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SUPPLEMENTARY NOTES ON CREPIS

I. — Some New or Noteworthy Species of the Mediterranean Region

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Since the completion of my monograph on the genus *Crepis* (I) several new species, either undescribed or not previously known to me, have come to my attention. All of these species occur in the Mediterranean area or adjacent regions. One hitherto undescribed species will be reported first.

Crepis dobrogica sp. nov. — *Herba annua robusta ca. 3.5 dm. alta, ramibus numerosis densis elongatis foliatis multifloris; folia caudicalia pauca lanceolata acuta pinnatifida petiolata; folia caulina similia vel sessilia lineares ad basim angusta auriculata vel integra summa setosa; pedunculi 1-5 cm. longi arcuati setulosi; capitula parva 30-50-flora; involucrem campanulatum 7-8 mm. altum 4-5 mm. latum dense setosum, setis longis tenuibus eglandulosis, squamis exterioribus 5-6 linearibus, squamis interioribus 11-13 lanceolatis acutis decoris navicularibus ventre pubescentibus; receptaculum areolatum minute ciliatum; corolla 12 mm. longa, ligula 2 mm. lata, tubo 3-5 mm. longo minute barbellulato; antherae ca. 4 mm. longae, appendicibus ca. 1 mm. longibus oblongiobus obtusibus, filamentis ca. 0.7 mm. longioribus; rami styli 1.5 mm. longi in sicco nigri; achaenia fusca 4 mm. longa 0.4 mm. lata ad basim constricta gradatim in rostrum breve attenuata 10-costata spiculata; pappus albus 3.5-4 mm. longus 1-seriatus tenuis deciduus.*

Robust annual, ca. 3.5 dm. high, profusely branched and leafy from the base upward, with many small heads; stem 1 cm. wide and woody at base, ca. 2 dm. high, terete, striate, sparsely tomentulose; branches close, elongated, arcuate, repeatedly branched, forming a dense compound corymbiform cyme; basal leaves 9 cm. long, 2 cm. wide, lanceolate, acute, denticulate and pinately divided with long terminal segment and 2 pairs of triangular acute lateral segments, gradually attenuate into a winged petiole, finely pubescent or glabrescent; lower cauline leaves similar, less deeply pinnatifid, the others gradually reduced, acuminate auriculate, mostly linear, uppermost bract-like and setulose; peduncles 1-5 cm. long, arcuate, very slender, like the upper branches sulcate and hispidulous with fine pale glandless setules; heads erect before anthesis, small, 30-50-flowered; involucre campanulate, in fruiting heads 7-8 mm. high, 4-5 mm. wide near base, densely setose with fine glandless setae; outer bracts 5 or 6, linear, 1/3-1/2 as long as inner ones, becoming lax; inner bracts 11-13, lanceolate, acute, becoming carinate, infolding marginal achenes, pubescent on inner face with short appressed white shining hairs;

(*) BABCOCK, E. B., *The Genus Crepis*, Univ. Calif. Publ. Bot., vols. 21 and 22, 1947.

receptacle areolate, shortly and finely ciliate; corolla in marginal florets 12 mm. long; ligule 2 mm. wide; ligule teeth 0.2-0.5 mm. long, gland-crested; corolla tube 3-5 mm. long, very finely barbellulate; anther tube ca. 4×1 mm. when dissected and opened out; appendages ca. 1 mm. long, oblong, obtuse, united; filaments 0.6-0.8 mm. longer than appendages; style branches 1.5 mm. long, black *in sic.* (after boiling, under lens, yellow with drak green spicules); achenes dark brown, 4 mm. long, 0.4 mm. wide, marginal ones slightly curved and compressed, the others straight and subterete, constricted above the white-calloused hollow base, fusiform, gradually attenuate into a short beak only 0.1 mm. wide near the apex, with expanded white pappus disk 0.25 mm. wide, 10-ribbed, ribs rather strong, rounded, rugulose toward base, spiculate toward apex; pappus white, 3.5-4 mm. long, 1-seriate, very fine, soft, deciduous. Flowering June, flowers yellow, styles green. See Plate I and Fig. 1.

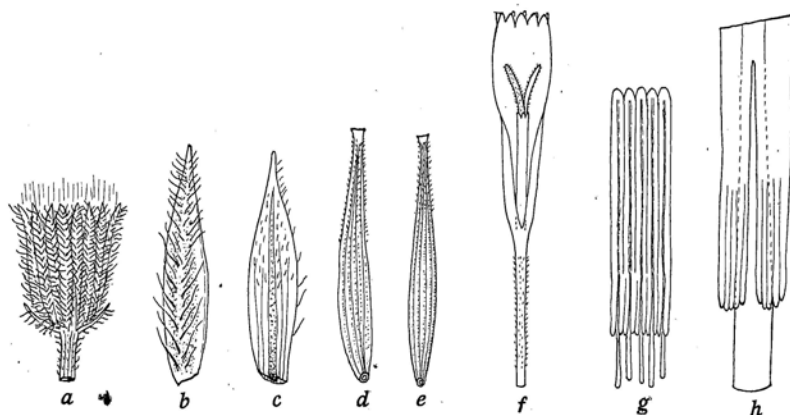


FIG. 1. — *Crepis dobrogica* Babc. a, head, $\times 2$; b, c, inner involucre bract, outer and inner face, $\times 4$; d, e, marginal and inner achenes, $\times 8$; f, floret lacking ovary, $\times 4$; g, anther tube opened out, $\times 8$; h, detail of appendages, $\times 32$.

The type and only specimen known to me is in the Herbarium of the Naturhistoriska Riksmuseet, Stockholm. It was collected by Sintenis in Dobrogea, Rumania, June 16, 1874, at the following locality—« Mahmudie : Steppe bei Dunarec ».

Crepis dobrogica belongs in the group described as Section 24, Phytodesia, in my monograph, its nearest allies being *C. apula* of southeastern Italy and *C. Suffreniana* of southern France. That it is very distinct from these two species is shown by the synoptical comparison of ten characters in Table I. In its floral and achenial characters, as well as its robust habit, *C. dobrogica* may be considered somewhat more primitive than the two species mentioned above. But in other respects it is equally reduced or specialized. Its setose involucre is reminiscent of *C. corymbosa*, but in habit, florets, and achenes the latter is very different. *C. dobrogica* should be placed between *C. cretica* and *C. apula* as arranged in my monograph, even though the former is a much more reduced plant. A single line is inadequate for the representation of phyletic relations in such a group. These relations can be roughly indicated for the eleven species in Section Phytodesia by the arrangement shown in Fig. 2.

Dobrogea lies within the distributional areas of *C. capillaris*, and *C. setosa*, but *C.*

TABLE 1

Synoptical Comparison of the Characters Distinguishing
Crepis dobrogica from *C. apula* and *C. Suffreniana*.

Characters	<i>C. apula</i>	<i>C. Dobrogica</i>	<i>C. Suffreniana</i>
Branches	few, remote	numerous, close	few, remote
Stem	densely setose	sparsely tomentulose	finely pubescent
Peduncles	gland-pubescent	setulose	tomentulose or glabrous
Involucre	tomentulose and gland-pubescent	densely setose, the setae fine, without glands	tomentulose and setulose without glands
Outer bracts	10	5 or 6	12
Inner bracts	glabrous on inner face	pubescent on inner face	glabrous on inner face
Corolla in marginal florets	8.50 mm. long	12 mm. long	5 mm. long
Anther tube	2.5 mm. long	4 mm. long	1 mm. long
Style branches	1 mm. long, yellow	1.5 mm. long, green	0.5 mm. long, yellow
Achenes	definitely beaked	indefinitely beaked	definitely beaked

dobrogica is distinct from those species morphologically, and it is therefore doubtful that the two species would produce fertile hybrids with *C. dobrogica*, if they should happen to cross naturally. Furthermore, *C. dobrogica*, from its abundant regular 3-pored pollen grains averaging 27 μ in diameter, is apparently a diploid species and probably has 4 pairs of chromosomes, whereas *C. capillaris* has 3 pairs. If a difference in chromosome number exists between two species, any possible hybrids would certainly be highly sterile.

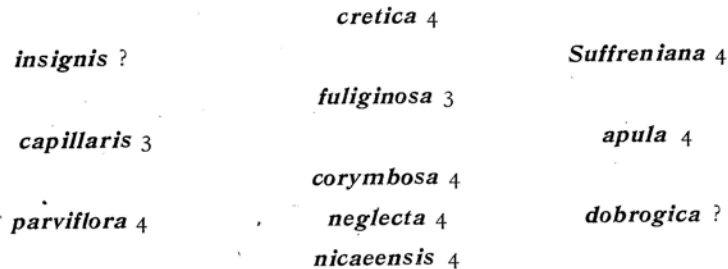
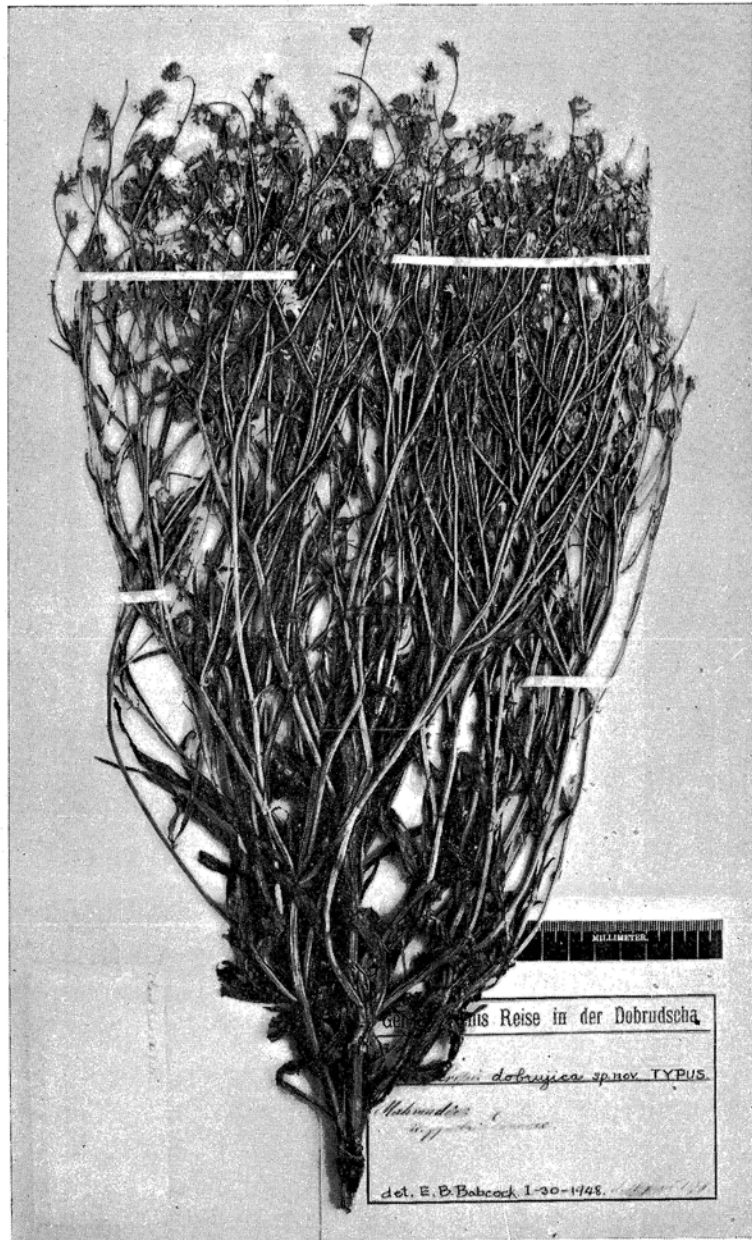


FIG. 2. — Phylogenetic arrangement of species in Section 24, Phytodesia, of the genus *Crepis*. Numbers indicate haploid chromosomes.

Crepis Bruceae Babc., Univ. Calif. Publ. Bot. 22 : 401. 1947. — One herbarium sheet with four specimens in Herb. Mus. Bot. Stockholm (determined in Mus. Bot. Berol. as *C. Newii* Oliv. et Hiern) is certainly *C. Bruceae*. This is the second collection of the species to be seen by the present writer. It came from near the type locality, the data on the label is translated from the German as follows : *Tanganyika Terr. ; Morogoro region ; Uluguru Mts., west side, Lukwangule highland, mountain savanna above the mist-forest, 2400 meters*



Crepis dobrogica Babcock.