

Contributions to the bulb flora of Ilias (NW Peloponnese, Greece): *Asphodelaceae*, *Colchicaceae*, *Fumariaceae* and *Geraniaceae*

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Abstract. The bulb flora of prefecture (nomos) Ilias in NW Peloponnese, Greece is documented with an emphasis on its distribution within the administrative unit. Families, genera and species are presented in alphabetical order. Each taxon is accompanied by a photograph, description, habitat, ecology and distribution dot map. This is the third contribution of the series and deals with four families – the *Asphodelaceae* comprising two genera, *Asphodeline* and *Asphodelus*, the *Colchicaceae* comprising its own genus *Colchicum*, the *Fumariaceae* with the genus *Corydalis* and *Geraniaceae*, with *Geranium*.

Key words: *Asphodelaceae*, *Colchicaceae*, *Fumariaceae*, *Geraniaceae*, *Asphodeline*, *Asphodelus*, *Colchicum*, *Corydalis*, *Geranium*, distribution maps, Greece, NW Peloponnese

Introduction

Approximately a hundred species of bulb plants belonging to 14 families occur in nomos Ilias. This is the third contribution in the series (Giannopoulos & al. 2021) and deals with the family *Asphodelaceae* which comprises two genera, viz., *Asphodeline* and *Asphodelus*, *Colchicaceae* comprising *Colchicum*, *Fumariaceae* with *Corydalis* and *Geraniaceae* with *Geranium*. The latter two dicotyledonous genera are included as they have underground storage organs and aerial parts which die down in the dry months. The presentation in alphabetical order follows that adopted in the first two publications of the series.

Material and methods

Field studies have been carried out in the prefecture (nomos) of Ilias. Keys to the species, photographs, short descriptions, habitat, ecology, and distribu-

tion maps are provided for the taxa which are listed in alphabetical order. The general range within and without the prefecture is also indicated. For external distribution, reference is made to Floras of the neighbouring countries and Plants of the World online (Kew Science). Descriptive terminology is as used in English language Floras, e.g., *Flora Europaea*, *Mountain Flora of Greece*. Unqualified measurements refer to length or height. Two taxa are Greek endemics, one of which occurs in the mountainous area of the north-east as well as the mountains of Peloponnese, Sterea Ellas and S Pindos. The other is restricted to the Peloponnese and Ionian islands.

Results and discussion

ASPHODELACEAE

1. Leaves alternate. Inflorescence unbranched. Perianth segments yellow *Asphodeline*

– Leaves all basal. Inflorescence branched. Perianth segments white or pale pink *Asphodelus*

Asphodeline Rchb.

Asphodeline lutea (L.) Rchb. (Figs. 1:1 & 2)

Glabrous perennial herb with fleshy, fusiform roots. Stem erect, leafy throughout. Leaves numerous, alternate, linear, strongly veined, smooth at margins. Inflorescence dense, unbranched, with large, persistent, scarious bracts. Perianth tube short; segments yellow to greenish-yellow. Capsule globose, 11–14 mm in diam.

Northeastern part of Ilias (Mts Lambia, Skiadovouni, Erimanthos). Dry subalpine meadows, stony limestone slopes, 1210–1700 m. Flowering April to June. Italy to Balkans and Anatolia.

Asphodelus L.

Annual or perennial. Leaves numerous, basal, linear, c. half as long as stem. Scape erect, branched above; bracts persistent, scarious. Perianth segments free, elliptic-oblong, white or pale pink. Capsule broadly obovoid, smooth or wrinkled.

1. Roots fibrous. Leaves subterete, fistulose. Perianth segments 8–12 mm *fistulosus*

– Roots tuberous. Leaves flat. Perianth segments 12–20 mm *ramosus*

Asphodelus fistulosus L. (Figs. 1:2 & 2)

Annual or short-lived perennial with slender, fibrous roots. Leaves subterete, fistulose, 2.5–4 mm wide at middle. Scape 20–60 cm, fistulose, moderately branched above. Inflorescence lax; bracts small, scarious. Perianth segments 8–12 mm, white or pale pink with purplish-brown mid-vein. Capsule 4–5 mm in diam., smooth.

Scattered mainly in south-central parts of Ilias. Macchie, olive groves, roadside gravel and ruderal places, on limestone, 5–610 m. Flowering March to April. Mediterranean region.

Asphodelus ramosus L. [syn.: *A. aestivus* Brot.; *A. microcarpus* Viv.] (Figs. 1:3 & 2)

Perennial, with napiform root tubers. Leaves flat, 1–3 cm wide. Scape 50–120 cm, solid, usually much branched above. Partial inflorescences dense. Perianth segments 12–15(–20) mm, white with pink or brownish mid-vein. Capsule ovoid, 5–9 mm in diam., transversely wrinkled.

Widespread throughout Ilias. Openings in *Quercus* woodland, macchie, phrygana, olive groves, uncultivated fields, roadsides, archaeological sites, on limestone and schist, sea level to 780 m. Flowering January to June. Mediterranean region.

COLCHICACEAE

Colchicum L.

Perianth segments fused below into long, narrow tube. Stamens 6. Styles 3, free. Ovary subterranean; capsule maturing at or above ground within tuft of leaves. Corms and leaves poisonous.

The four species occurring in Ilias are autumn flowering, two of them are endemic. *Colchicum cupani* Guss. a late flowering species occurring less than 1 km away in adjacent Achaia (Kalogria) has so far not been found in Ilias. However, it has been brought into cultivation near the source of the Lefkianias river in central Ilias.

1. Stigmas punctiform. Leaves less than 5 mm wide *parlatoris*

– Stigmas decurrent. Leaves more than 5 mm wide . . . 2.

2. Perianth segments tessellated *bivonae*

– Perianth segments untessellated or obscurely tessellated 3.

3. Leaves obtuse, dull dark green; perianth segments untessellated *graecum*

– Leaves acute-acuminate, shiny light green; perianth untessellated or obscurely tessellated *Colchicum* sp.

Colchicum bivonae Guss. [syn.: *C. sibthorpii* Baker; *C. tuntasianum* Heldr.] (Figs. 1:4 & 2)

Corm broadly ovoid; tunics dark brown, extended into a short (1–3 cm) neck. Leaves absent at flowering, suberect, lanceolate, 1–3 cm wide, glossy green, glabrous. Perianth tube greenish-white; segments elliptic-oblong to narrowly obovate, pale to deep pinkish-purple, tessellated. Anthers reddish or purplish-brown; pollen yellow to orange. Styles recurved at apex.

Widespread in central and eastern part of Ilias. Rocky and stony slopes, on limestone, *Quercus* woodland, *Phlomis* phrygana, olive groves, 30–1130 m. Flowering September to October. Corsica and Sardinia, S Italy to Balkans and W Anatolia.

A variable species with perianth segments differing in shape, width and degree of tessellation. $2n=48$ (Persson 2009: electronic supplement, material from Andritsena).

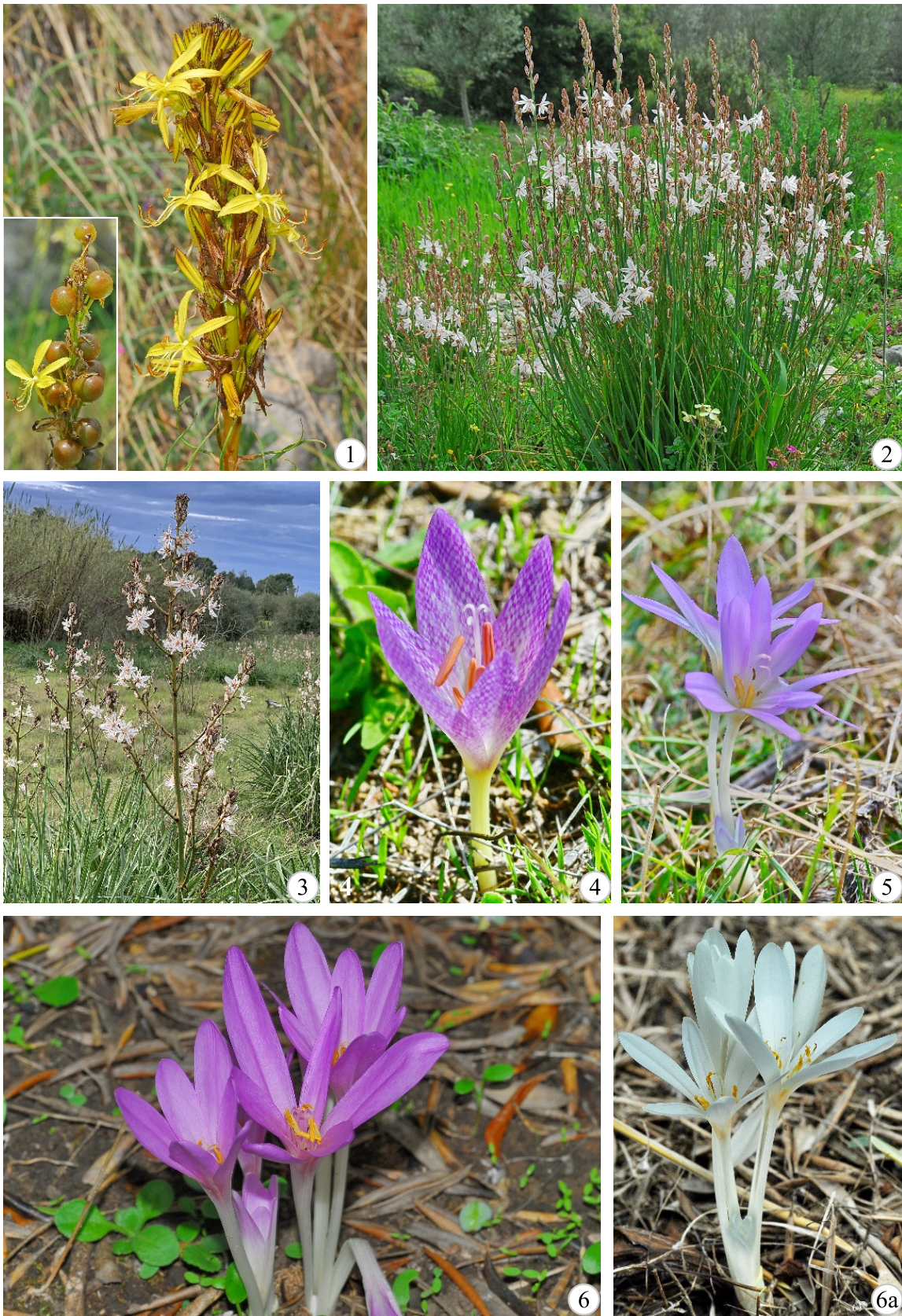


Fig. 1. *Asphodelaceae* and *Colchicaceae* taxa in nomos Ilias: 1, *Asphodeline lutea* 2, *Asphodelus fistulosus* 3, *Asphodelus ramosus* 4, *Colchicum bivonae* 5, *C. graecum* 6 & 6a, *Colchicum* sp.

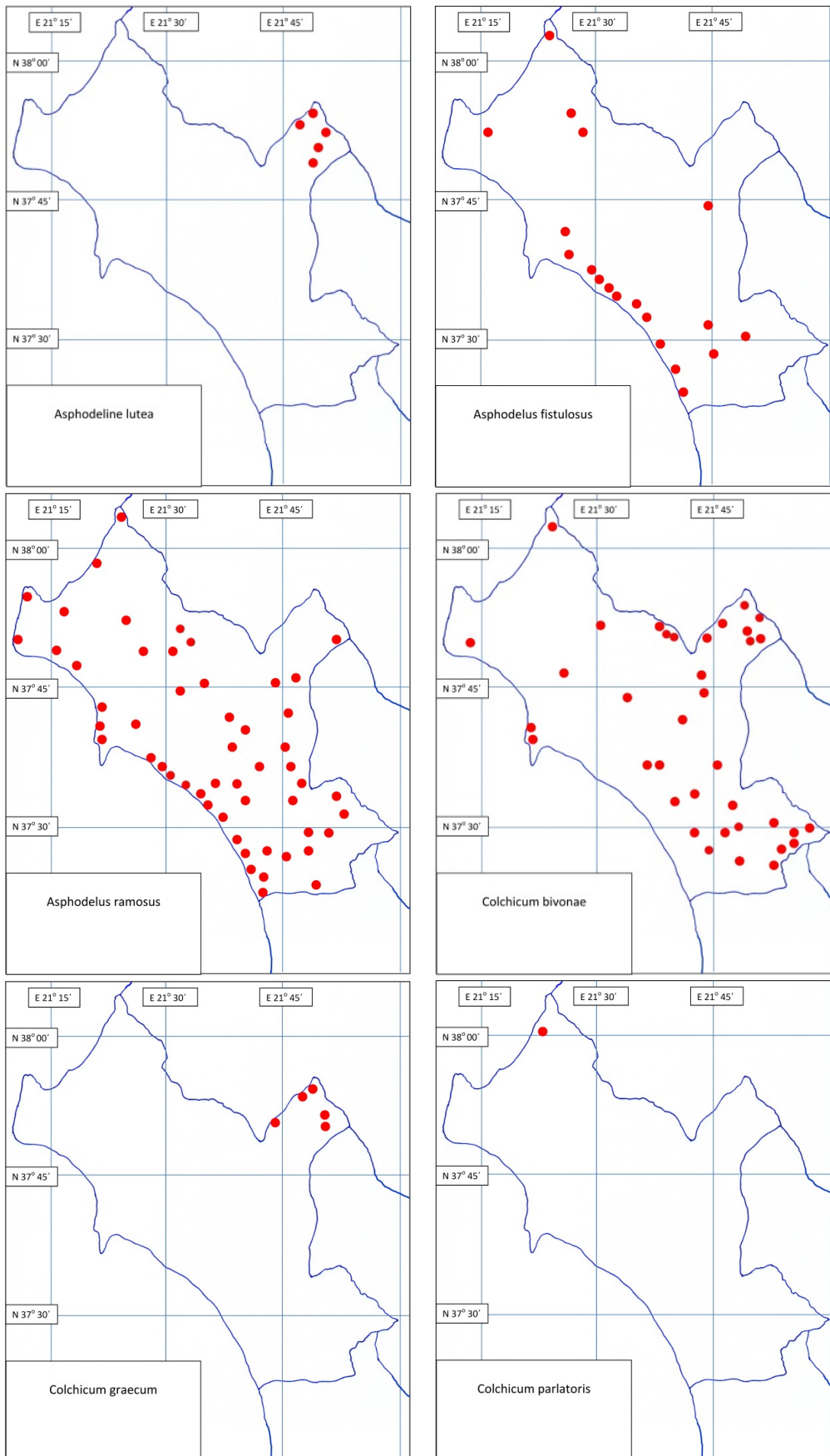


Fig. 2. Distribution of *Asphodelaceae* and *Colchicaceae* in nomos Ilias.

Colchicum graecum K. Perss. (Figs. 1:5 & 2)

Corm ovoid to globose. Leaves absent at flowering, elliptic-oblong, 2–6 cm wide, erect, often slightly twisted, obtuse, glabrous. Perianth tube white to yellowish-white; segments oblong-ob lanceolate, lilac to pinkish-purple, not tessellated. Anthers and pollen yellow. Styles recurved at apex.

Northeastern part of Ilias (Mts Lambia, Skiadovouni, Erimanthos). Open rocky and stony limestone slopes, 1210–1740 m. Flowering July to August. Endemic to Greece (mountains of Peloponnese, Sterea Ellas and S Pindos).

Colchicum parlatoris Orph. (Fig. 2)

Corm ovoid; tunics coriaceous, extended into a long neck. Leaves linear, 2–4 mm wide, usually absent at flowering, glabrous. Perianth tube white; segments narrowly elliptic-oblong, pale lilac to pinkish-purple, not tessellated. Anthers and pollen yellow. Styles straight or slightly bent near apex.

Rare in northwestern Ilias. Wet meadows in forest, on siliceous alluvium, sea level to 10 m. Flowering late October. Endemic to Greece (Peloponnese, Ionian islands).

The occurrence of *C. parlatoris* was based on a collection by Maire and Petitmengin (no. 2298) on 27 October 1906 from Manoladha forest [sub nom. *C. neapolitanum* var. *parlatoirei* (Orph.) Richt.]. Attempts to locate plants or the site more than a hundred years later were unsuccessful but there is no reason to doubt an existence since the area is not far away from Strofilia and Metochi (nomos Achaias) where plants still occur.

***Colchicum* sp.** (Figs. 1:6, 6a & 2.1.)

Corm ovoid to globose. Leaves absent at flowering, lanceolate, 1.5–3 cm wide, erect-spreading, acute to acuminate, glabrous. Perianth tube white; segments elliptic-oblong, pale to dark pinkish-purple, not tessellated. Anthers and pollen orange to yellow. Styles recurved at apex.

Central part of Ilias. Grassy slopes in olive grove, on *terra rossa* overlying limestone, c. 80 m. Flowering September to October.

White-flowered forms (Fig. 1:6a) occur in an unusually dark pink-flowered population (Fig. 1:6) at Skliava near Olympia in central Ilias. The population has been monitored for the past 14 years and the plants have retained all their characteristics. Possibly an undescribed taxon.

FUMARIACEAE

Corydalis DC.***Corydalis solida*** subsp. *incisa* Lidén (Figs. 3:1 & 4)

Tuber solid, globose. Basal leaves absent. Stem erect, with two alternate, petiolate leaves and a membranous scale-leaf below lowest leaf. Leaves 3–4-ternate with lanceolate to linear lobes, glaucous beneath. Raceme dense, 5–20-flowered, elongating and erect in fruit. Bracts deeply divided with the primary divisions again divided or dentate. Pedicels slender, recurved in fruit. Corolla white to pale purple; outer petals winged; inner petals internally tipped dark reddish-purple. Capsule lanceolate, dorsiventrally flattened, pendent.

Northeastern part of Ilias (Mt Lambia). Stony limestone slopes, scree, 1210–1400 m. Flowering March to April, with *Scilla* and *Crocus* at the edge of melting snow. Mainly S and W Balkan Peninsula.

GERANIACEAE

Geranium L.***Geranium macrostylum*** Boiss. (Figs. 3:2, 2a & 4)

Perennial with slender rhizome bearing swollen terminal and intercalary tubers. Basal leaves divided

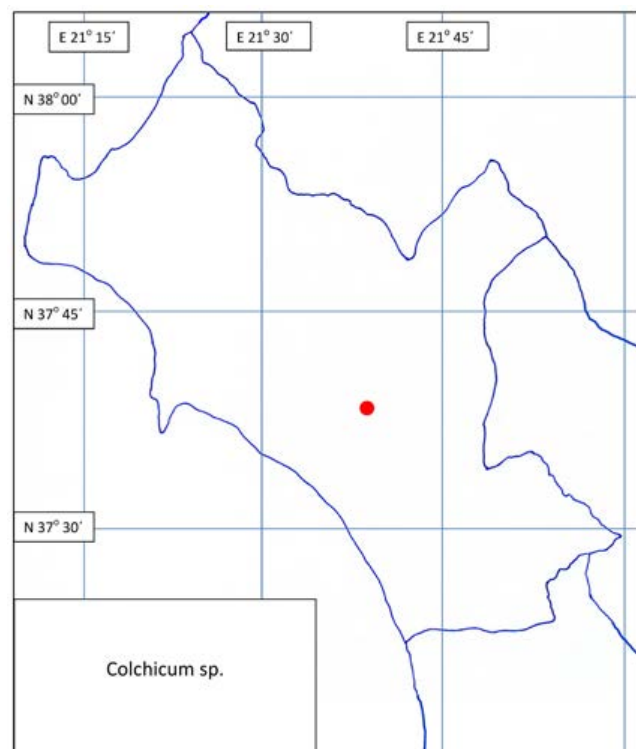


Fig. 2.1. Distribution of *Colchicum* sp. in nomos Ilias.

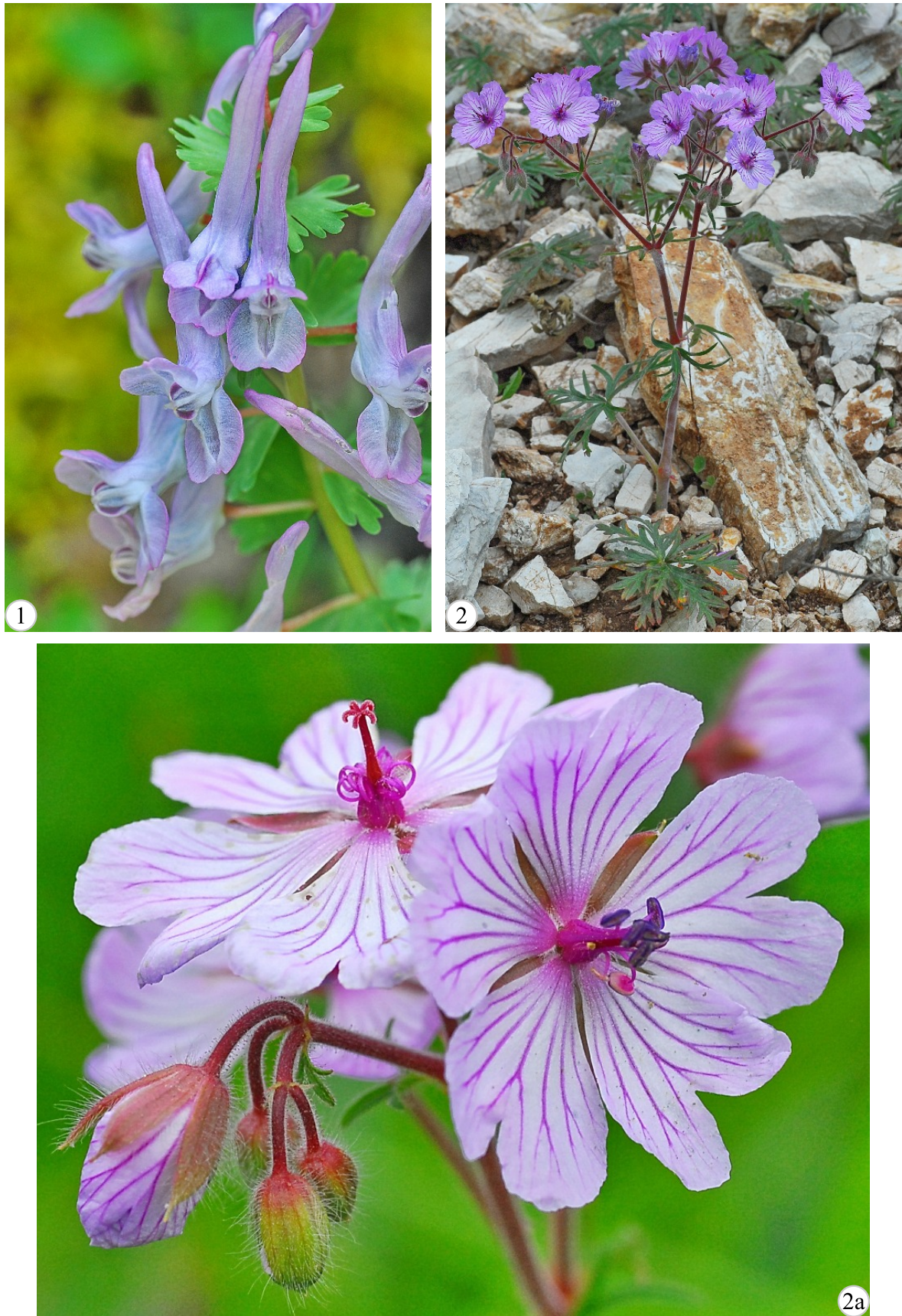


Fig. 3. *Corydalis* and *Geranium* species in nomos Ilias: 1, *Corydalis solida* subsp. *incisa* 2 & 2a, *Geranium macrostylum*

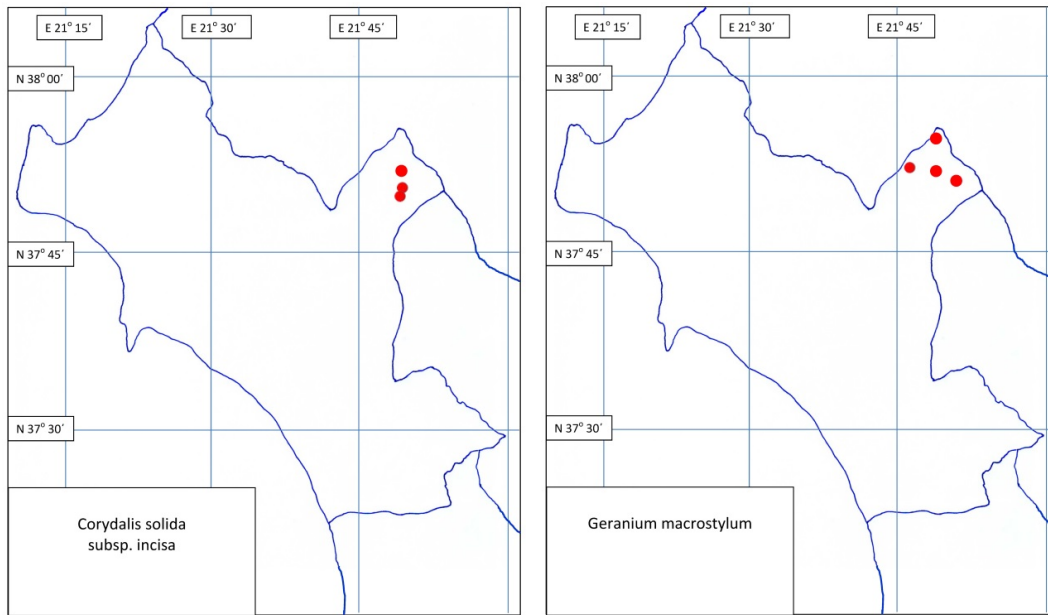


Fig. 4. Distribution of *Corydalis* and *Geranium* species in nomos Ilias.

with segments deeply pinnatifid. Stem unbranched, with a pair of pinnatifid cauline leaves and a pair of leaf-like bracts subtending inflorescence. Upper part of stem, peduncles and pedicels glandular-pubescent. Petals obovate, emarginate, pink veined reddish-purple. Mericarps villous; beak glandular-pubescent, glabrous in slender apical part.

Northeastern part of Ilias (Mts Lambia, Skiado-vouni, Erimanthos). Stony limestone slopes, open gravelly scree, 1200–1680 m. Flowering June to July. Balkans to W and S Anatolia.

Related to *G. tuberosum* L., easily distinguished by the pair of cauline leaves and the glandular-pubescent pedicels.

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