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***Cynoglossum montanum* L. in the western part of the Mediterranean area**

Abstract

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Cynoglossum montanum L. (*C. haenkei* Schult., *C. hungaricum* Simk.) is reported from NW Italy (Piedmont), S France and N & C Spain. Taxonomy, nomenclature and general distribution are discussed.

Introduction

Cynoglossum montanum L. Demonstr. Pl. Horto Upsaliensi: 5 (1753) was described from material obtained in Italy and cultivated in Uppsala. The description refers to name “*Cynoglossa media altera virente folio, rubro flore, montana frigidearum regionum*” in Colonna’s (Columna’s) *Ecphrasis* 176 t., 175 (1606). Description and picture were designated as lectotype by Lacaita in *Bull. Orto Bot. Napoli* 3: 291 (1913) see Figure 1. The type material is not preserved in Linné’s herbarium (Brand 1921 or <http://www.nhm.ac.uk/botany/linnaean/databasehome.html>). The authorship of the whole publication is sometimes ascribed to Höjer and therefore this name appears sometimes as *C. montanum* Höjer in Linné (e.g. Cincović & Kojić 1974).

Discussion of taxonomy, nomenclature and general distribution

The above scant data have caused problems as to the identity and circumscription of the species. For example, Popov (1953) and subsequently some other Soviet botanists have used the name for *Cynoglossum germanicum* Jacq. Rather frequently, plants from the northern part of the species range have been classified under the name *C. hungaricum* Simonkai (1878) (e.g. Jávorka 1925; Dostál 1949, 1958, 1982; Soó 1968; Janchen 1958; Czerepanov 1981; Pignatti 1982; Petrova 1992; Holub & Kmeťová 1993; Fischer 1994, etc.). Should the separation of the northern taxon be justified, then in my opinion the older name *C. haenkei* Schult. 1814 has to be used. I have not found the type material of the latter, but, as follows from the concise and otherwise insufficient description, the author had in mind plants which occur in Hungary and whose leaves are rough on both sides (“auf bei-



Fig. 1. *Cynoglossa media altera virente, folio rubro flore, montana frigidearum regionum*. Colonna F. Ephrasis p. 175, 1606.

den Seiten scharf"). Of the "Hungarian" species of the genus, only *C. montanum* can be characterized in this way. Some authors (Brand 1921; Krajina 1935; Degen 1937) have identified Schultes' name with *C. germanicum* Jacq. However, the above quotation from the description excludes this unequivocally. The leaves of *C. germanicum* are almost glabrous on the upper side and sparsely, rather inconspicuously hairy on the lower one but never conspicuously rough. Apparently the younger name *C. hungaricum* was preferred because an unequivocal and detailed description is available for it, and plants of this species still occur at the classical locality in Budapest (Adlersberg = Sáshegy), where Simonkai even collected them for an exsiccate (No. 2636, Fl. Exs. Austro.-Hung.), which is preserved in many herbarium collections (e.g. BC, FI, G, H, K, KRAM, M, OLM, PR, PRC, Z, etc.). These facts are in sharp contrast with Schultes' problematic description and have naturally been reflected in the frequency of usage of these two names.

Having examined herbarium specimens of this species, I have not been able to confirm any differences between plants from the southern and northern parts of its range and hence I consider the names *C. hungaricum* and *C. haenkei* to be synonymous with *C. montanum*. However, further intensive studies of plant populations and their ecological requirements might reveal certain differences. Authors who consider the two species as being different (Riedl 1962; Pignatti 1982) do not state any reliable differentiating characters.

Brand (1921: 125) in his monograph classifies *C. hungaricum* as a variety of *C. germanicum* and considers it to be a transitional form between *C. germanicum* and *C. montanum*. He describes plants from the Balkans and Italy as *C. montanum* subsp. *linnaeanum* (Brand 1921: 126/127). His concept of *C. montanum* is very broad, including a number of taxa (as subspecies, varieties and subvarieties.) which should probably be placed under other, independent species. Riedl (1962) considered *C. montanum* and *C. hungaricum* to be two distinct species, but later (Riedl 1978) he already ranged *C. hungaricum* under the synonyms of *C. montanum*, following other authors (Hayek 1928; Krajina 1935). Recently it was used in this sense by Authier (2000) and Sutorý (2000). Kovanda (1972) does not mention *C. montanum* and includes plants from central Europe and the Balkans into *C. hungaricum*. Also Meikle (1985) believes that these two species are identical, includes another species, *C. nebrodense* Guss., and discusses furthermore the synonymy of *C. teheranicum* Riedl.

C. montanum occurs in a rather continuous range from the Czech Republic (southern Moravia) and Slovakia (see Sutorý 1978, 2000) through the easternmost part of Austria, Hungary, former Yugoslavia, Albania down to northern Greece. In Romania the species avoids higher elevations. Along the Black Sea coast it passes down to Moldavia and the southern Ukraine (Crimea). It occurs in Bulgaria and the northern part of Turkey. Somewhat isolated, the species occurs on the Apennine Peninsula, at two groups of localities in southern France and NW Italy, and at several scattered localities in the mountain ranges of central Spain.

Whereas the occurrence of the species in the Balkans, central Europe and Italy has always been rather clear even in spite of the differences in the circumscription of the species, its occurrence west of the Apennines has not yet been clearly reported. The occurrence of the species in NW Italy (Piedmont) was neither reported by Pignatti (1982), nor in earlier complex lists. A similar situation is found in France. Of all floras and checklists for the territory of France (beginning with Lamarck 1778 up to the most recent ones by

Guinochet & Vilmorin 1975; Greuter & al. 1984), only reports of *C. officinale* B *virens* (Schreb.) Rouy (Rouy 1908: 338) can be referred to this species, although with certain reservations. The description “feuilles plus étroites, lanceolées, briève pubescentes, vertes, les sup. (*C. officinale*) large arrondies, subcordées”, as well as some of the synonyms listed (*C. montanum* L., *C. haenkei* Schult.) suggest that Rouy had *C. montanum* in mind. However, the author does not state any localities or even an approximate range of the species. Schreber’s own taxon *C. virens* Schreber ex Boehmer Flora Lipsiae indigena 12, 1750 (shortly described as “A precedente /*C. officinalis*/ differt habitu duriore, viridibus foliis, hirsutis, neque mollibus”) is ambiguous, being established for a plant collected near Leipzig (Germany), that is, from an area in which *C. montanum* is not known to occur. The description is short but acceptable. In the synonymy of *C. montanum* this name is given also by Richter (1835). I have not seen the type specimen. From the discussed area it was given and later omitted in local contributions by Gautier (1898) from the Pyrenees and by Gola (1909) from Piedmont.

From Spain this species was only reported by Greuter & al. (1984) but I have not seen any data on concrete localities and I suppose this record is based on the occurrence of the sometimes not distinguished *C. pustulatum* Boiss. (*C. nebrodense* auct. non Guss.). In other synoptic papers covering the territory of Spain (Willkomm & Lange 1870; Willkomm 1893; Garcia-Rollan 1981; Smithies 1984; Casas & al. 1992) the species is not mentioned. Greuter & al. (1984) also report the species as occurring in Sardinia and Sicily.

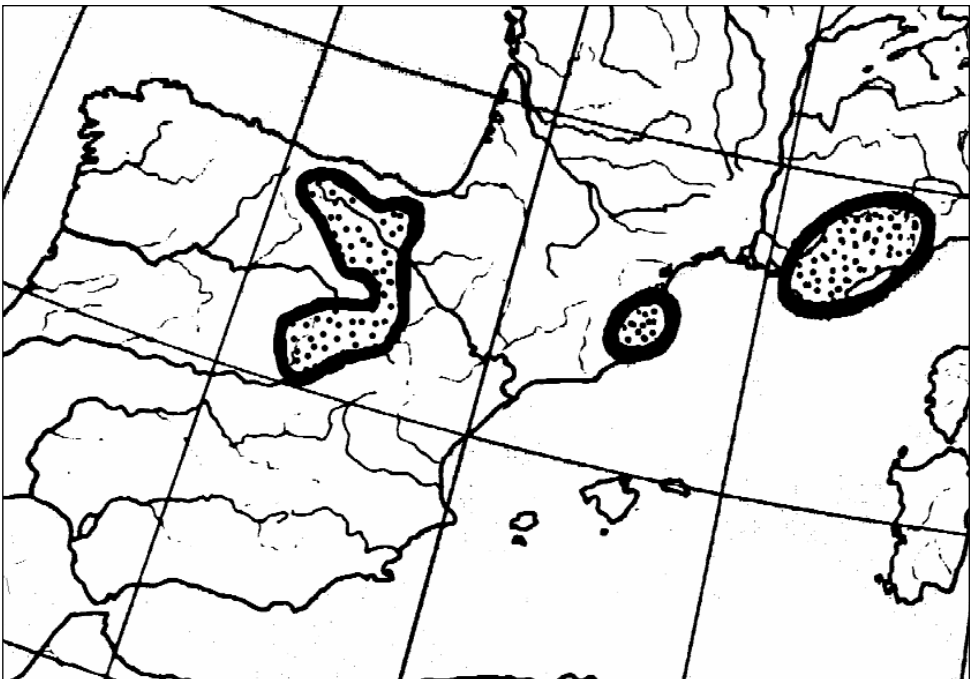


Fig. 2. Distribution of *Cynoglossum montanum* L. in the Western Mediterranean.

The former is probably based on data by Arrigoni (Greuter & Raus 1982) and the latter is likely to refer to *C. nebrodense* Guss. Its occurrence from Sicily is questionable.

Conclusion

The distribution of *C. montanum* in the western Mediterranean is satisfactorily documented by herbarium material and its area although of dispersed character reaches from Central Spain to the eastern part of the Black Sea region.

Synopsis of localities of *C. montanum* L. in the western Mediterranean

Italy (localities from the Apennine Peninsula are not included):

Piedmont: Bagni di Valdieri (herb. Lacaïta 1882 BM), Chartreuse de Pesio (Thuret 1862 P). Bad Vinadio (herb. Alioth 1856 MA). Val d'Aoste: La Léchère, Valpelline roches sili-cense, 1900 m (Aeschimann 1960 G). Prov. Cuneo, Alta Valle Pesio entre les Gias d'Funtena et le Pas d'Baban, 1550 m (Charpin 1993 G). Vallone del Matto a.m. 1400 (Boggiani M.O. 1901 FI). Pion de la Casa del Re nella Valletta (1800 m) Val Gesso (A. M.) (Bono P.G. 1961 FI). Vallone di Mte. Colombo presso S. Giacomo di E..... (1350 m) Val Gesso (A. M.) (Bono P. G. 1961 FI). Erbosì presso S. Anna di Valdieri (1100 m). Val Gesso (A. M.) (Bono P. G. 1962 FI).

France, Pyrénées orientales:

Cerdagne a Angoustrine, 1800 m (Sennen 1916 BC). Angoustrine, 1410 m, coteaux granitique (Sennen 1926 BC, BM; 1927 BC). Capcir, a la Quillan, 1700 m (Sennen 1828 sub *C. gastonis* Sennen BC, BRNU), Cardagne (Cer.): Val de la Molina, 1600 m (Sennen 1935 READ). Coustariges (Olivier 1883, MPU). Mont-Louis, alt 1600 m (Camus 1927 P). Vernet-les-baui, in valley leading to the Col de Jou. 2800 ft. (Ellman, Sandwith 1925 K). Vernet (?) - Le Canigou (Müller G. 1896 Z). Barrage de Bouillouse (Galerielle 1934, MPU). Canigou, Chemin de la Gasse de Cadi (Anonymus 1891 G). Pente du Canigou (Sennen 1898 LY). Le Canigou Vallée de Taurinya (Sennen 1897 BC, MPU). Le Canigou pentes vers Taurinya, alt. 1000 m (Sennen 1898 LY).

France, Hautes Alpes:

Orcières (Beauverd 1936 G). Prapic s. Orcières (Beauverd 1932 G). Chabrières..., Pilon oriental (Beauverd 1939 G). Biviers. Lieux arides a autonavés (Reverchon E. E. 1873 TL). Gap. Bois arides á Clarances (Reverchon E. E. 1872 TL). Gap. Lieux arides a Monteyer. (Reverchon E. 1871 TL, LY, MPU). Gap. Mont Sense. (Reverchon E. E. 1871 K). Briancon, a pros Mauréle (Reverchon E. 1861 JE). Briancon. Bois de Pramaurele. (Reverchon E. 1870 K). Briancon (Anonymus 1856 G). Bords des Champs: Vari (H. Alpes) (Anonymus 1873 G). Ealus, alt 1510 m, Ailefroide (Duclos 1935 P). Galets de la Celse-Nière. (Pelvoux) (Kuhnholz-Lordat G. 1939 MPU). Massif du Pelvoux. Pré d Madame Carle (Tallon G. 1922 MPU). Beilloc prés de Prades (anonymus 1925? E). Pré de Madame Carle Vallouise (Sotiaux P. 1978 BR). Isère, Mt. Rachel prés Grenoble (Verlot 1856 G). Vallon d' Ailefroide (Haffner 1932 P). Montagne de Peillasque, au dessous de

Des vaches (Canut 1867 FI). Mont Aurouse: de Montmaur a la maison forestiere (Rouy G. 1898 LY). Valley of Clairee, Nevache (Campbell M.S. 1937 BM). Chantemerle. Descente du Serre-Chevallier a Serre-Ratier, alt. 2000-2200 m (Retz B., Didier G. 1961 P). Vallée du Valgaudemar, entre le Refuge du Gioberney et le Lac du Lauzon, 1800-1900 m (Retz B. 1963 P).

Spain:

Prov. Avila: Hoyocasero: le "Pinar" (Rouy 1889 LY). El Nevero (Izco, Costa et Crespo 1973, MA). La Revilla: cerca del pueblo, 1000 m (Muñoz, Pons-Sorolla, Sánchez G. et S. 1979 MA). Madrid: Majaserranos Navacerrada (Anonymus 1911 MA). Escorial (herb. De Coincy 1887 P). Escorial (Lange herb.1890? C). Segovia: Aldealengua de Pedraza (puerto de Lozoya) (Romero 1982 MA). Segovia: Alto del León (Amich 1982 MA). Hinojosa de la Sierra (Soria) (Segura Zubizarreta 1962 MA). Sierra la Mata, Hinojosa de la Serra, ad septentrionem a pago versus (Sutorý K. 2001 BRNM). Sierra de Guadarrama Canencia, in declivibus (Vicioso C. 1916 MA). In locis incultis, Vaciamadrid (Madrid) (Vicioso C. 1915 MA). Palencia: Dehesa de Montejo, valle de Tosande, 1350 m (Monasterio et al. 1995 MA). P. de Guadarrama, pelouse (Bouharmont J. 1977 BR). In locis incultis Somosierra (Madrid) (Vicioso C.1918 MA). Burgos: Neila Sierra de Neila, Peña Aguda. laderas silíceas, 1880 m (Arán V. J. 1997 MA). Burgos: Covanera, cuneta húmeda Galán Cela (López G.1986 MA). Puerto de Novacerrada, 1 km antes del Ventorillo, 1450 m (Morales, Sanz 1993 MA). In sylvis et dumosis Sierra de Guadarrama Cercedilla (Vicioso C. 1912 BC). Clairieres du bois de chatagniers a Gerta/e?/ pres Placencia (Bourgeau 1863 MA, MPU). Val...? in hispan (Boissier 1843 G). Sierra de Guadarrama Cercedilla, In rudertatis (Vicioso C.1914 MA). La Revilla: cerca del pueblo, 1000 m (Muños Garmendia, Pons-Sorolla, Sanches Garcia et Susanna MA). Guadalajara: Cantalojas, valle del Lillas, barranco de Carretas, 1460 m, (Burgos, Cardiel 1986 MA).

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