

A NEW CICER FROM TURKEY

G. LADIZINSKY*

ABSTRACT. A new annual chick pea, *Cicer reticulatum* Ladizinsky, is described from SE Turkey. It differs from the recently found *C. echinospermum* Davis by the reticulated seed coat. It is suggested that this new wild species is the ancestor of the cultivated chick pea *C. arietinum* L.

In recent years it has become evident that south-east Turkey is an important centre of the annual wild species of *Cicer* (Davis 1970). Three species, *C. pinatifidum* Jaub. & Spach, *C. bijugum* Rech. f. and *C. echinospermum* Davis, have been reported from that area. It was also proposed (Davis 1969) that the cultivated chick pea, *C. arietinum* L., originated from that area.

As part of a study aimed at clarifying the origin and the evolution of the cultivated chick pea, the three wild species of Turkey were examined by the author in the course of a field trip in summer 1974. Besides valuable information regarding the ecological specificities of these wild species and their spatial relationships with *C. arietinum*, an additional annual wild *Cicer* was collected which did not match any known species. It was also not mentioned in the latest monograph of *Cicer* (Van der Maesen 1972). Accordingly it is described as a new species.

***Cicer reticulatum* Ladizinsky, sp. nov.** Affinis *C. echinospermo* P. H. Davis, a quo habitu prostrato et seminibus tuberculatis differt.

Herba annua, prostrata, praecipue basi ramosa, pilis glandulosis et eglandulosis pubescens. *Folia* imparipinnata, 20–40 mm longa; stipulae 1–3 mm longae, dentatae; foliola 7–11, breviter petiolulata, 5–11 mm longa, 2–4 mm lata, obovato-oblonga, irregulariter dentata. *Flores* solitarii; pedunculi 3–6 mm longi; pedicelli 3–7 mm longi. *Calyx* 4–6 mm longus, obsolete gibbosus, dentibus lanceolatis acuminatis tubo duplo longioribus. *Corolla* 9–12 mm longa, 9–10 mm lata; vexillum venosum, purpurascens; alae violaceo-purpureae. *Legumen* 1–2-spermum, 12–16 mm longum, 8–12 mm latum, late ellipsoideum. *Semina* 5–9 mm longa, 4–6 mm lata, irregulariter oblongo-ovoidea, breviter rostrata, reticulato-tuberculata, brunneo-grisea.

Turkey. C8 Mardin: near Dereici, about 9 km E of Savur on gulley, edge of vineyard, 24 vi 1974, *Ladizinsky* (holo. HJ); *ibid.*, cult. Rehovot (HJ, E).

Morphologically, this new species is close to the recently discovered *C. echinospermum* but differs in the following: prostrate habit, shorter leaves, the standard of the corolla pale violet, wings and keel dusky mauve, and the seed coat densely covered with tubercles of irregular size forming a reticulated surface. Typical *C. echinospermum* which was collected and studied in the field has a semi-erect procumbent habit, purple violet corolla and echinate seed coat. While *C. echinospermum* plants were found in the steppe vegetation of the Karacadağ basaltic plateau, *C. reticulatum* was found in a

* The Hebrew University, Faculty of Agriculture, Rehovot, Israel.

hilly area with a limestone bedrock dominated by oak shrubs. In the general area of the type locality of our new species, material that has been identified as *C. echinospermum* has been collected in three different locations (Davis, 1969). Because these herbarium specimens bore no ripened seed (Davis, personal communication) their identification is doubtful. However, the material is at least very close to *C. reticulatum* in the characters of habit and flower colour; also the habitat suggests that they might be this species. If these specimens are indeed so, *C. reticulatum* is apparently not rare in the Savur-Midyat area of Turkey.

In addition to the morphological difference, *C. reticulatum* is apparently reproductively isolated from *C. echinospermum*. Plants of these two species were grown in a greenhouse from seeds collected in the wild. Numerous crosses performed between them yielded a single seed and the hybrid was completely sterile. Similar results were obtained when *C. echinospermum* was crossed with *C. arietinum*.

By its seed coat structure, *C. reticulatum* is much closer to the cultivated species than *C. echinospermum*. The close relationship between them is further shown by the cross compatibility and the fertility of the hybrids, indicating that *C. reticulatum* is a probable ancestor of *C. arietinum*. The genetic affinities of these two species are presently being investigated.

An amended key for the annual Cicer in the Flora of Turkey
[Vol. 3:268, 1970]

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| 8. | Seeds echinate; stems procumbent; leaves 20–60 mm; 7–12 leaflets, 5–11 mm; corolla purple violet; legumes 15–19 mm | 9 |
| 8. | Seeds not echinate; stems prostrate or ascending erect | |
| | | 7. <i>echinospermum</i> |
| 9. | Seeds reticulated; stems prostrate; leaves 20–40 mm; 7–12 leaflets, 5–11 mm; corolla dusky mauve; legumes 12–16 mm | 8. <i>reticulatum</i> |
| 9. | Seeds smooth, tuberculate or rugulose; stems ascending-erect; leaves 30–60(–70) mm; 8–15 leaflets, 7–15 mm; legumes 17–22(–30) mm [cultivated] | 9. <i>arietinum</i> |

ACKNOWLEDGMENTS

The author is greatly indebted to the Harry S. Truman Institute, The Hebrew University, Jerusalem, for supporting this study. Thanks are also due to Dr Irena Gruenberg-Fertig of The Hebrew University for the Latin description.

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