

## *Linaria dumanii* (Scrophulariaceae), a new species from south Anatolia, Turkey

Ahmet Duran & Yusuf Menemen

*Kırıkkale University, Faculty of Science and Literature, Department of Biology, 71450 Yahşihan-Kırıkkale, Turkey*

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*Linaria dumanii* A. Duran & Y. Menemen *sp. nova* is described from the Akseki district in Turkey. It belongs to the section *Pelisserianae* Valdés and is related to *L. pelisseriana* (L.) Miller, from which it mainly differs in its very small flowers.

Key words: *Linaria*, Scrophulariaceae, taxonomy

### Introduction

The first author studied the flora of the Akseki district in 1996 and 1998, and collected many specimens of a *Linaria* with flower and fruit, which were not referable to any known species. Studying the specific descriptions of *Linaria* in Davis (1978), Tutin *et al.* (1972), Pignatti (1982) and Sutton (1988), as well as comparisons with specimens in the Herbaria of Hacettepe University (HUB), Gazi University (GAZI), Ankara University (ANK) and Kırıkkale University (ADO), showed that the specimens represent a species new to science. Around 100 specimens of *L. dumanii* were examined for this study and compared with specimens of the related species *L. ricardoi* Coutinho, *L. micrantha* (Cav.) Hoffmans. and *L. pelisseriana* (L.) Miller. Representative specimens examined of *L. micrantha* (altogether 43 specimens from one locality) and *L. pelisseriana* (27 specimens from five localities) are cited below.

***Linaria dumanii*** A. Duran & Y. Menemen, *sp. nova* (Fig. 1)

*Planta annua, glabra. Caules steriles praesentes. Lobi calycis leviter inaequales, 2.5–3.5 mm longi. Corolla violacea, 5–6 mm longus. Semen orbiculare, 0.8–1 mm longus. Hilum submedianum. Ala fimbriatus.*

HOLOTYPE: Turkey. C3 Antalya, Akseki, Murtiçi, Sarıel Beleni civarı, 500–550 m, clearings in macchia, 4.V.1998 A. Duran 4259 (ADO; isotypes GAZI!, HUB!, ANK!, Herb. Yıldırımli!).

PARATYPE: Turkey. C3 Antalya, Akseki, Murtiçi-Çukurköy arası, Olcağzı mevki, 550–600 m, clearings in macchia, 25.V.1996 A. Duran 3674 (ADO).

Glaucous, glabrous annual; fertile stems erect, slender, 10–25 cm, rarely branched above; sterile stems procumbent to ascending or erect. Leaves of fertile stems 8–25 × 0.5–1(–1.5) mm, linear, obtuse, lowest pair sub-opposite, others alternate; leaves of sterile stems (3–)4–5(–9) × (1.5–)2–3 mm,

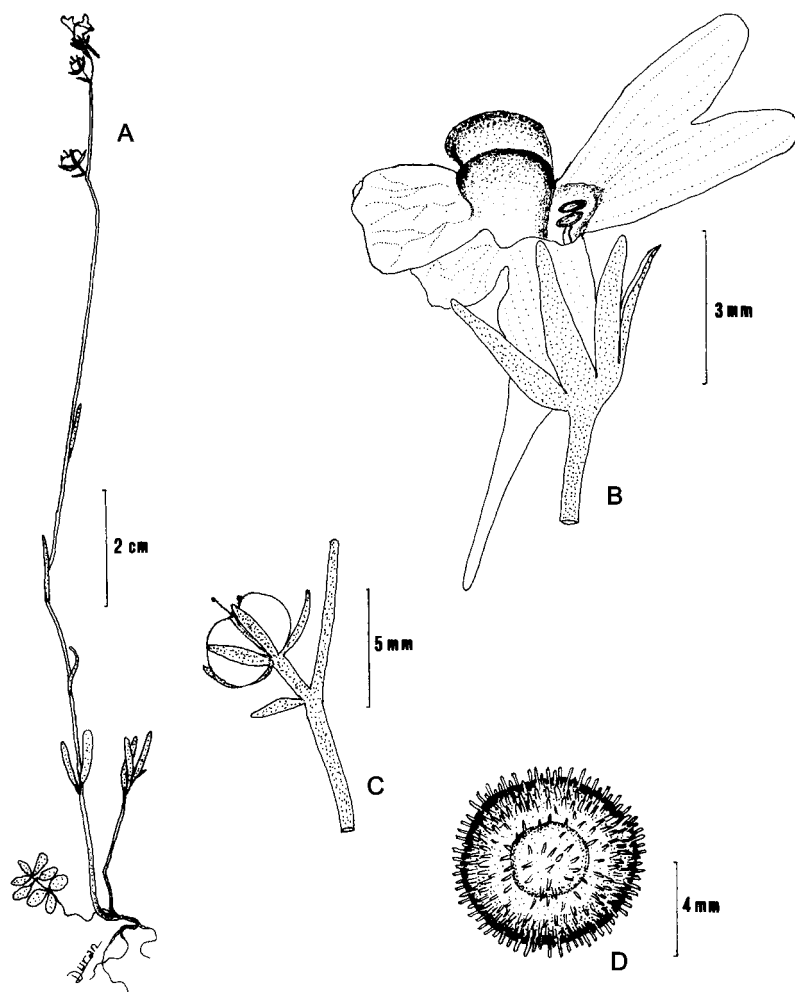


Fig. 1. *Linaria dumanii* (from the holotype). — A: Habit. — B: Flower. — C: Fruit. — D: Seed. Drawn by A. Duran.

broadly elliptic or linear, obtuse, opposite or verticillate. Inflorescence with 3–8 flowers,  $\pm$  lax in anthesis, 2–4 cm, later elongating. Bracts linear, as long as or longer than pedicels in anthesis and generally shorter after it, 2.5–5 mm. Pedicels  $\pm$  erect, 2.5–5 mm in flower and fruit. Calyx-lobes slightly unequal, 2.5–3.5 mm, linear-lanceolate, acute, tinged violet in anthesis. Corolla 5–6 mm, violet, upper lip erect and deeply bifid, spur 3.5–4.5 mm, 0.6–0.9 mm broad at base, subulate, straight. Capsule 2–3  $\times$  3–4 mm, broadly depressed globose, emarginate, glabrous, as long as or slightly longer than calyx. Seeds 0.8–1 mm, orbicular, flattened, brownish, with a submedian facial hilum, wing fimbriate; disc orbicular, ventral face convex, papillate, often brownish; dorsal (hilar) face concave, smooth.

ETYMOLOGY. This species is named in honour of the eminent Turkish botanist Prof. Hayri Duman (Biology Department, Gazi University).

DISTRIBUTION AND ECOLOGY. Endemic to South Anatolia (Antalya Province; Fig. 2). Flowers and fruits from April until June. This species grows in macchia clearings at 500–600 m with *Phlomis lunariifolia*, *P. grandiflora* var. *grandiflora*, *Tuberaria guttata* var. *plantaginea*, *Campanula phrygia*, *Cistus salvifolius*, *Anthemis pseudocotula*, *Lagoecia cuminoides*, *Crepis foetida* subsp. *commutata*, *Picris cyprica*, *Trigonella spicata*, *Silene papillosa*, and *Lolium rigidum* var. *rigidum*, of which some are endemic to Turkey.

CONSERVATION STATUS. *Linaria dumanii* is known from two nearby localities in Akseki (Antalya). It should be regarded as vulnerable (VU) (IUCN 2000).

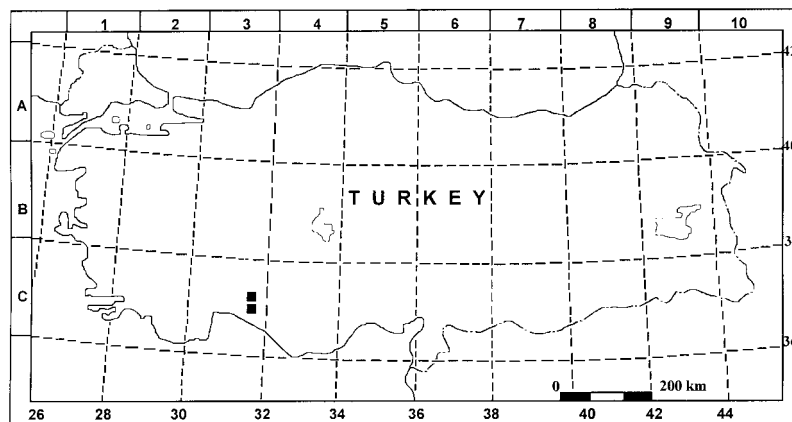


Fig. 2. Distribution of *Linaria dumanii*.

Table 1. Differences between *Linaria dumanii* and three closely related species.

Characters	<i>L. dumanii</i>	<i>L. ricardoii</i>	<i>L. micrantha</i>	<i>L. pelisseriana</i>
Stem	10–25 cm	15–30 cm	7–35 cm	15–70 cm
Leaves	8–25 × 0.5–1 mm	10–30 × 0.5 mm	7–30 × 2–11 mm	10–40 × 0.5–1 mm
Inflorescence	3–8 flowers, ± lax	5–17 flowers, lax	8–25 flowers, dense	2–20(–40), dense
Sterile stems	present	absent	present	present
Calyx and pedicels	glabrous	glabrous	glandular-pubescent	glabrous
Calyx	2.5–3 mm	3.5–4.5 mm	3–4 mm	3.5–4.5 mm
Corolla	violet, 5–6 mm	violet with yellow palate, 9–12 mm	lilac-blue, 2.5–5 mm	purplish-violet, 15–20 mm
Spur	3.5–4.5 mm	4–5 mm	0.8–1 mm	7–9 mm
Seeds	0.8–1 mm, orbicular	1–1.5 mm, reniform	1.3–1.8 mm, suborbicular	0.8–1 mm, deldate to elliptic-orbicular
Disk surface	with brownish papillae	with white papillae	with blackish-brown papillae	with white papillae
Wing	lacinate	rather dentate	entire	lacinate

*Linaria dumanii* is closely allied to *L. pelisseriana*, and it also has some similarities with *L. ricardoii* and *L. micrantha*. The differences between *L. dumanii* and the other three species are given in Table 1.

REPRESENTATIVE SPECIMENS EXAMINED. — *L. pelisseriana*. **Turkey.** *H. Peşmen* 3728 (HUB); *A. Güner et al.*, *A. Güner* 3525 (HUB); *A. Güner et al.*, *A. Güner* 8267 (GAZI); *H. Duman* 4397 (GAZI); *A. Baytop* (ANK). — *L. micrantha*. **Turkey.** *M. Serin* 1768 (ANK).

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