

# Typification of the names and taxonomic status of six taxa of *Gagea* Salisb. (Liliaceae) conserved at Firenze (FI)

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## Typification of the names and taxonomic status of six taxa of *Gagea* Salisb. (Liliaceae) conserved at Firenze (FI)

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### ABSTRACT

PERUZZI, L. & J.-M. TISON (2006). Typification of the names and taxonomic status of six taxa of *Gagea* Salisb. (Liliaceae) conserved at Firenze (FI). *Candollea* 61: 293-303. In English, English and French abstracts.

*Gagea granatellii* var. *boveana* A. Terracc., *Gagea iberica* A. Terracc., *Gagea mauritanica* var. *balansae* A. Terracc., *Gagea pampaninii* A. Terracc., *Gagea pinardii* A. Terracc., *Gagea syriaca* A. Terracc. are typified. Each type is illustrated and discussed. The taxonomic value of these taxa is discussed.

### RÉSUMÉ

PERUZZI, L. & J.-M. TISON (2006). Typification des noms et statut taxonomique de six taxons du genre *Gagea* Salisb. (Liliaceae) conservés à Florence (FI). *Candollea* 61: 293-303. En anglais, résumés anglais et français.

*Gagea granatellii* var. *boveana* A. Terracc., *Gagea iberica* A. Terracc., *Gagea mauritanica* var. *balansae* A. Terracc., *Gagea pampaninii* A. Terracc., *Gagea pinardii* A. Terracc., *Gagea syriaca* A. Terracc. sont typifiés. Chaque type est illustré et commenté. La valeur taxonomique de chacun de ces taxons est discutée.

**KEY-WORDS:** LILIACEAE – *Gagea* – Typification

***Gagea granatellii* var. *boveana*** A. Terracc. in Bull. Soc. Bot. France 52, Mém. 2: 16. 1905.

**Lectotypus (here designated): ALGERIA:** Alger, collines près de la Réhaya, III.1837, *Bové s.n.* (FI-Webb!, n° 183424, right specimen) (Fig. 1).

Describing *G. granatellii* var. *boveana* as a smaller variant of *G. granatellii* s.str., TERRACCIANO (1905) writes: “*Cl. Bové dicata, qui primum invenit et pro Gagea sp. n. distribuit*”. In the previous page, he affirms to have seen these specimens in the herbaria of Paris (P), Kew (K), de Candolle (G) and Firenze (FI). The latter was traced at FI-Webb (Fig. 1) and is here regarded as the lectotypical collection; the most informative plant is chosen as the lectotype. It is noteworthy that the specimen is labelled *manu* Achille Terracciano as *G. granatellii* var. *algeriensis*, a name never validly published; very likely, the provisional term “*algeriensis*” was substituted in course of publication with the term “*boveana*”, in honour of the collector.

*Taxonomic discussion.* – The morphology of the typical specimens fully agrees with *G. granatellii* (Parl.) Parl. s.l., a polymorphic or aggregate species including at least three very close or synonymic taxa: *G. granatellii*, *G. lacaitae* A. Terracc., *G. chabertii* A. Terracc. (PERUZZI & TISON, 2004; TISON, 2004b). The size of these plants is very variable according to living conditions and cannot be retained as a taxonomic feature. In its most characteristic aspect, *G. lacitae* differs from var. *boveana* by its short peduncle bearing an elongate, cymose inflorescence with more or less alternate leaves, and its oblanceolate obtuse tepals; *G. chabertii* by its long peduncle bearing a strictly umbellate inflorescence with a whorl of leaves. Though inferring taxonomic relationships on only two flowering plants is inevitably uncertain in this group, the morphology of var. *boveana* is compatible with *G. granatellii* s.str.: short peduncle, sub-umbellate inflorescence with subwhorled leaves, lanceolate subacute tepals.

***Gagea iberica*** A. Terracc. in Boll. Soc. Ort. Palermo 2(3): 6. 1904.

≡ *Gagea durieui* subsp. *iberica* (A. Terracc.) A. Terracc., Revis. Gagea Fl. Spagn.: 56. 1905.

**Lectotypus (here designated):** SPAIN: Regnum Granatense, loc. glareos. umbrosis in pratibus superioribus Baranco del Caballar, pr. Almeira, 5.IV.1879, *Huter, Porta & Rigo 521* (FI!, sub *G. polymorpha*, central complete specimen; iso-: G!, MPU!, P!) (Fig. 2).

STROH (1937) quotes as type: “Reverchon, 12.2.1890, Sierra de Malaga (Herb. Berol.)” but in the protologue (TERRACCIANO, 1904) are cited neither this locality, nor the Herbarium of Berlin (B). Terracciano instead explicitly refers to *Huter, Porta & Rigo 521* and, among others herbaria, to Herbarium of Firenze. We traced in FI this collection (Fig. 2), and its most complete and representative plant is selected as the lectotype.

*Taxonomic discussion.* – According to TISON (2004a, 2004b), this unit is to be considered conspecific with *G. durieui*.

***Gagea mauritanica*** var. *balansae* A. Terracc. in Bull. Soc. Bot. France 52, Mém. 2: 18. 1905.

**Lectotypus (here designated):** ALGERIA: coteaux incultes à l’est d’Oran, 9.II.1852, *Balansa, Pl. Algérie 1852: n° 225* (FI-Webb! n° 183412, specimen on the left) (Fig. 3).

*Specimen visum alterum.* – ALGERIA: Mostaganem, sur les coteaux incultes, 19.III.1851 (FI) – 13.IV.1851 (Fr.), *Balansa, Pl. Algérie 1851: n° 165* (FI-Webb! n° 183413).

Describing *G. mauritanica* var. *balansae*, TERRACCIANO (1905) does not explicitly mention any specimen. However, because of eponymy, we can infer that he based his description on several herbarium specimens with 3 cauline leaves, collected by Balansa near Oran and listed one page before the protologue as conserved in several herbaria (among them, FI). Two of them were traced at FI-Webb; the most representative one (Fig. 3) is here selected as the lectotypical collection and, in this collection, the complete plant appears as the most worthy lectotype.

*Taxonomic discussion.* – All the species of sect. *Didymobolbos* have several cauline leaves, usually more numerous than the flowers and decreasing in size; the 2-4 lower cauline leaves are big, the last ones are small and bract-like. The leaves appear whorled if the inflorescence is umbellate, which is the normal conformation of *G. mauritanica*. This species is commonly small and 1-2-flowered with only 2 or 3 unequal cauline leaves, but tall specimens can bear up to 5-7 flowers and 7-12 cauline leaves. Such a variation is absolutely normal. Since the var. *balansae* has no particular ecological or chorological features, we can admit it as fully conspecific with *G. mauritanica*.

***Gagea pampaninii*** A. Terracc. in Pamp., Pl. Tripol.: 53. 1914 [pro hybr.].

**Lectotypus (here designated):** LIBYA: Tarhuna, Uadi Milgah, 26.II.1913, *Pampanini* 301 (FI!, upper second specimen from right) (Fig. 4).

*Specimina visa altera.* – LIBYA: Tarhuna, colline ad E. di Kasr Tarhuna, 27.II.1913, *Pampanini* 385 (FI!); Tarhuna: Abiar Milgah, 28.II.1913, *Pampanini* 414 (FI!)

In the protologue, TERRACCIANO (1914) quotes the specimens n° 301, 414 and 4900 of Pampanini's collections. We traced in FI n° 301, 414 and n° 385. While the latter should be obviously excluded for typification purposes, both specimens n° 301 and 414 can be instead considered as original material. We selected one well representative specimen of the first locality cited, Uadi Milgah (n° 301, Fig. 4) as lectotypical collection of the name *G. xpampaninii* A. Terracc.; a subcomplete, well-developed plant is designated as the lectotype.

*Taxonomic discussion.* – Though it was interpreted by its descriptor as *G. fibrosa* x *G. granatellii* (TERRACCIANO, 1914), *G. pampaninii* cannot be such a hybrid. Its morphology is coherent with sect. *Platyspermum* s.str. (LEVICHEV, 1990): coriaceous, long-acuminate tepals, one filiform pentahedral basal leaf, linear whorled cauline leaves without ovate basal dilatation. The lack of fibrous collar at the top of the bulb and the thick roots does not necessarily refer to *G. granatellii*: these features are found within sect. *Platyspermum*, especially in *G. dayana* Chodat & Beauverd, a rare Israeli and Lebanese species described in 1932 and so unknown to Achille Terracciano. At the adult stage, *G. dayana* and *G. pampaninii* are morphologically similar. Their possible identity, however, cannot be proved without a detailed study, because the species of sect. *Platyspermum* often differ only at immature stages and are quite identical when flowering (LEVICHEV & TISON, 2004). However, if these two taxa are shown to be conspecific, the name *G. pampaninii* will hold priority over *G. dayana*.

***Gagea pinardii*** A. Terracc. in Boll. Soc. Ortic. Palermo 2(3): 8. 1904.

**Lectotypus (here designated):** TURKEY: Caria, 1843, *Pinard s.n.* (FI!, sub *G. billardieri*, bottom left plant; iso-: FI-Webb! n° 183447, G!, MPU!) (Fig. 5).

In the protologue, TERRACCIANO (1904) cites specimens from Firenze (FI) and Wien (WU). Both specimens traced in FI and FI-Webb are labelled *manu* Terracciano as *G. pinardii*. The specimen at FI was revised in May 1904, while the one at FI-Webb lacks date of revision. Since the description of this species was ultimated by Terracciano in August 1904, i.e. a few months after the revision of the FI collection, we select this collection (Fig. 5) as the lectotypical one. The only entire plant of the sheet is chosen as the lectotype.

*Taxonomic discussion.* – According to RIX (1984), *G. pinardii* and *G. dubia* A. Terracc. would be conspecific with *G. granatellii* (Parl.) Parl. TISON (2004b) instead transfers *G. pinardii* in the synonymy of *G. dubia*, the latter being specifically distinct from *G. granatellii*. Probably both viewpoints are erroneous. The differences between *G. granatellii* and *G. dubia* are clear, especially regarding the anatomy of the basal leaves (TISON, 2004b), but both species are stout plants with broad basal leaves (2,5-5 mm at flowering time). All the syntypes of *G. pinardii* have instead a gracile habitus, very narrow basal leaves (1-1,5 mm) and an unusually long peduncle. Whereas the juvenile stages and the anatomical features of this plant are unknown, such a morphology is not clearly interpretable: *G. pinardii* may be either a narrow-leaved form of *G. dubia*, a microspecies close to other representatives of sect. *Didymobolbos* (i.e. *G. villosa* (M. Bieb.) Sweet, *G. bohémica* (Zauschner) Schultes & Schultes f. etc.) or, very likely, an original species. The latter hypothesis needs further investigation on living plants.

*Gagea syriaca* A. Terracc. in Boll. Soc. Ortic. Palermo 2(3): 9. 1904.

**Lectotypus (here designated):** TURKEY: Tokat, s.d., *Aucher-Eloy 5403* (FI!; iso-: FI-Webb! n° 183498) (Fig. 6).

*Specimen visum alterum.* – IRAN: In alpe Kuh Delu, in paludosis reg. altiarum, 11.VI.1842, *Kotschy 484* (FI!)

In the protologue, TERRACCIANO (1904) cites specimens from several herbaria, including FI. All the three specimens traced can be considered as original material. One of them (Fig. 6) is selected as lectotype. It is noteworthy to say that the name *Ornithogalum syriacum* Ehrenberg, cited among the synonyms of this species (TERRACCIANO, 1904) appears to be a *nomen nudum* found by the author in a manuscript in Berlin.

*Taxonomic discussion.* – According to RIX (1984) this unit would be synonymic with *G. luteoides* Stapf, such as *G. linearifolia* A. Terracc., *G. sintenisii* Pascher and *G. assyria* A. Terracc. LEVICHEV (1990) agrees with Rix about *G. linearifolia*, *G. sintenisii* and *G. assyria*, but admits instead *G. syriaca* as a synonym of *G. fragifera* (Vill.) Bayer & López González. We fully confirm the opinion of the latter author. Indeed, *G. linearifolia*, *G. sintenisii* and *G. assyria* (types at G!) are morphologically similar to *G. luteoides*. The ambiguousness of the name *G. syriaca* is due to Achille Terracciano himself, who attributed the collection *Sintenis 1888.123* (Birecik, Turkey) firstly under *G. syriaca* and then under *G. linearifolia* A. Terracc. (= *G. sintenisii* Pascher) (TERRACCIANO, 1904: 8). This large collection (G!), including type sheets of *G. linearifolia* and *G. sintenisii*, actually seems to be composed by several species (e.g. *G. luteoides* Stapf or a very close taxon) and then needs further study.

In the description of *G. syriaca*, TERRACCIANO (1904) quotes “Ad stirpem *G. Liotardi* pertinet”. The typical specimen designated here actually shows the very characteristic first cauline leaf of *G. fragifera* (= *G. liotardii*) with a broad ovate basis and a long tubular apex (TISON, 2004c); the first cauline leaf of *G. luteoides* is lanceolate without obvious tubular part. According to this, we include *G. syriaca* in the polymorphic complex of *G. fragifera* and *G. anisanthos*, which probably represents a single species (I. G. Levichev, pers. comm.).

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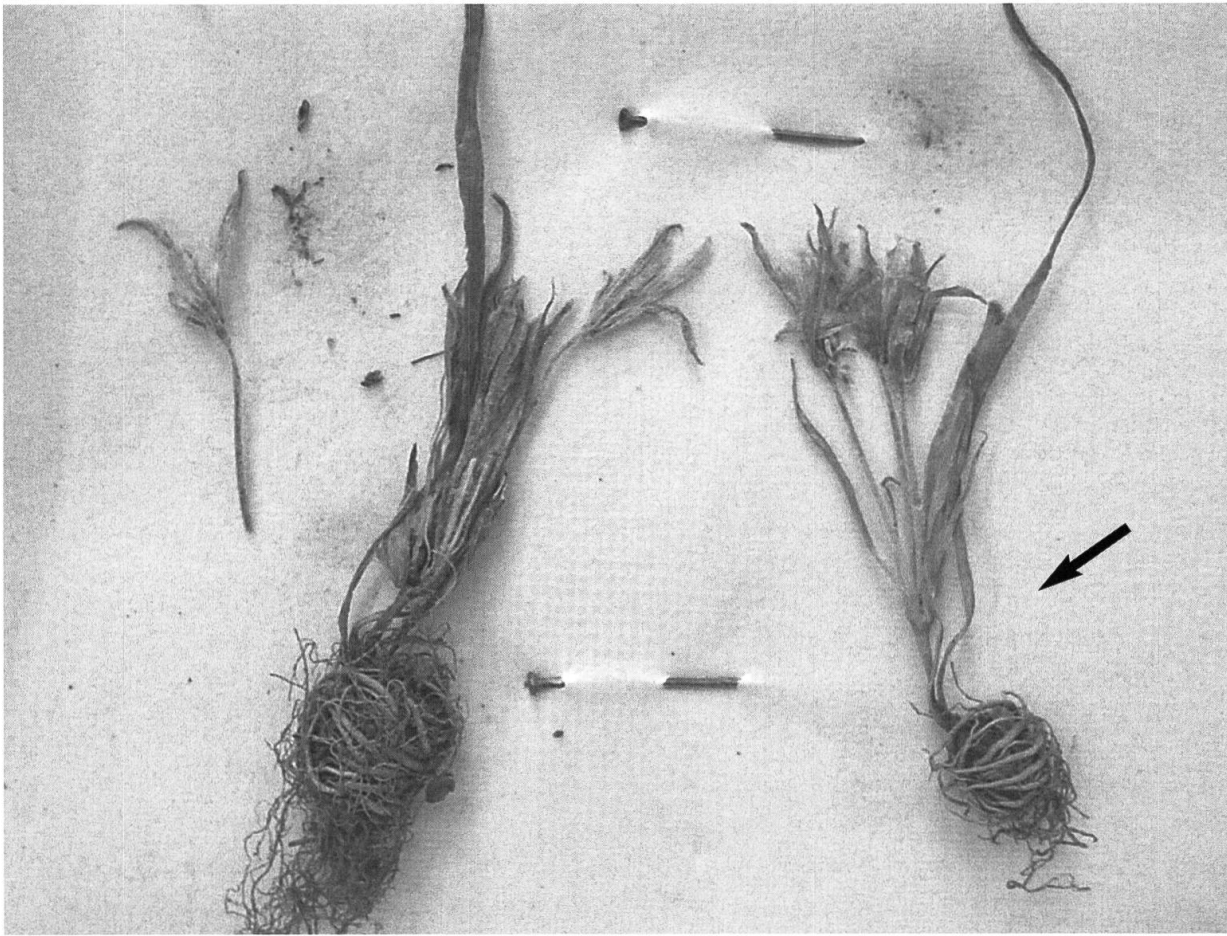


Fig. 1. – Lectotypus (right specimen) of the name *Gagea granatellii* var. *boveana* A. Terracc., conserved at FI-Webb.



Fig. 2. – Lectotypus (central complete specimen) of the name *Gagea iberica* A. Terracc., conserved at FI.



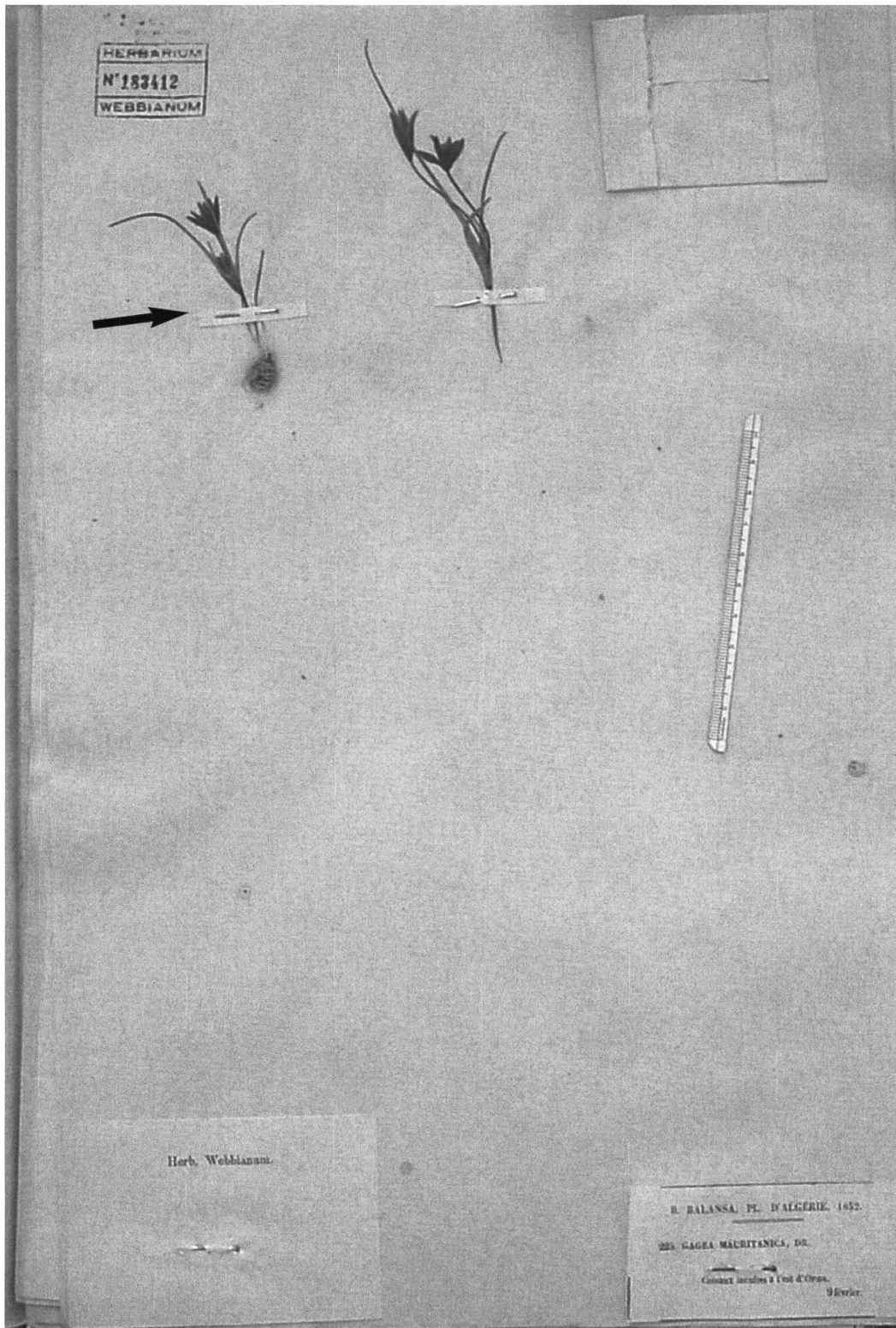


Fig. 3. – Lectotypus (left specimen) of the name *Gagea mauritanica* var. *balansae* A. Terracc., conserved at FI-Webb.

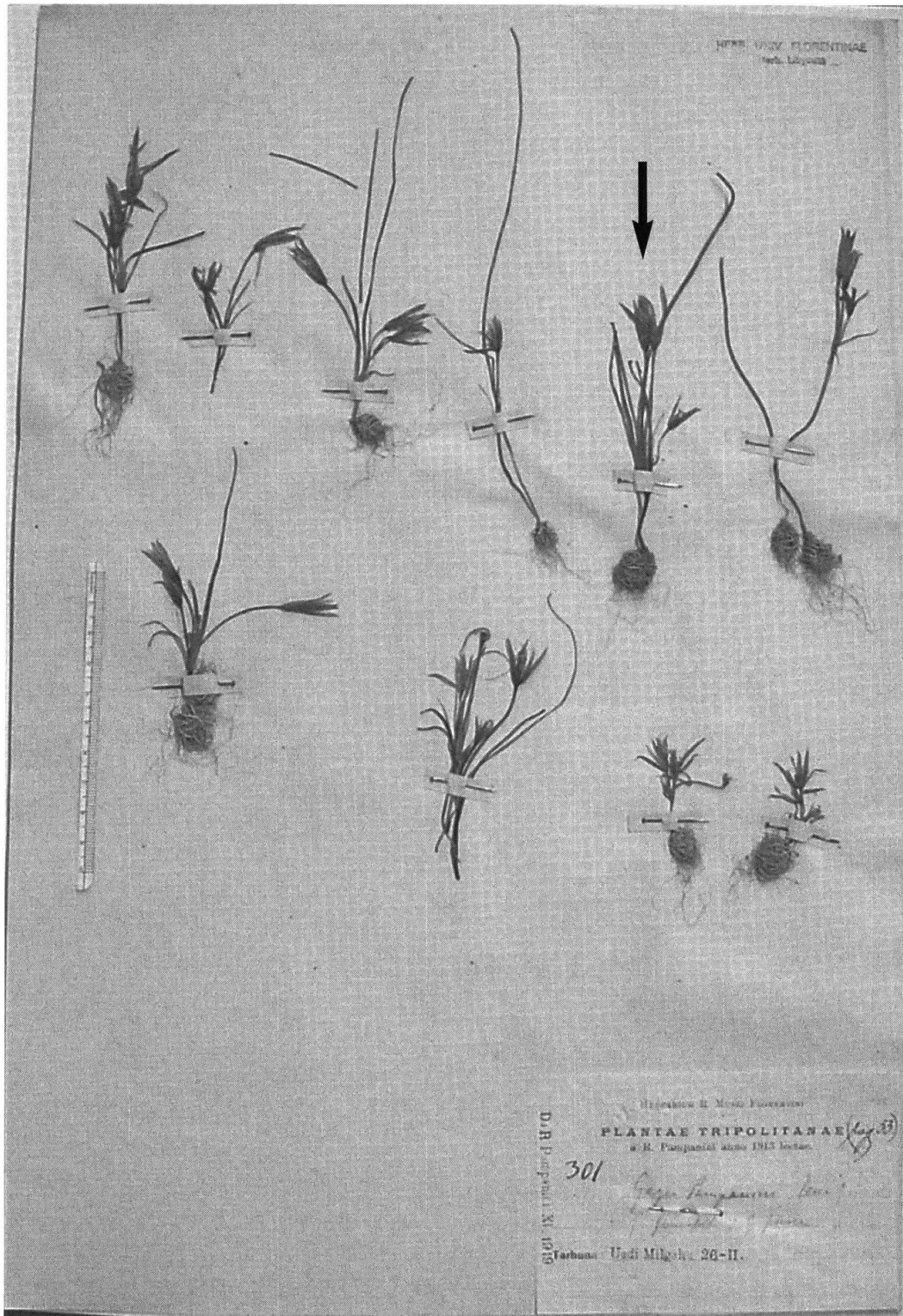


Fig. 4. – Lectotypus (upper second specimen from right) of the name *Gagea pampaninii* A. Terracc., conserved at FI.

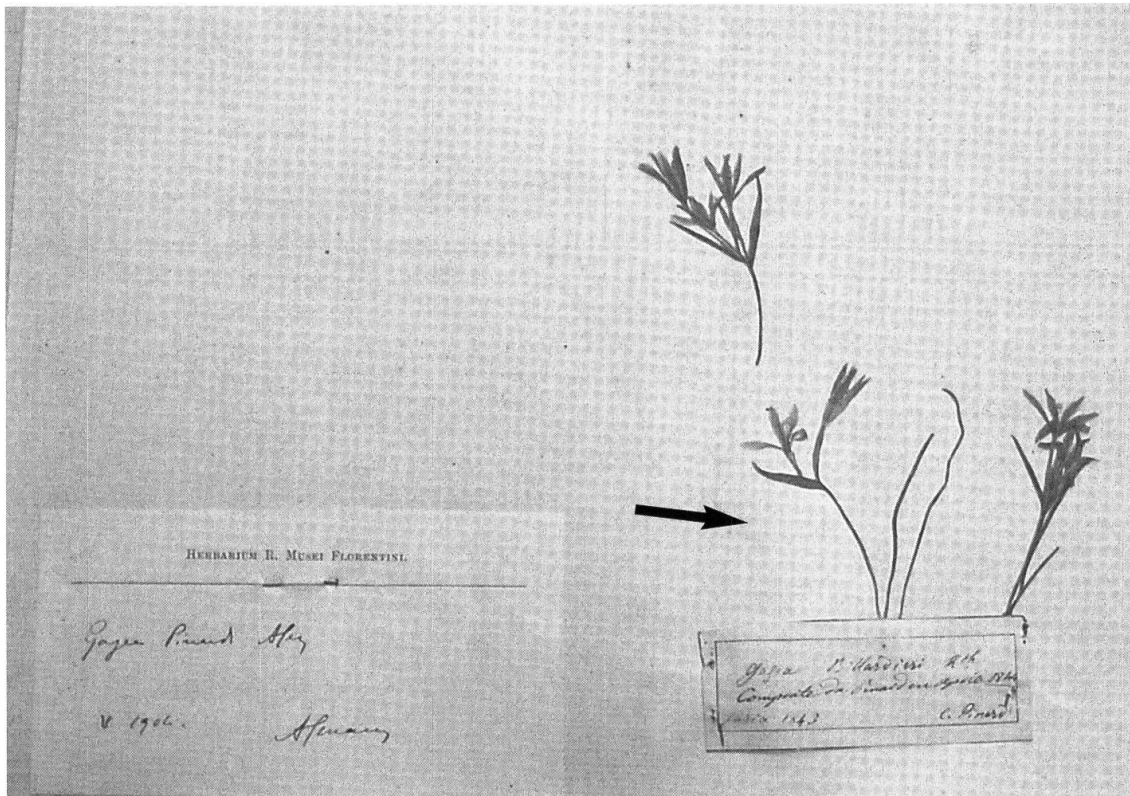


Fig. 5. – Lectotypus (bottom left plant) of the name *Gagea pinardii* A. Terracc., conserved at FI.

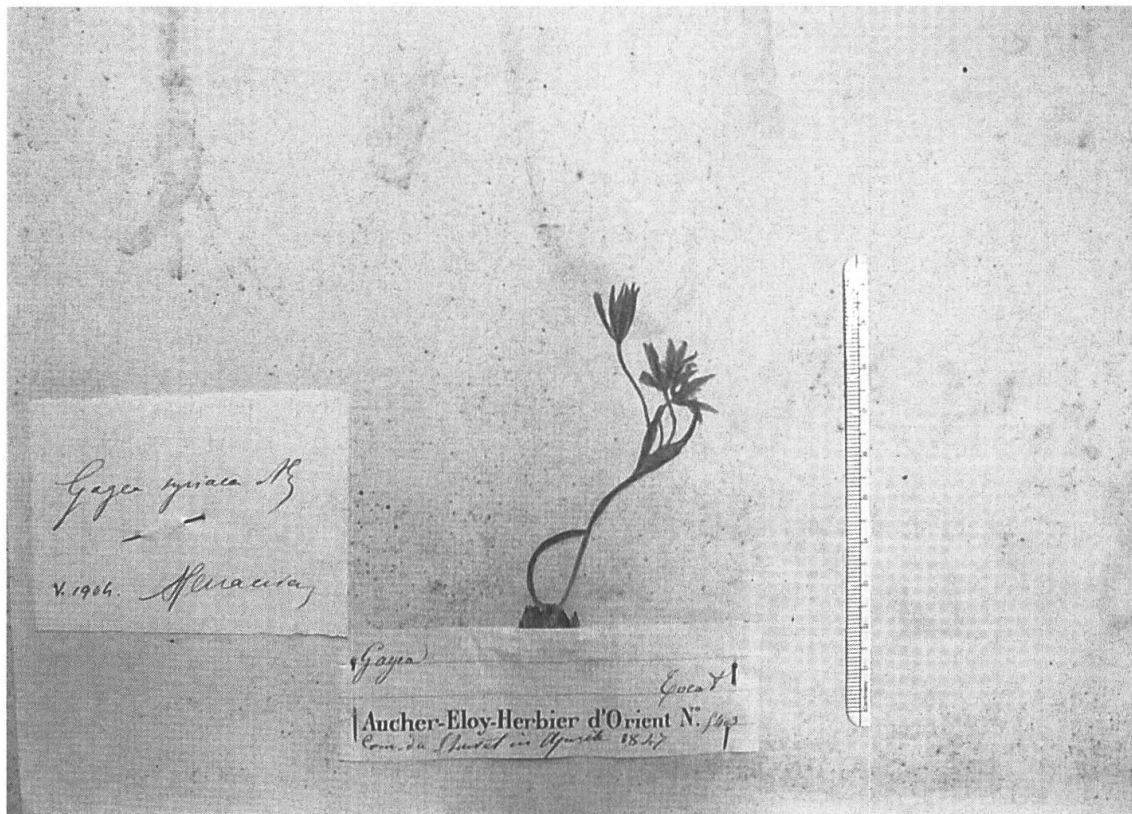


Fig. 6. – Lectotypus of the name *Gagea syriaca* A. Terracc., conserved at FI.

