

Observations: *C. varnensis* vel. differs from *C. jurineaefolia* Boiss. by the form and division of leaves, elongated paniculate inflorescence, smaller capitula, long cuspidate involucre bracts terminating in a rigid spine and more numerous fimbria (4-7) and not 3-5 as in *C. jurineaefolia*. It resembles the hybrid *C. jurineaefolia* X *C. diffusa*, from which it differs on the first sight by the branching which begins from the middle (and not from the base as in *C. diffusa* due to which this plant becomes shrubby), and lesser number of branches, by division and color of leaves, numerous and more rigid fimbria.

Synonyms: *Centaurea rutifolia* S.S. f. *varnensis* (Velen.) in Gugler, Die Cent. des Ungar Nat. Min. p. 147.

76. *Centaurea affinis* Frivaldszky.
In Flora XIX. p. 435 (1836).

Description: Perennial. Stem 20-80 cm tall, erect, angulate, rough-papillose at angles, often branched from the base or below the middle, branches long, virgate, less rigid, foliate. Radical leaves long petiolated, 17-28 cm long and 5-6 cm broad, oblong circumference, discontinuously pinnatisect, with segments lanceolate or oblong-cuneate often broader at the middle, 3-5 mm broad, entire or dentate, mucronate, sometimes the last segment is broad and dentate (2 cm broad and 5 cm long), cauline leaves petiolate or subsessile with broad segments, mucronate, the superior leaves usually with only one pair of segments or entire. All leaves gray-green, scabrous, radical leaves at the beginning more densely tomentose. Capitula long pedunculate, peduncles thickened below the capitula, capitula oval or oval-globose, 15 mm long and 10-12 mm broad. Involucre bracts striate, inferior and middle bracts ovate-oblong, rough-glandulose. Appendages of internal bracts scarious, oval-oblong, dentate or irregularly lacerate, the remaining bracts with large appendages (2 mm long and 1½-2 mm broad) which are triangular, black, fimbriate, fimbria brown or black, sometimes white, 1½ mm long, 8-9 on both sides. Flowers pink, marginal flowers radiant. Achenes black, lucid, 3 mm long. Pappus 2½-3 mm long (according to other descriptions pappus is half as long as the achene). Inflorescence in July-August.



PLATE-XXXIII. *Centaurea affinis* Friv. plant with capitula, radical leaves, in the middle involucre bracts. - In upper left hand side corner from left to right. A leaf of *C. affinis* subsp. *serbica* Prod; besides this leaf two smaller leaves of *C. affinis* subsp. *laconiae* Prod. (Original)

Iconography (Icons): Prodan, Cent. Rom. Pl. XXXIII.

Geographical areas: Orient. Yugoslavia, Bulgaria.

Distribution in the country

Calcareous soils, rocky regions in shady mountainous valleys.

VECHIUL REGAT. Specimens studied: Oltenia, Valea-Jiului between Lainici and Vama Paوسي; Valley Oltetului at Polovraci above cave; Manastirea Bistrita, Grecescu (Herb. Grec.) Polovraci, D. Brandza (H. D. Brandza).

Observations: In the herbarium of Cluj university there are three specimens of C. affinis Friv. The first original specimen collected by Frivaldszky is present in H. Baumgarten; he has sketched this specimen. The second specimen is found in Plantae exsicc. Florae Graecae No. 128 collected by Chr. Leonis. The third specimen is in H.C. Baenitz under the name of C. tartarea Vel. collected in Yugoslavia, determined by Wagner as C. affinis Friv. All these specimens resemble in their capitula, however, they differ greatly from the point of view of leaves. In the original specimen, the leaves are large, pinnate with broad segments, the specimen in Greece has very small leaves, pinnate with broad segments, while cauline leaves are nearly entire, having 1-2 wings at the base. Specimens of Yugoslavia have multi-pinnate leaves with very narrow lacinia. Taking into consideration the above facts we shall have to describe 2 subspecies of C. affinis Friv., namely: C. affinis Friv. subsp. laconiae Prodan. This is characterized by its grayish-white hair, its straight stature 25 cm tall, lesser and very long branches, about 15 cm long, evidently branched from the base (Mediterranean character). Leaves small, 18-20 mm long and 10 mm broad, pinnate, the leaves growing on branches 5-15 mm long, entire and lacinate only at the base. Achenes 4 mm long and 1½ mm broad, hairy, light brown in color, pappus ¼ the length of achene. - C. affinis Friv. subsp. serbica Prodan. It is characterized by its straight stature (43 cm tall), branched from the

middle, branches shorter, 10 cm long, leaves pinnate with very narrow lacinia, linear, entire plant scabrous covered with less hair. Achenes $2\frac{1}{2}$ -3 mm long and 1 mm broad, dark-brown, less hairy, pappus rudimentary or $\frac{1}{6}$ of the length of achene (Pl. XXXIII).

Synonyms: Centaurea dissecta Pancic, Elem. ad. fl. prin. bulg. p. 44 non. Ten. Prodr. (1815). Centaurea stereophylla affuris Griseb. Spicil. Rum. 2. p. 237 (1844) Centaurea Cinerea Griseb. l.c.p. 236 - non. Lam. - Centaurea dissecta Boiss. Fl. orient. III. p. 644 (1875) quod plantam macedonicam. - Centaurea tartarea Velen. Abh. der Konigl. bohm. Gesellschaft. d. Wissensch. p. 25 (1886). - Velen. Sitzungsber. der. Konigl. bohm. Gesellschaft. d. Wissensch. p. 56-57 (1886). - Velen. Fl. bulg. p. 318 (1891). pro parte. - Centaurea affinis Friv. in Degen O.B.Z. n. 2 (1893) and in Grecescu, Consp. fl. Romaniei p. 494 (1901). - Centaurea dissecta Ten. subspecies affinis (Friv.) Gugler, Die Cent. des Ung. Nat-Mus. p. 139, 141, 143 (1907).

77. Centaurea rhenana Boreau. Flore d. Centre d. l. France, Ed. III, p. 355 (1857).

Description: Plant more or less tomentose, biennial or perennial. Root thick, woody. Stem erect, 80-100 cm tall, angular and more or less white-tomentose, branched from the middle. Radical leaves petiolate, simple pinnatisect, more rarely entire or bipinnate, segments lanceolate, 2-9 mm broad. Inferior cauline leaves short petiolate, simple or bipinnatisect, segments lanceolate, cartilaginous mucronate; the middle leaves sessile, pinnatifid, segments dentate; the uppermost leaves simple, entire. All leaves covered on margins and lower surface with small rough setae. Capitula ovate, swollen in the lower part, about 14 mm long and 10 mm broad. Involucral bracts green, sulcate-veined-striate. Appendages of external and middle bracts triangular, black, pectinate-fimbriate at margins, fimbria on both sides, 6-10 in number, 2 mm long, usually white. Internal bracts with an ovate, scarious appendage, with a soot-colored spot, all these bracts have membranous margins in superior part. Flowers pink, radiant. Achenes $2\frac{1}{2}$ -3 mm long. Pappus about 2 mm long, white, inflorescence from June to October.