 32b. Leaves crenate to serrate, ovate-cordate or broadly lanceolate to ovate-oblong, not pale beneath; flowers secund \_\_\_\_\_ 5. *C. rapunculoides*
- 33a. Leaves as long as wide or wider than long \_\_\_\_\_ 34
- 33b. Leaves 2–3 times longer than wide \_\_\_\_\_ 40
- 34a. Corolla tubular; style included \_\_\_\_\_ 35
- 34b. Corolla infundibular or campanulate; style exerted or equalling the corolla \_\_\_\_\_ 36
- 35a. Plant hirsute \_\_\_\_\_ 22. *C. persepolitana*
- 35b. Plant glabrous or with very dispersed and short hairs \_\_\_\_\_ 23. *C. perpusilla*
- 36a. Plant glabrous \_\_\_\_\_ 37
- 36b. Plant with dispersed short hairs \_\_\_\_\_ 39
- 37a. Pedicel hairy-papillose \_\_\_\_\_ 24. *C. escalerae*
- 37b. Pedicel glabrous \_\_\_\_\_ 38
- 38a. Leaves subsucculent, sinuate at margin; corolla campanulate; calyx  $\frac{1}{3}$  length of corolla \_\_\_\_\_ 25. *C. hermannii*
- 38b. Leaves not subsucculent, dentate; corolla narrow infundibular; calyx  $\frac{1}{2}$  length of corolla \_\_\_\_\_ 26. *C. humilima*
- 39a. Corolla glabrous, c.5 mm long \_\_\_\_\_ 27. *C. luristanica*
- 39b. Corolla velutinous, more than 5 mm long \_\_\_\_\_ 28. *C. acutiloba*
- 40a. Style included; calyx  $\frac{1}{2}$  length of corolla \_\_\_\_\_ 29. *C. lourica*
- 40b. Style exerted; calyx  $\frac{1}{3}$  length of corolla \_\_\_\_\_ 30. *C. hystriculica*
- 41a. Stem more than 70 cm long; stem leaves ovate-oblong; calyx lobes serrate \_\_\_\_\_ 41. *C. lactiflora*
- 41b. Stem less than 70 cm long; stem leaves lanceolate to linear-lanceolate; calyx lobes entire or remotely dentate \_\_\_\_\_ 42
- 42a. Plant branched; calyx lobes patent \_\_\_\_\_ 42. *C. patula*
- 42b. Plant simple; calyx lobes erect \_\_\_\_\_ 43
- 43a. Ovary hemispherical, densely papillose with prominent inflated cells \_\_\_\_\_ 43. *C. phytidocalyx*
- 43b. Ovary obconical, not densely papillose with prominent inflated cells \_\_\_\_\_ 44
- 44a. Calyx tube glabrous \_\_\_\_\_ 44a. *C. stevenii* subsp. *stevenii*
- 44b. Calyx tube papillose \_\_\_\_\_ 44b. *C. stevenii* subsp. *beauverdiana*

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*CAMPANULA SPECIES SINCE FLORA IRANICA*

The following species have been described or reported as new to Iran since the publication of *Flora Iranica* (Rechinger & Schiman-Czeika, 1965).

***Campanula crispa*** Lam., Encycl. 1: 581 (1785).

This species was first recorded for Iran by Aghabeigi (1985).

*Additional geographic distribution.* Caucasus and Turkey. Type from Turkey.

*Specimens studied.* WEST AZERBAIJAN. Khoy, 14 km from Keshmesh Tappeh to Kelisa Kandy, 1400 m, *Assadi & Mozaffarian* 30208 (TARI); 15 km from Maku-Bazargan road towards Kelisa Candy, 1800 m, *Assadi* 70835 (TARI); Maku, Bazargan, towards Haji-Ali holiday camp town, somewhere between Yarnaghi and Greek, 1550 m, *Mozaffarian* 70026 (TARI).

***Campanula sibirica*** L., Sp. Pl. 167 (1753).

This species was first recorded for Iran by Assadi & Wendelbo (1977) under the name of *Campanula hohenackeri* Fisch. & C.A.Mey. based on a specimen collected from West Azerbaijan.

*Additional geographic distribution.* Caucasus, Turkey, Europe, Siberia and Central Asia. Type specimen from Georgia.

*Specimens studied.* EAST AZERBAIJAN. Arasbaran, Khodafarin, Balan, junction towards Kalaleh-Olya, 1650 m, *Aminirad & Tehrani* 36230 (IRAN); Arasbaran protected area, Shabkhaneh towards Veinagh, 1400 m, *Asry & Hamzei* 81297 (TARI); Arasbaran protected area, between Veinagh and Vaighan, 1000–1400 m, *Assadi & Vosoughi* 24720 (TARI); Arasbaran protected area, Kaleibar, Veinagh, 500–900 m, *Wendelbo & Assadi* 17097 (TARI); Kaleibar towards Khodafarin, 1350–1850 m, *Mozaffarian & Ali Mohamadi* 37649 (TARI); Arasbaran protected area, Khodafarin, Tatar woods, 1350 m, *Ghahraman & Attar* 17329 (TUH).

***Campanula coriacea*** P.H.Davis, Notes Roy. Bot. Gard. Edinburgh 24: 29, t.4 (1962).

Davis (1962) described this species from Turkey. It is similar to *Campanula radula* Fisch. var. *minor* Boiss. and was recorded as this in *Flora Iranica* from Kurdistan in Iraq. Assadi (1992) was the first to report it for Iran.

*Additional geographic distribution.* Turkey, Iraq and Syria. Type specimen from Turkey.

*Specimens studied.* WEST AZERBAIJAN. 70 km west of Khoy, on the mountain, Razi village, 2000–2500 m, *Assadi & Olfat* 68897 (TARI); 30 km to Bazargan, Borolan, East of Ararat mountain, 1550 m, *Jafari* 19350 (TUH).

***Campanula hakkiarica*** P.H.Davis, Notes Roy. Bot. Gard. Edinburgh 24: 32 (1962).

This species was described by Davis (1962) and was first recorded for Iran by Aghabeigi (2005). It was regarded as a synonym of *Campanula minsteriana* by Organesian (1995) and Victorov (2002). Our observations have revealed that *Campanula minsteriana* is pubescent while *C. hakkiarica* is glabrous and we therefore

distinguish them as distinct species. The two species sometimes grow in the same area.

*Additional geographic distribution.* Turkey. Type specimen from Turkey.

*Specimens studied.* WEST AZERBAIJAN. Maku, Gharahdagh, 2100–2250 m, *Termeh* 3557 (IRAN); Makou, Dash-Fishel, 1930–2000 m, *Amini Rad & Torabi* 39884 (IRAN); Maku, 9 to 11 km to Chaldoran, *Maassoumi & Safavi* 82552 (TARI); About 30 km north west of Marand, Kamar mountain, 2000–2600 m, *Assadi & Shamsavari* 65663 (TARI); In between Maku and Khoy, Haramloo, 1850–1950 m, *Assadi & Mozaffarian* 30365 (TARI); Marand, Zonoz to Zanugah, Kamar mountain, 1800 m, *Mozaffarian* 72779 (TARI); 25 km to Maku from Seyah Cheshmeh, Kelisa Candy, 1700 m, *Akbarzadeh & Salary* 41130 (TARI).

***Campanula lamondiae*** Rech.f., Anz. Osterr. Akad. Wiss., Math.-Naturwiss. Kl. 109: 173 (1972). **Fig. 1.**

This species was first described by Rechinger (1972) based on a specimen from Iran.

*Geographic distribution.* Endemic to Iran.

*Specimens studied.* ZANJAN. Gheydar, 35 km to Soltanieh, Gheydar mountain, 2200–2650 m, *Termeh & Mousavi* 3589 (IRAN). KURDISTAN. Bijar, Hamzeh-Arab Mountain, 2000–2600 m, *Termeh* 3588 (IRAN); Bijar, Hamzeh-Arab Mountains, Tangeh-Almas mountain, 2200–2500 m, *Iranshahr & Dezfalian* 3591 (IRAN).

***Campanula conferta*** A.DC. in DC., Prodr. 7: 468 (1839).

This species was first recorded for Iran by Jafari (1995).

*Additional geographic distribution.* Iraq and Turkey. Type specimen from Turkey.

*Specimens studied.* WEST AZERBAIJAN. Orumieh, Silvaneh mountains, 1580–2550 m, *Termeh* 3448 (IRAN); Orumieh, Ghasemloo, 1380–1650 m, *Mousavi, Zargani & Termeh* 3447 (IRAN); Orumieh towards Sarv, Eishkesoo village, 1650 m, *Aghabeigi, Sajedi & Eskandari* 50693 (IRAN).

***Campanula hermannii*** Rech.f., Mitt. Bot. Staatssamml. München 16, Beih. 37–39 (1980).

Rechinger (1980) described this species from Iran. No specimens have been found in Iranian herbaria.

*Geographic distribution.* Endemic to Iran. Type specimen from Esfahan: 5 km west of Semirum, Pashma mountain, 2700–3000 m, *Rechinger* 47404 (holo W).

***Campanula fastigiata*** Dufour in A.DC., Monogr. Campan. 340 (1830).

The species has previously been treated in the genus *Brachycodon* as *B. fastigiatus* (Dufour) Fed. and prior to this report all specimens preserved in TARI and IRAN

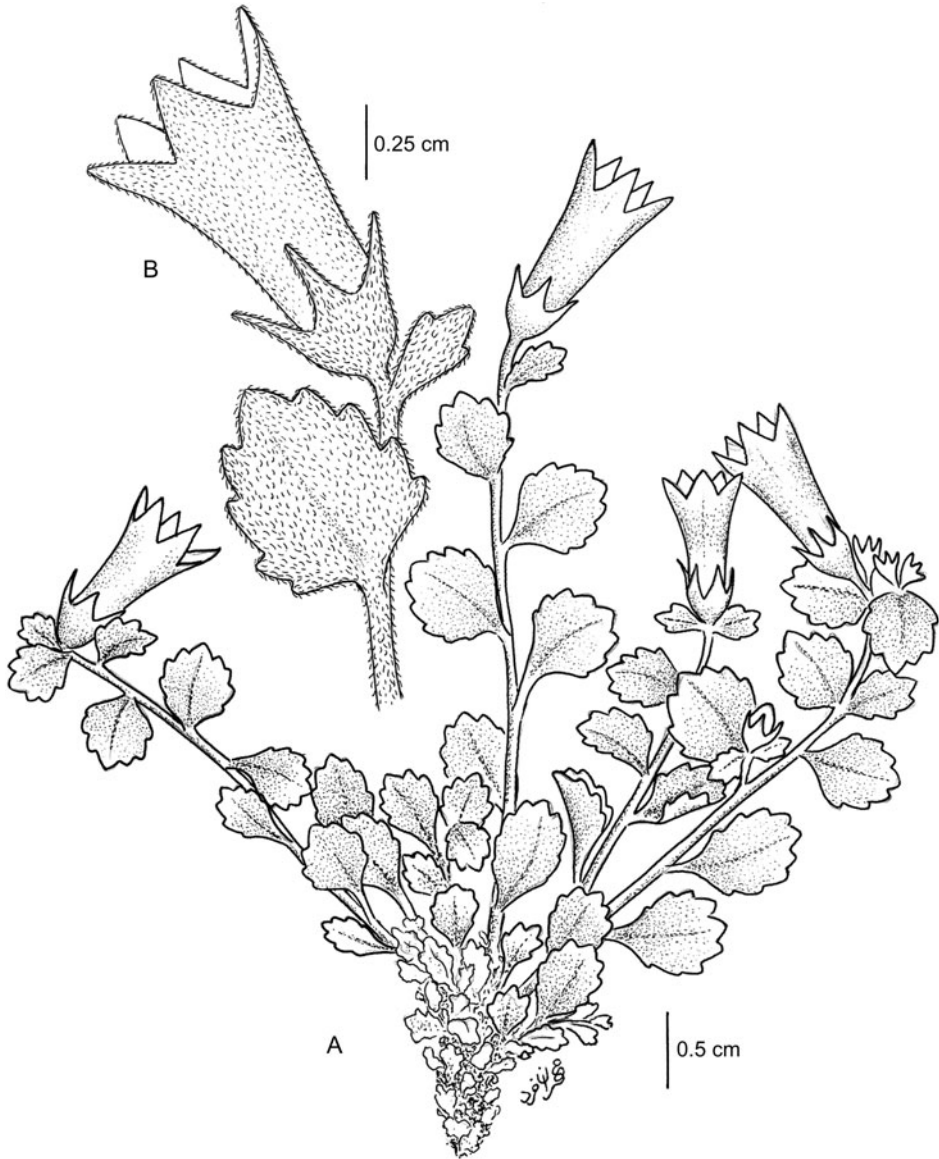


FIG. 1. *Campanula lamondiae* Rech.f. A, habit; B, flower.

were treated under this name. Since the publication of the *Flora of Turkey* (Damboldt, 1978) this species has been treated as *Campanula fastigiata* Dufour.

*Additional geographic distribution.* Spain, Africa, Caucasus and Asia. Type specimen from Spain.

*Specimens studied.* EAST AZERBAIJAN. 62 km from Ahar to Tabriz, 1400 m, *Assadi & Maassoumi* 20569 (TARI). KHUZESTAN. Haftgel toward Masjed Soleiman (20–30 km),



400 m, *Iranshahr & Termeh* 3491 (IRAN). TEHRAN. Kardaj, highest point of Chaloos neck, 2370 m, *Runemark & Maassoumi* 20645 (TARI).

A complete list of *Campanula* species in Iran is given in Table 1.

TABLE 1. *Campanula* species in Iran (asterisks indicate endemic species)

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**Subgenus *Campanula***

**Section *Quinqueloculares*** (Boiss.) Phitos

1. *Campanula crispa* Lam.

**Section *Campanula***

2. *Campanula bononiensis* L.

3. *Campanula latifolia* L.

4. *Campanula trachelium* L.

5. *Campanula rapunculoides* L.

**Section *Sibirica*** (Fomin) Kharadze

6. *Campanula sibirica* L.

**Section *Involucrata*** (Fomin) Kharadze

7. *Campanula involucrata* Aucher ex A.DC.

8. *Campanula glomerata* L. subsp. *hispida* (Witasek) Hayek

**Section *Cordifoliae*** (Fomin) Kharadze

9. *Campanula sclerotracha* Boiss.

**Section *Rupestres*** (Boiss.) Kharadze

10. *Campanula coriacea* P.H.Davis

11. *Campanula hakkiarica* P.H.Davis

12. *Campanula minsteriana* Grossh.

13. *Campanula lamondiae* Rech.f.\*

14. *Campanula candida* A.DC.\*

15. *Campanula kermanica* (Rech.f., Aellen & Esfandiari) Rech.f.\*

16. *Campanula bayerniana* Rupr.

17. *Campanula incanescens* Boiss.

18. *Campanula khorasanica* (Rech.f. & Aellen) Rech.f.\*

**Section *Scapiflora*** (Boiss.) Kharadze

19. *Campanula aucheri* A.DC.

20. *Campanula ruprechtii* Boiss.

**Section *Saxicolae*** (Boiss.) Kharadze

21. *Campanula conferta* A.DC.

22. *Campanula persepolitana* Kotschy ex Boiss.\*

23. *Campanula perpussilla* A.DC.

24. *Campanula escalerae* Rech.f. & Schiman-Czeika\*

25. *Campanula hermannii* Rech.f.\*

26. *Campanula humillima* A.DC.\*

27. *Campanula luristanica* Freyn\*

28. *Campanula acutiloba* Vatke

29. *Campanula lourica* Boiss.

30. *Campanula hystriacula* Pau

TABLE 1. (Cont'd)

**Section *Dictyocalyx*** (Fed.) Damboldt

31. *Campanula gilliatii* Milne-Redh. & Turrill\*  
 32. *Campanula stricta* L.

**Subgenus *Megalocalyx*** Damboldt

33. *Campanula propinqua* Fisch. & C.A.Mey.  
 34. *Campanula strigosa* Banks & Sol.  
 35. *Campanula reuteriana* Boiss. & Balansa

**Subgenus *Roucela*** (Dumort.) Damboldt

36. *Campanula erinus* L.

**Subgenus *Brachycodonia*** (Fed.) Damboldt

37. *Campanula fastigiata* Dufour ex A.DC.

**Subgenus *Rapunculus*** (Boiss.) Kharadze**Section *Rapunculus*** Boiss.

38. *Campanula rapunculus* L. var. *lambertiana* (A.DC.) Boiss.  
 39. *Campanula flaccidula* Vatke  
 40. *Campanula ghilanensis* Pall. ex Roem. & Schult.\*  
 41. *Campanula lactiflora* M.Bieb.  
 42. *Campanula patula* L.  
 43. *Campanula phytidocalyx* Boiss. & Noë  
 44a. *Campanula stevenii* M.Bieb. subsp. *stevenii*  
 44b. *Campanula stevenii* M.Bieb. subsp. *beauverdiana* (Fomin) Rech.f.

NOTES ON SOME PROBLEMATIC *CAMPANULA* SPECIES IN IRAN***Campanula ghilanensis*** Pall. ex Roem. & Schult., Syst. Veg. 5: 154 (1819).

This species was described from Gilan province. No specimens of this species have been found, either in the herbarium or from field searches. It is not possible to ascertain the identity of this species from the description given by Boissier (1875).

***Campanula aucheri*** A.DC. in DC., Prodr. 7(2): 460 (1839).

Syn.: *Campanula tridentata* Schreb. var. *velutina* Parsa, Kew Bull. 1948: 209 (1948).

Parsa collected *Campanula tridentata* var. *velutina* from the northern part of the Alborz mountains (Dish-Gadok) and recorded it as a new variety in 1948. A specimen of this taxon exists in TEH under Parsa 102. The plant is about 15 cm high, the basal leaves are crowded in dense rosettes, and are oblong with a crenate-dentate apex, the calyx is triangular-lanceolate with an appendage, the corolla is broadly campanulate, about 30 mm long, pubescent on the outside, and the style is included. If one compares these features with those of *Campanula aucheri* A.DC. (Rechinger & Schiman-Czeika, 1965), one can see there is no difference between the two taxa. Accordingly, it is necessary to regard *Campanula tridentata* var. *velutina* as a synonym of *C. aucheri*.

*Symphyandra armena* (Steven) A.DC., Monogr. Campan. 367 (1830).

Syn.: *Campanula triangularis* Parsa, Kew Bull. 1948: 209 (1948).

Parsa collected *Campanula triangularis* from Hasanbeiglou in East Azerbaijan province and recorded it as a new species in 1948. This specimen is in TEH under Parsa 875. The basal and lower leaves are cordate, long petiolate, the anthers are connate into a tube and the filaments are free. These features do not belong in the genus *Campanula* but are rather characters of the genus *Symphyandra*. On investigation it is clear that *Campanula triangularis* is in fact a synonym of *Symphyandra armena* (Steven) A.DC. which has been recorded from the same area.

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