

distinguished from subsp. *polyphyllum* by its 12–14.2 mm broad, oblong-spatulate, narrow petiolate, 3-nerved rosette leaves with a rounded apex, narrower cauline leaves, smaller capitules and the other features cited in the diagnosis. The leaves are  $\pm$  intermediate in length between subsp. *plicatum* and subsp. *polyphyllum*; the characters of the capitules are also  $\pm$  intermediate. Resting bulbs, usually absent within the *H. plicatum* complex (Davis & Kupicha 1975: 90), are well developed.

*Helichrysum plicatum* subsp. *isauricum* is centred in the Isaurian Taurus and occurs in the area of Oyuklu Dağ and Geyik Dağları near Ermenek. The surroundings of Ermenek are well known as a speciation centre in the Taurus, from where several endemic taxa were recently described (Tan 1984: 61, 65, Vural & Tan 1983: 66, 69, Yıldız & Tan 1988: 441). Specimens from the more western (Pisidian) Derme Tepe (*Hein 56*) show some affinities to subsp. *plicatum* by having smaller, obscure 3-nerved, but oblong-spatulate leaves.

*Helichrysum plicatum* subsp. *isauricum* is a plant of montane and subalpine, ophiolitic and calcareous, rocky and grassy slopes (Astragalo-Brometalia Quézel 1973), degraded *Abies cilicica*-forests, stabilized screes and rocks between approximately 1500 and 2100 m. The type population inhabits ophiolitic soils.

***Prenanthes oyukludaghensis* Parolly, spec. nova – Fig. 2.**

Holotype: Turkey, C4 Karaman, Oyuklu Dağ bei Ermenek, Nordostflanke, Kar, 36° 51' N, 32° 53' E, subalpine Steinschuttflur mit *Scrophularia myriophylla* und *Ferulago trachycarpa*, 2000 m, feinerdereicher, ruhender Mittelschutt, Dolomit, 30°, SE-exp., 23. 7. 1992, *Parolly A354-1* (BSB; iso- B, herb. Parolly).

Species sine affinitatibus proximis. Ab aliis speciebus turcicis floris purpureis vel coeruleis characteribus sequentibus distinguitur: A *Prenanthe cacaliifolia* (M. Bieb.) Beauverd (species euxina maxima) caulibus humilioribus et valde gracilibus, foliis minoribus, synflorescentia eglandulosa, capitulis paucioribus (in *P. cacaliifolia* 10-pluris), capitulis minoribus quinquefloribus et pappo albo, a *P. purpurea* L. foliis distincte divisis, capitulis paucioribus, erectis differt. A *P. glareosa* (Schott & Kotschy ex Boiss.) C. Jeffrey (species humillima, 5–15 cm alta, 1–5-capitulata) habitu majore, caulibus erectis 17–42.5 cm altis, synflorescentia (4) 6–9 (10)-capitulata differt.

Perennial, 17 (in holotype) to 43 cm high, with thick creeping rhizom. Flowering stem slender, at half the length c. 1(1.3) mm in diameter, erect, striate, loosely leafy, scarcely glandular to glabrescent, terminated by a very loosely paniculate, few-capitulate synflorescence. Leaves 30 × 15 – 170 × 58 mm, membranaceous when dry, upper surface deep-green (when fresh) and glabrous, lower surface pale-green to somewhat glaucous and loosely glandular on the veins; basal leaves somewhat crowded, hastate, with a large (10 × 15 – 47 × 58 mm), cordate, acute, subovate to triangular terminal, mostly 2 smaller, distant, acute, lateral segments, and a long, petiole-like, basally semiamplexicaule rhachis; margin of the segments irregularly sinuate-dentate with spinulosely acuminate teeth; lower cauline leaves gradually smaller, lanceolate, rudimentary pinnatifid to subentire and sinuate-dentate with acutely sheathing base, upwards the stem passing over into the linear-lanceolate bracts subtending the synflorescence branches. Synflorescence with (4) 6–9 (10) capitules. Capitules, the corollae inclusively, c. 15–17 mm long, erect (never nodding); peduncles and involucre bracts eglandular. Involucrum (9) 9.5–10 (11) mm long, slender cylindrical, with 10–12 green to purplish involucre bracts, apically somewhat fimbriate-ciliate, in 3(4) series; outermost 3–4 times shorter than the innermost, narrowly ovate to ovate, 2–3.4 × 1.5–1.8 mm; innermost involucre bracts 5,

linear-oblong to linear-lanceolate, 9–11 × 2–2.5 mm. Flowers 5 per capitule, purplish blue when fresh, brownish rose when dry, distinctly exceeding the involucre, without achenes 12.5–14 mm long. Mature achenes not seen, immature 2–2.5 × 0.7 mm, compressed, narrowly elliptical and hardly attenuate apically. Pappus with white, scabrid rays, 5–5.5 mm long. Flowers from July to August.

Specimina visa: Turkey: C4 Karaman, Oyuklu Dağ, westlich Yelibeller Geçidi, zwischen Karaman & Ermenek (Orta Toroslar), Topahir Dağı, Steinschuttflur, 2000–2100 m, 1. 7. 1986, H. J. Greuter & U. Kramer 1354 (BSB!).

Presently four *Prenanthes* taxa are known from Turkey: the yellow-flowering *P. abietina* (Boiss. & Balansa) Kirp. and the violet-, mauve- or lavender-flowering species *P. cacaliifolia* (M. Bieb.) Beauverd, *P. glareosa* (Schott & Kotschy ex Boiss.) C. Jeffrey and *P. purpurea* L. (Jeffrey 1975: 764). The latter, an Euro-Siberian element, is only recorded in Anatolia from the NE. The other two species are found in remarkably restricted areas: whereas *P. cacaliifolia*, a tall perennial herb up to 250 cm, is limited to the Caucasian-Euxine-Hyrcanic province, the small, creeping scree plant *P. glareosa* seems to be endemic to high elevations in the Bolkar Dağları (Cilician Taurus).

A fifth species, i.e. *Prenanthes oyukludaghensis*, has now been discovered on Oyuklu Dağ, not far from the type locality of *Helichrysum plicatum* subsp. *isauricum*. This proves again the floristic importance of the Ermenek region. The material was collected early in the year and was mostly still in bud. *P. oyukludaghensis* is only known from two gatherings and apparently is without near allies. The lack of a world-wide treatment of the genus and a practicable infrageneric classification renders a discussion of relationships difficult. In some respects, e.g. in leaf-characters, the new species resembles the Euxine *P. cacaliifolia*, looking prima vista like a eglandular miniature of it. Nevertheless both species are clearly separated by the characters mentioned in the diagnosis above.

To a certain extent resemblance can also be found to *Prenanthes glareosa*. The few-capitulate synflorescences and capitules are very similar, and both being more or less small scree plants. *P. glareosa*, specialized to mobile screes has the distinctive habit of a creeping scree plant absent in stabilized screes. *P. oyukludaghensis* is a distinctive species inhabiting S- and E-facing stabilized calcareous screes and stony slopes between 1900 and 2100 m (*Scrophularietum myriophyllae* subass. *typicum* Parolly 1995). In its typical habitats it is accompanied by *Scrophularia myriophylla* Boiss. & Heldr., *Ferulago trachycarpa* Boiss., *Linaria corifolia* Desf., *Bromus tomentellus* Boiss., *Allium scorodoprasum* L. subsp. *rotundum* (L.) Stearn, *Elymus tauri* (Boiss. & Balansa) Melderis, etc. The vegetation cover is scarcely 50%.

### *Galium aladaghense* Parolly, spec. nova – Fig. 3.

Holotype: Turkey, C5 Niğde, Aladağları, Yalak Deresi, 37° 50' N, 35° 10' E, 2640 m, aktive Steinschuttflur mit *Lamium eriocephalum* und *Anthriscus kotschyi*, 45°, ENE-exp., 24. 8. 1992, Parolly A 836 (B).

*Galio membranaceo* Ehrend. et *G. shepardii* Post valde affinis. Differt a *G. membranaceo* foliis latioribus (usque ad 3 mm latis) et plerumque brevioribus, caulibus basi distincte lignosis et basin versus purpureo suffusis, corollis roseis, majoribus, usque ad 4.5 mm diametro (non albis, non usque ad 2.5 mm), lobis corollae apiculatis, quam duplo majoribus, antheris distincte majoribus, pedicellis non capillaribus. A *G. shepardii* caulibus fundite firmis ramosissimis, internodiis distincte inaequalibus, foliis 6-verticillatis et plerumque brevioribus, mar-

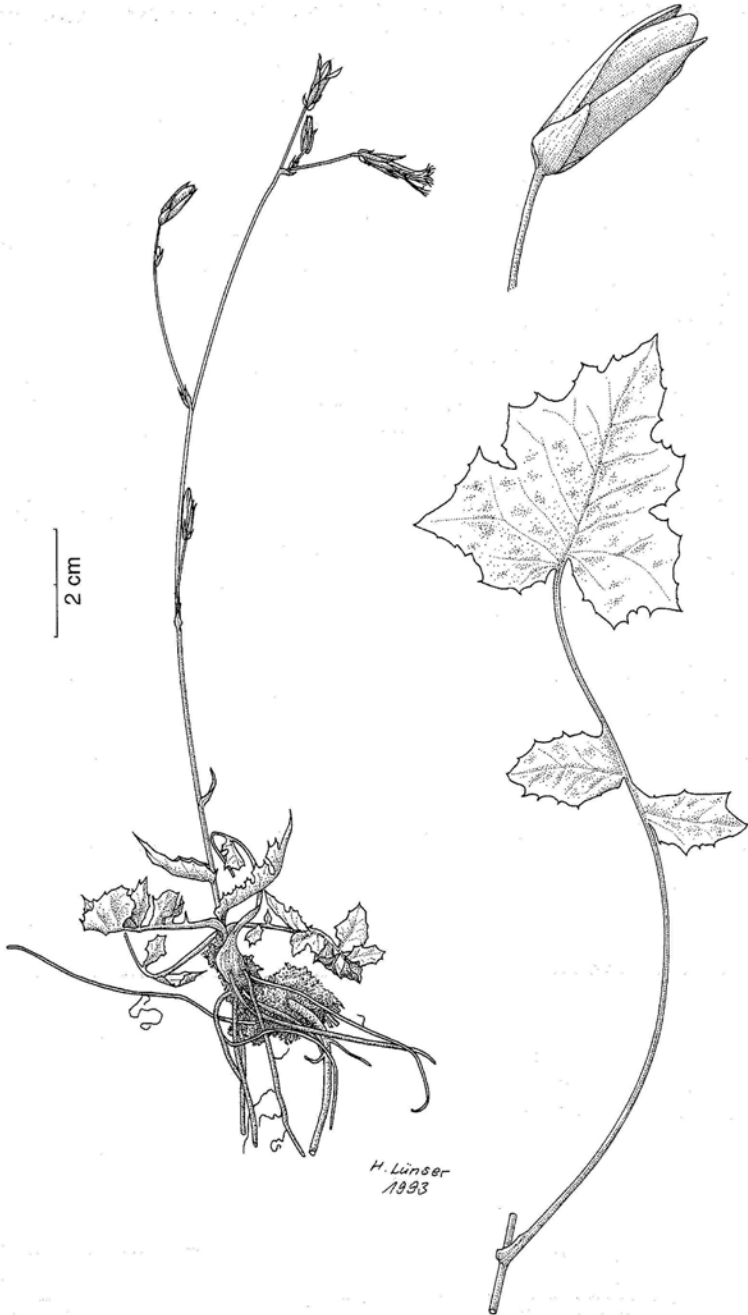


Fig. 3. *Galium aladaghense* Parolly – a: single branch; b: single flower (after holotype).

**Correct caption:**

*Fig. 2. Prenanthes oyukludaghensis* Parolly – a: habit (after holotype); b: capitulum (after left one of holotype); c: cauline leaf (after isotype BSB).