

# Typification of some critical taxa of *Gagea Salisb.* (Liliaceae) from W Asia

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# Typification of some critical taxa of *Gagea* Salisb. (Liliaceae) from W Asia

Lorenzo Peruzzi & Mehdi Zarrei

## Abstract

PERUZZI, L. & M. ZARREI (2007). Typification of some critical taxa of *Gagea* Salisb. (Liliaceae) from W Asia. *Candollea* 62: 237-244. In English, English and French abstracts.

*Gagea amblyopetala* var. *elata* A. Terracc., *Gagea aitchisoniana* A. Terracc., *Gagea linearifolia* A. Terracc. (≡ *Gagea sintenisii* Pascher) and *Gagea foliosa* var. *micrantha* Boiss. (basionym of *Gagea micrantha* (Boiss.) Pascher) are typified. Each type is illustrated and discussed. The taxonomic value of these taxa is discussed.

## Key-words

LILIACEAE – *Gagea* – Typification

## Résumé

PERUZZI, L. & M. ZARREI (2007). Typification de quelques taxons critiques de *Gagea* Salisb. (Liliaceae) de l'Asie de l'Ouest. *Candollea* 62: 237-244. En anglais, résumés anglais et français.

*Gagea amblyopetala* var. *elata* A. Terracc., *Gagea aitchisoniana* A. Terracc., *Gagea linearifolia* A. Terracc. (≡ *Gagea sintenisii* Pascher) et *Gagea foliosa* var. *micrantha* Boiss. (basionyme de *Gagea micrantha* (Boiss.) Pascher) sont typifiés. Chaque type est illustré and discuté. La valeur taxonomique de ces taxa est discuté.

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***Gagea amblyopetala* var. *elata*** A. Terracc. in Bull. Herb. Boissier ser. 2, 6: 118. 1906.

**Lectotypus** (here designated): **TURKEY:** Gandali, mt. près Andiamyti (Asie M<sup>e</sup>), près de la neige, 11.VI.1833, *Gustav Cocquebert de Montbret s.n.* (FI-Webb! n° 183378, individual on the right) (Fig. 1).

In describing *G. amblyopetala* var. *pumila* A. Terracc. and *G. amblyopetala* var. *elata* A. Terracc. as two tallest variants of *G. amblyopetala* s.str., TERRACCIANO (1906) affirms that many intermediate forms occur among these two taxa. However, he affirms also that “typical” var. *elata* can be recognised in two specimens: “*Ras-Beyrut (Peyron s.n.!)*” and “*Gandali (herb. Webb)*”. We traced the latter herbarium sheet, which is doubtless original material, in the Herbarium Webb, conserved at FI. Among *Gagea* individuals, there is also (on the extreme left) a plant referable to another taxon (possibly *Ornithogalum* sp.).

*Taxonomic discussion.* – On the basis of the typical collection, it seems that this variety is synonymic with *G. amblyopetala* Boiss. & Heldr.

***Gagea aitchisoniana*** A. Terracc. in Boll. Soc. Ort. Palermo 2(4): 5-6. 1904.

**Lectotypus** (here designated): **AFGHANISTAN:** [illeg.], 12.VI.1880, *Aitchison 828* (K!, individual on the right) (Fig. 2).

In the protologue (TERRACCIANO, 1904b), only one collection is cited: “*Ho esaminato gli esemplari esistenti col n°828 nell'erbario di Kew, raccolti da I. E. Aitchison il 12 giugno 1880 nel suo viaggio attraverso l'Afghanistan*”. We traced this herbarium specimen at K; and one well preserved individual of this collection is here designated as the lectotype.

*Taxonomic discussion.* – TERRACCIANO (1904b) considers this species as related to *G. reticulata* group. This species complex grows usually in drier part of the distribution range. The distinguishing characters for this group are so few that make it too difficult to handle them. *Gagea aitchisoniana* appears closely related to *G. setifolia* Baker and *G. anonyma* Rech. f. Indeed, WENDELBO & RECHINGER (1990) cited this species as a synonym of *G. setifolia*. *Gagea aitchisoniana* has shorter pedicels and broader tepals in relation with *G. setifolia*. The types for both species has been collected from Afghanistan by Aitchison during his trip. New investigation reveals the morphological variability in *G. setifolia* complex (incl. *G. anonyma*, *G. tehranica* Gand. *G. perpusilla* Pascher) is very high and there are no correlations between different morphological forms. It seems that all belong to one species (M. Zarrei, unpubl. data).

***Gagea linearifolia*** A. Terracc. in Boll. Soc. Ort. Palermo 2(3): 7. 1904.

≡ *G. sintenisii* Pascher in Sitzungber. Deutsch. Naturwiss.-Med. Vereins Böhmen “Lotos” Prag 24: 125. 1904.

**Lectotypus** (here designated): **IRAQ:** Mesopotamia, Biredjik, in declivibus ad Euphratem, 12.III.1888, *Sintenis 123* (LD! n°1038046, complete individual at the centre bottom) (Fig. 3).

In the protologue (TERRACCIANO, 1904a), only one collection is cited: “*Mesopotamia, Biredjik, in declivibus ad Euphratem (18 martio 1889, leg. Sintenis! Iter orientale 1889; exs. N.°123, sub G. Liotardi, in herb. Vindobonensi)*”. Unfortunately, this collection is no more present in Vienna herbaria, neither at W nor at WU. Consequently, we asked for information on duplicates to all those herbaria which notoriously hold Sintenis collections. We found only three specimens, at BHUPM!, G! and LD! As already noted by PERUZZI & TISON (2006), *Sintenis n° 123* collection is heterogenous, merging several taxa. Indeed, TERRACCIANO (1904a) explicitly affirms that in the same collection (but in Berlin Herbarium) he found part of the material seen by the author when describing *G. syriaca* A. Terracc. For this reason, the choice of the lectotype of the name *G. linearifolia* was not so obvious. We selected in the herbarium sheet at LD, a single complete specimen well fitting with the protologue description.

*Taxonomic discussion.* – The selected lectotype fully confirms the close relationship (likely synonymy) between *G. linearifolia* and *G. luteoides* Stapf, as already suggested by RIX (1984) and LEVICHEV (1990).

***Gagea foliosa* var. *micrantha*** Boiss., Fl. Orient. 5: 205. 1881.

≡ *Gagea micrantha* (Boiss.) Pascher in Sitzungber. Deutsch. Naturwiss.-Med. Vereins Böhmen “Lotos” Prag 24: 122. 1904.

**Lectotypus** (here designated): **ISRAEL:** In summis alpinis humosis prope nives deliquescentes, alt. 8-9000 ped., 6.VI.1855, *Kotschy Iter Syriacum 1855: 245* (G-BOIS! second individual on the left bottom; iso-: K!, individual on the left) (Fig. 4).

In the protologue (BOISSIER, 1881), cited “*Habitat ad cedros et alibi (Bl.!), in Hermone Antilibani ad nives deliquescentes 8-9000' (Ky. 245 sub G. Billardieri!), in subalpinis montis Argaei Cappadociae 8500' (Ky. Suppl. 274!)*”. We have found at G-BOIS all the herbarium material related to the name *G. foliosa* var. *micrantha*. A complete individual of the Kotschy's collection n° 245 is here selected as the lectotype. A duplicate of the same collection was found at K. Incidentally, this herbarium collection is cited also by PASCHER (1904), who

elevated this taxon to specific rank. HEYN & DAFNI (1977) cited this same herbarium sheet as an isosytype of *G. micrantha*. The syntypical Kotschy's collection n° 274 clearly represents instead a different taxon, belonging to sect. *Fistulosae* (Pasch.) Davlian., which conflicts with the protologue of *Gagea foliosa* var. *micrantha*.

*Taxonomic discussion.* – *Gagea micrantha* is a plant with two not-fistulose basal leaves, likely belonging to sect. *Didymobulbos* (K. Koch) Boiss. According to HEYN & DAFNI (1977) it is characterized one-sided inflorescence and distinctly pilose perianth. It is noteworthy to say that the collection here designated as the lectotype is also an isosytype of the name *G. syriaca* A. Terracc. However, according to the lectotypification effected by PERUZZI & TISON (2006), the latter name is heterotypic and applicable to plants with single hollow basal leaf, close to *G. fragifera* (Vill.) Ehr. Bayer & G. López (sect. *Fistulosae*).

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**Fig. 1.** – Lectotypus of the name *Gagea amblyopetala* var. *elata* A. Terracc.

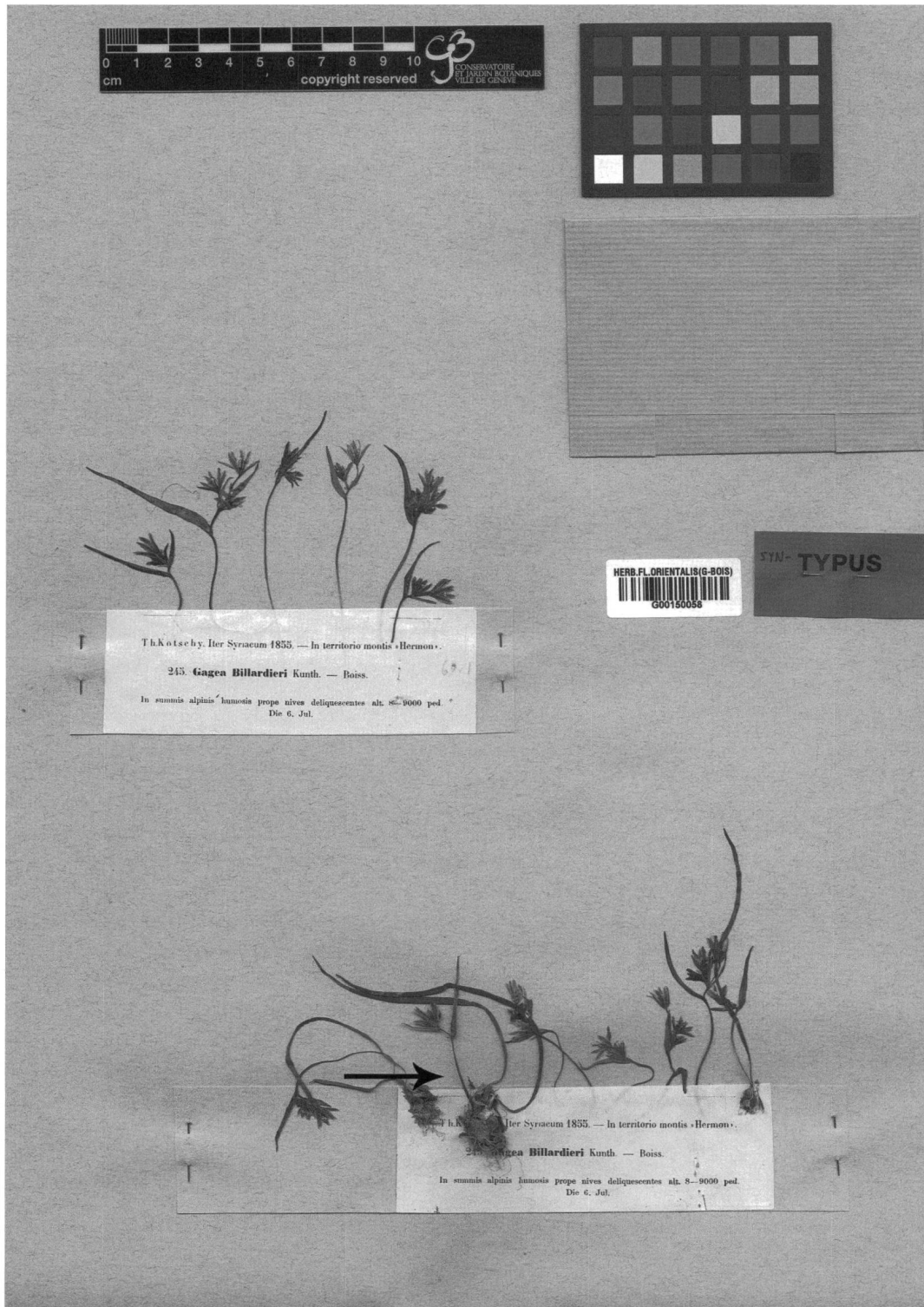
[Gustav Coquebert de Montbret s.n., Fl] [© Museo di Storia Naturale, Florence. Reproduced with permission]



**Fig. 2.** – Lectotypus of the name *Gagea aitchisoniana* A. Terracc.  
[Aitchison 828, K] [© The Board of Trustees of the Royal Botanic Garden, Kew. Reproduced with permission]



Fig. 3. – Lectotypus of the name *Gagea linearifolia* A. Terracc.  
[Sintenis 123, LD] [© Botanical Museum, Lund. Reproduced with permission]



**Fig. 4.** – Lectotypus of the name *Gagea foliosa* var. *micrantha* Boiss.  
[Kotschy 245, G-BOIS] [© Conservatoire et Jardin botaniques de la Ville de Genève]



