

On the distribution and variability of *Genista sakellariadis* (*Fabaceae*) in Greece

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Abstract. *Genista sakellariadis* (*Fabaceae*) belonging to *Genista* sect. *Spartioides* is a local endemic previously thought to be restricted to the eastern and northern foothills of Mt Olimbos in phytogeographical region North Central. Its occurrence is now reported for East Central Greece. Two morphotypes were noted in the new locality. One of them has lax, patent-hairy shoots and leaves together with short, compact and more densely hairy inflorescences. The other morphotype has longer, lax subsecund racemes with 4–10 flowers and dense appressed-sericeous indumentum together with patent or semi-patent hairs. Both forms also exist on Mt Olimbos but have never been realized or given formal recognition. They are presented with comments on variation. A lectotype for *G. sakellariadis* is designated.

Key words: endemic, *Genista*, Greece, new morphotypes, new records, taxonomy

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Introduction

Photographs of a flowering *Genista* from Nomos Larisis sent for identification to Kit Tan by Giannis Kofinas revealed a species resembling *G. sakellariadis* Boiss. & Orph. endemic to the eastern and northern foothills of Mt Olimbos. A detailed study confirmed it differed in some aspects from type material of this species. Another gathering from the same locality had a dissimilar facies with plants bearing short compact,

few-flowered inflorescences and patent-hairy stem and leaves. It also differs from the type material. Two main types of indumentum are thus found. Plants with hairs patent and plants with hairs appressed sericeous. And two types of inflorescences occur, with flowers borne singly in long racemes or with flowers clustered in short, compact racemes. The leaves can have appressed hairs on both surfaces or appressed hairs together with patent or semi-patent hairs on the surfaces and margins. It is difficult to find any clear correlation

in the morphological variation of the Larisis plants, we consider they represent extreme forms of *G. sakellariadis* sensu Orphanides. We have thus referred all to a single polymorphic species *G. sakellariadis*. However, some grouping can be made at an infraspecific level and we propose to recognize two forms.

Material and methods

Genista sakellariadis from Larisis was first noted on 27 May 2023 and 21 June 2023 by G. Kofinas at the flowering stage. Observation of this plant at fruiting stage was made on 30 September 2023 by Kit Tan and G. Vold. However, the plant material they collected (*Kit Tan & G. Vold* 33255) were of plants growing in the same locality but having some different morphological traits. This was not realized in a preliminary identification in the field. Closer examination and comparison with relevant herbarium material revealed they differed in indumentum-type and form of inflorescence.

Results and discussion

Description of species

Genista sakellariadis Boiss. & Orph. in Diagn. Pl. Orient., ser. 2, 6:42 (1859) (Figs. 1-3)

[Greece, Nomos & Eparchia Pierias]: "In regione media montis Olympi Thessali supra monasterium Sancti Dionysii alt. 5000", 28 July 1857, *Orphanides* Flora Graeca Exsiccata 597 [Lectotype designated here by Kit Tan and J. Zieliński: G-BOIS (G00331411); isolectotypes BM, BR, G (G0063422 & G00365586), G-BOIS (G00331412), K, MANCH, S, W (W0031693), WU-Hal (WU0106596 & 0106597)]. WU0106598 (WU-Hal) bears a different collecting number Herb. Orphanideum 3091 but is undoubtedly of the same gathering and so is also included as an isolectotype.

Non-spiny, erect, much-branched shrublet to 30 cm tall. Stems woody, striate, subterete, unwinged;

branches alternate, pubescent. Flowering stems and shoots numerous, patent or semi-patent hairy. Leaves alternate, simple, 5-15 × 1-2 mm, elliptical to linear lanceolate, subsessile, entire, patent hairy and appressed sericeous on both surfaces. Stipules pulvinate. Bracts leaf-like, to 6 mm. Bracteoles 1.5-4 mm long, borne just below the calyx. Flowers 3-10, in racemes, solitary in axil of each bract. Pedicels short, 1.5-3 mm. Calyx bi-labiate, 4-7.5 mm long, sericeous; tube 2.5-3.5 mm, shorter than or subequalling teeth; upper lip 2-fid with broadly triangular, 2-4 mm long teeth; lower lip 3-toothed with linear-lanceolate, 2-3.5 mm long teeth. Corolla bright yellow, 7-10 mm long; standard slightly retuse, broadly ovate, as long as or slightly shorter than keel, uniformly sericeous; wings shorter than standard, with 2-2.5 mm long claw, glabrous; keel oblong, densely white-sericeous. Legume dehiscent, 1-3-seeded, 10-14 mm long, narrowly ovoid-oblong, acuminate, sericeous-pubescent. Seeds oblong-ovoid, 1-1.25 mm long, smooth, brown, without strophiole.

$2n = 36 + 2B$ (Cusma Velari & al. 2009).

Rocky limestone slopes, gravelly coastal flats (near old railway station at Litochorion), sea level to 1400 m. Flowering May to August, fruiting July to September.

A very variable species in habit, stem and leaf indumentum, and structure of inflorescence. Two forms can be distinguished; the differences between them are presented in the key below:

1. Stems slender, flexuous. Indumentum on stem, shoots and leaves mainly appressed silvery-sericeous. Flowers 4-10, in lax subsecund racemesf. *sakellariadis*
- Stems rigid, erect or prostrate. Indumentum on stem, shoots and leaves mainly patent to subpatent-pilose. Flowers 2-4, in compact clustered racemesf. *compacta* Kit Tan & Ziel.

New locality records

Genista sakellariadis f. *sakellariadis* (Fig. 2)

Nomos Larisis, Eparchia Elassonos: NE of village



Fig. 1. *Genista sakellariadis* f. *sakellariadis* (Mt Olimbos): isolectotype (WU-0106598).

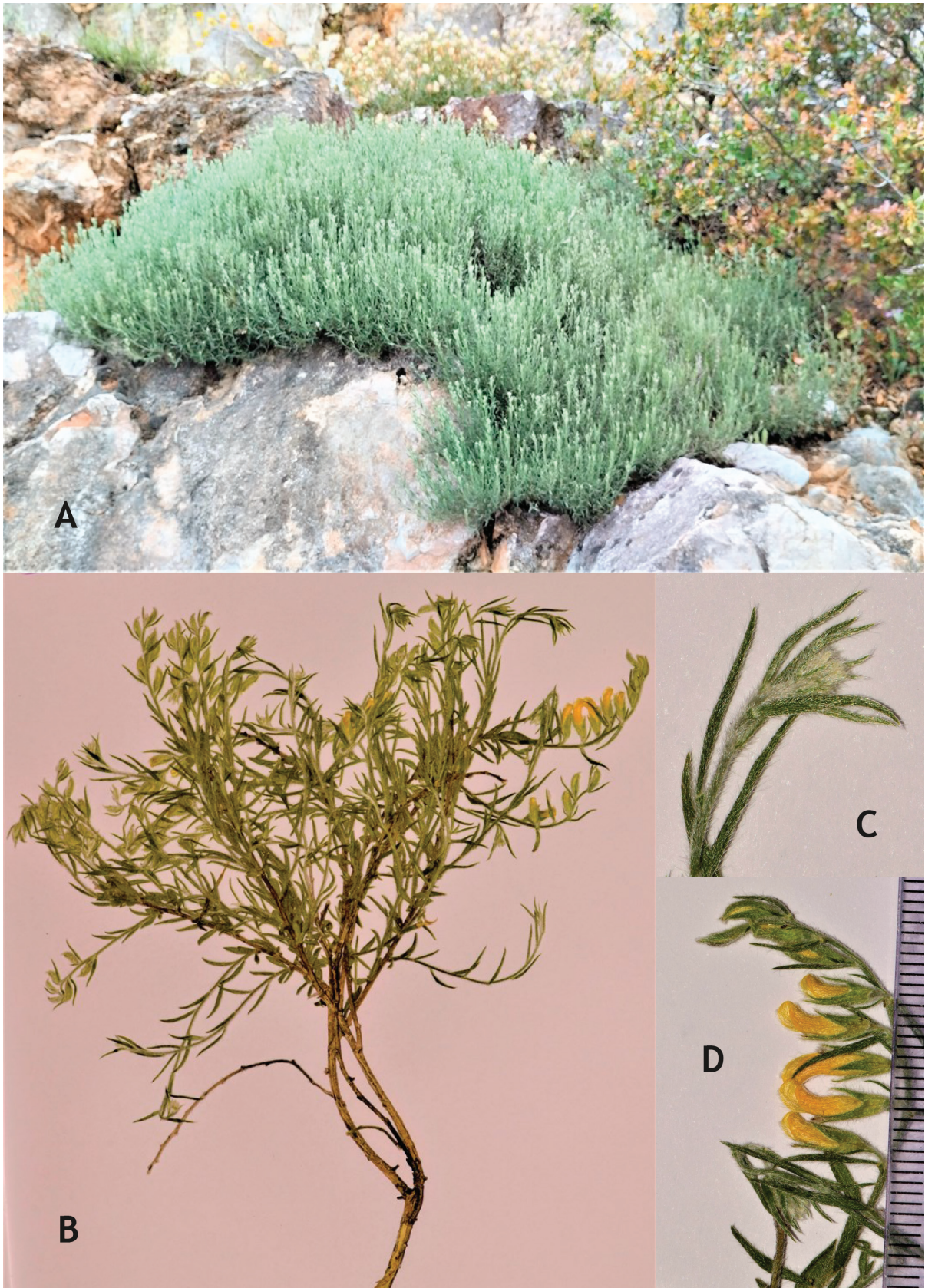


Fig. 2. *Genista sakellariadis* f. *sakellariadis* (Loutro): **A**, habit; **B**, flowering stems; **C**, leaves with silvery-sericeous indumentum; **D**, flowers in lax raceme.

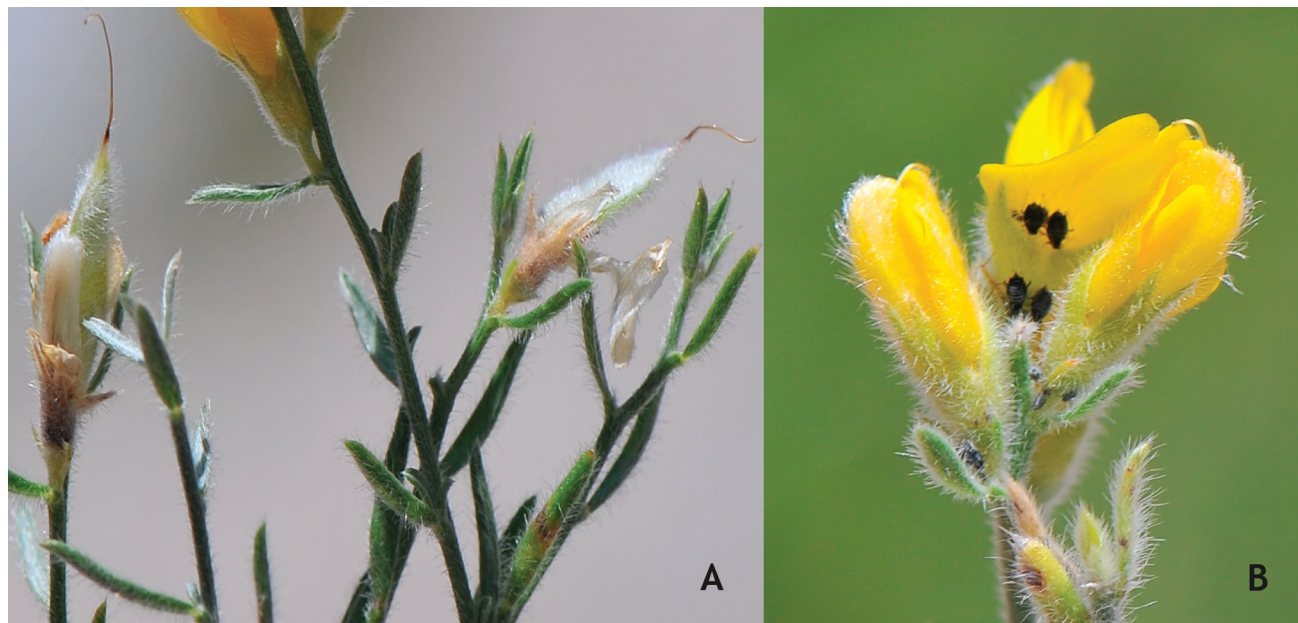


Fig. 3. *Genista sakellariadis* f. *compacta* (Mt Olimbos): **A**, stem and leaves with patent to sub-patent pilose indumentum; **B**, flowers in compact cluster.

Loutro, dry stony limestone slopes, 789 m, 39°57'N, 21°54'E, flowering, 21 June 2023, *Kofinas* s.n. (herb. *Kofinas*); *loc. ibid.*, flowering, 27 May 2023, *Kofinas* obs. (photos); *loc. ibid.*, 30 September 2023, *Kit Tan* & *G. Vold* obs.

Genista sakellariadis* f. *compacta Kit Tan & Ziel., f. ***nova*** (Fig. 3)

Typus: Nomos Larisis, Eparchia Elassonos: NE of village Loutro, dry stony limestone slopes, 789 m, 39°57'N, 21°54'E, 30 September 2023, *Kit Tan* & *G. Vold* 33255 (holotype C; isotypes ATH, KOR).

Nomos & Eparchia Pierias: Mt Olimbos, on way to Prionia, limestone slopes, 1000 m, 40°05'N, 22°24'E, flowering, 20 July 2023, *Kipopoulos* obs. (photos); *loc. ibid.*, flowering, 17 August 2023, *Kofinas* obs. (photos).

Genista sakellariadis is a species new for Nomos Larisis, Eparchia Elassonos and phytogeographical region East Central. Previously known only from Mt Olimbos in Nomos and Eparchia Pierias (North Central). The new locality extends the distribution of *G. sakellariadis* more eastwards.

Theodorus G. Orphanides collected a *Genista* on Mt Olimbos in July 1857, flowering material of which he sent to Pierre Edmond Boissier at Geneva. Together, they named the plant after Mr Sakellariades, presumably a close friend of Orphanides in Athens. Very little is known about Sakellariades and his name had not been traced to another botanical epithet. However, his friendship must have been esteemed by Orphanides since *G. sakellariadis* is described as “rarissime”, occurring on the foothills of the highest mountain in Greece, also the second highest in the Balkan Peninsula. We may assume it was not considered by Boissier and Orphanides as just a common plant but one of interest and merit.

Boissier diagnosed *G. sakellariadis* as resembling *G. sericea* Wulfen which differs by its broader obtuse leaves, capitulate racemes and pedicels with two small scales “pedicello 2 squamulas minimus ferenti”, the latter referring to the small bracteoles.

Genista sakellariadis belongs to *Genista* subgen. *Genista* sect. *Spartioides* Spach which is characterized by non-spiny stems, simple leaves, broadly ovate sericeous standard equalling wings and sericeous keel and narrowly oblong pubescent legume with more than 2 seeds. The length of the standard relative to the keel is

an important subgeneric and sectional character. *Genista sakellariadis* was assigned to this section by Gibbs (1966, 1968) but it is anomalous in that the wings are up to 2/3 the length of keel, thus clearly shorter than the standard. Exceptions to a pattern probably do occur.

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