

A new species of *Omphalodes* (*Boraginaceae*) from Southeast Peloponnese, Greece

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Abstract: *Omphalodes runemarkii* sp. nova (*Boraginaceae*) is described from Mt Koulochera in southeast Peloponnese; it is illustrated by a photograph. It resembles *O. verna* but differs most clearly in its leaves which are greyish-green, of firmer texture and with scarcely visible anastomosing veins. In *O. verna* the leaves are a light fresh green, thinner in texture and with a conspicuous network of raised veins beneath.

Key words: *Boraginaceae*, endemic new species, *Omphalodes*, taxonomy

***Omphalodes runemarkii* Strid & Kit Tan, sp. nova**
(Fig. 1, front cover).

Type: Greece, Nomos Lakonias, Eparchia Epidavrou-Limiras, Mt Koulochera, near a small gravel road c. 500 m before the telecommunications tower on the summit, 1100 m, garigue and small outcrops of rugged limestone, 36°49' N, 23°00' E, 6 April 2005, coll. Strid, Kit Tan & Vold 55423 (holo- ATH; iso- B, C, G, GB, herb. Kit, LD, UPA).

Ab *O. verna* manifestissime differt foliis griseo-viridibus, robustioribus, nervis anastomosantibus paene invisibilibus. *O. verna* ab *O. runemarkii* differt foliis prasinis tenuioribus subtus nervis distincte reticulatis prominentibus.

Rhizomatous perennial forming large patches up to 1 m diam., without stolons, with numerous flowering and fewer non-flowering shoots. Rhizome slender (1–3 mm diam.), mostly creeping a few cm below surface, sparingly branched, angular, blackish, with blackish-brown scale leaves and strong adven-

titious roots. Flowering shoots ascending to erect, 6–14 (-20) cm tall, simple or sparingly branched, softly eglandular-pubescent. Stem angular to subterete, pale green, lower part with patent hairs c. 0.6 mm, upper part with erecto-patent to subappressed hairs. Basal leaves of flowering shoots 3–8, forming an indistinct rosette, the outer ones smaller and ± withered at anthesis; leaves white-tomentose when young, uniformly dull green to greyish-green on both surfaces when mature. Middle rosette leaves 5–14 cm long, with petiole ± equalling lamina; petiole broadened at base and somewhat sheathing, with pale green or scarious margins, softly patent-pubescent; lamina 20–60 × 12–30 mm, elliptic to narrowly ovate, entire, broadly cuneate at base, acute to apiculate at apex, uniformly and rather densely subappressed-pubescent on both surfaces. Cauline leaves few, alternate, similar to the basal ones but gradually smaller, the uppermost sessile. Basal and lower cauline leaves with midvein and major lateral veins slightly impressed above and raised beneath; midvein conspicuous; lateral veins less prominent, usually 3–6 on either side, branching off at an acute angle, slight-



Fig. 1. *O. runemarkii* (photo A. Strid)

ly curved and anastomosing towards upper margins; cross-veins faint and forming an inconspicuous, open network. Flowers solitary or in short, 2–4-flowered cymes in the axils of upper leaves, scarcely exceeding them. Pedicels slender, appressed-pubescent, 6–12 (–20) mm and suberect at anthesis, later elongating and becoming recurved. Calyx 3.5–4.5 mm at anthesis, accrescent to 7 mm, lobed to $\frac{3}{4}$ or more, green, appressed-pubescent; lobes erecto-patent, narrowly triangular-ovate, slightly overlapping below, acute to acuminate. Corolla 13–18 mm diam., subrotate, bright blue; tube broadly campanulate; limb divided slightly more than halfway into obovate to suborbicular, rounded lobes with small, white, minutely papillose invaginations at the centre. Stamens short, included; anthers 0.8–1 mm, brown; pollen cream. Style erect, c. 1.2 mm; stigma capitate. Mature nutlets arranged in a broad pyramid around the persistent, indurate style, stramineous to pale brown. Nutlet c. 3.2×2.2 mm, elliptical, c. 1 mm thick; proximal part of nutlet with radiating veins; distal part with rounded, puberulent edges and an oblong, excavate central part with lacerate inner rim.

Additional specimens examined.

Nomos Lakonias, Eparchia Epidavrou-Limiras: Mt Koulochera (Zarax or Zarakas), along small dirt road to telecommunications antennae at summit, 1100 m, macchie and low limestone rock outcrops, $36^{\circ}49' N$, $23^{\circ}00' E$, 6 April 2005, coll. *Kit Tan*, *G. Vold* & *Strid* 27896 (C, GB; living material for cultivation); same locality, 8 April 2004, coll. *Strid* 54868 (ATH, B, BM, G, GB, LD, UPA, W); 4.5 km along dirt road to mountain c. 1 km south of Mt Koulochera and parallel to it, 830–850 m, rocky limestone outcrops, $36^{\circ}48' N$, $22^{\circ}59' E$, 7 April 2005, coll. *Kit Tan* & *G. Vold* 27921 (ATH, E, GB, WU, herb. Kit, herb. Sfikas); Mt Korakia, valley between first ridge and summit, 750–800 m, terra rossa over hard limestone, $36^{\circ}52' N$, $22^{\circ}58' E$, 9 April 2005, coll. *Kit Tan* & *G. Vold* 27944 (G, GB, LD, UPA, W); Mt Kalogerovouni, abandoned terraces on north-east slopes, 600–700 m, limestone, $36^{\circ}51' N$, $22^{\circ}57' E$, 10 April 2005, coll. *Kit Tan* & *G. Vold* 27979 (GB, herb. Kit, SOM); Mt Chionovouni, 900–1000 m, clearings in *Abies* forest, $36^{\circ}58' N$, $22^{\circ}55' E$, 13 June 2005, fruiting, coll. *Kit Tan* & *G. Vold* 28070 (herb. Kit).

The type locality is at the upper part of Mt Koulochera, c. 500 m NW of the radar station at the summit, along a small gravel road. The vegetation is a macchie dominated by *Quercus coccifera*, *Genista acanthoclada*, *Coridothymus capitatus* and *Erica manipuliflora*. Perennial herbs and bulbous plants include *Alkanna graeca* subsp. *baeotica*, *Ballota acetabulosa*, *Doronicum orientale*, *Euphorbia rigida*, *Iris unguicularis*, *Lamium garganicum*, *Onosma erectum*, *Bellevalia hyacinthoides*, *Colchicum cupanii*, *Cyclamen graecum*, *Muscari neglectum* and *Orchis provincialis*. In the late spring and summer the area is heavily grazed and trampled by sheep and goats; the unpalatable *Asphodelus aestivus* is locally abundant. There are many small, spring-flowering annuals such as *Alyssum foliosum*, *Alyssum smyrnaeum*, *Anchusella variegata*, *Arabis verna*, *Briza humilis*, *Buglossoides arvensis* subsp. *arvensis*, *Capsella bursa-pastoris*, *Cerastium illyricum* subsp. *brachiatum*, *Clypeola jonthlaspi*, *Consolida tuntasiana*, *Erodium cicutarium*, *Erophila verna*, *Fumaria petteri*, *Geranium robertianum* subsp. *purpureum*, *Holosteum umbellatum*, *Hornungia petraea*, *Lamium amplexicaule*, *Malcolmia graeca*, *Plantago lagopus*, *Scandix pecten-veneris*, *Senecio vulgaris*, *Silene integripetala*, *Stellaria media*, *Thlaspi perfoliatum* and *Viola kitaibeliana*. There are scattered outcrops and ridges of hard, rugged limestone; species in such rocky places include *Aethionema saxatilis*, *Aubrieta deltoidea*, *Centaurea raphanina* subsp. *mixta*, *Cymbalaria microcalyx*, *Inula verbascifolia* subsp. *methanea*, *Minuartia pichleri*, *Stachys chrysantha* and in shady places, *Thalictrum orientale*. The new species of *Omphalodes* forms large patches in the macchie especially at the base of small rocks and ledges; when flowering it is conspicuous and easily visible from a distance.

Constantinidis & Kalpoutzakis (2005) described a remarkable new species, *Achillea occulta*, from the summit of Mt Koulochera. Together with it were some additional species also observed at the *Omphalodes* locality, e.g., *Acer sempervirens*, *Amelanchier parviflora* subsp. *chelmea*, *Rhamnus sibthorpiana* and *Melica rectiflora*. Several of the species listed above are regional endemics or otherwise of phytogeographical interest. Mt Koulochera and the other low mountains at the southern tail of the Parnonas range are clearly of great botanical interest.

Omphalodes runemarkii is obviously related to *O. verna* Moench. The native distribution of the latter is restricted to humus-rich deciduous woods at the lower montane zone in the southern Alps and southern Carpathians, extending to the northern Apennines and Croatia. It has long been cultivated as an ornamental and is widely naturalised in central Europe. A c. 1835 report from the island of Corfu (Kerkira) by Mazziari was cited by Halácsy in *Conspectus Florae Graecae* (2: 357, 1902) and repeated in later works; it is certainly based on cultivated material.

O. runemarkii grows in a very different habitat and there is a far disjunction to the natural occurrences of *O. verna*. Closer examination reveals a number of morphological differences which together make it reasonable to regard them as separate species. *O. verna* tends to be stoloniferous and forms lax patches. The flowering stems are usually longer, the inflorescence is 2–5-flowered and exceeding the leaves; the flowers are somewhat smaller. The most conspicuous differences lie in the leaves. In *O. verna* the petiole of the basal leaves is 2–3 times as long as the lamina; in the basal and lower cauline leaves the lamina is subcordate to truncate and fresh green, subglabrous above and sparsely appressed-pubescent beneath. On both sides, but especially beneath, anastomosing veins form a distinct and rather dense network. In fresh leaves the differences are very obvious, those of *O. verna* having a thin texture and a conspicuous network of raised, anastomosing veins beneath. The leaves of *O. runemarkii* are of a firmer texture and greyish-green, with hardly visible crossveins beneath. The mature nutlets are similar in size and shape but those of *O. runemarkii* have a lacerate inner rim on the distal face which is apparently lacking in *O. verna*.

One other Greek species of *Omphalodes* is *O. luciliae* Boiss. (Fig. 2) which grows in shady crevices of limestone rocks, usually at 1700–2800 m; it has been recorded from the mountains of Chelmos, Parnassos, Giona, Vardousia, Olimbos and Pangeon. It differs by its subglabrous, glaucous leaves, pale steel-blue flowers with pale yellow invaginations, and in several details of the nutlets. *O. luciliae* is a variable species occurring in mountains of Anatolia to N Iraq and W Iran; Greek material is treated as subsp. *scopulorum* Edmondson.



Fig. 2. *O. luciliae* (photo A. Strid)

The new species was first collected by Hans Runemark near the summit of Mt Koulochera on 7 May 1982 (*Omphalodes* sp., Runemark & Svensson 48361, LD). It is a pleasure to name this attractive species after him in recognition of his great contributions to Greek botany. The first author (A. S.) rediscovered it on Mt Koulochera on 8 April 2004 (Strid 54868) and collected seeds on 6 July 2004 (Strid 55384). The two authors (A. S. and K. T.) together with Gert Vold from the Copenhagen Botanic Garden returned on 6 April 2005 to study the habitat, flora and vegetation and to make a larger collection for distribution as type material.

O. runemarkii is now in cultivation at the Göteborg Botanical Garden; *O. verna* is already well established there as in several Scandinavian gardens. The former is currently kept under glass, and later trials will establish whether it is hardy. *O. luciliae* from Olimbos and Pangeon is grown successfully in tufa blocks in a cool greenhouse at the Göteborg Botanical Garden.

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Reference

Constantinidis, Th. & Kalpoutzakis, E. 2005. A new species of *Achillea* (Asteraceae: Anthemideae) from south-east Peloponnisos, Greece. – Bot. J. Linn. Soc., **147**: 249-256.