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# New taxa of *Allium* from Greece

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## RÉSUMÉ

TZANOUDAKIS, D. (1983). Nouveaux taxons d'*Allium* de Grèce. *Candollea* 38: 317-323. En anglais, résumé français.

Deux taxons d'*Allium* de Grèce sont décrits pour la première fois soit: *A. circinatum* subsp. *peloponnesiacum* Tzanoudakis (sect. *Molium* G. Don ex Koch) du sud du Péloponnèse et *A. goulimy* Tzanoudakis (sect. *Scorodon* Koch) de Macédoine occidentale. Des études cytologiques ont montré que *A. circinatum* et *A. goulimy* sont des diploïdes avec respectivement  $2n = 14$  et  $2n = 16$  chromosomes.

## ABSTRACT

TZANOUDAKIS, D. (1983). New taxa of *Allium* from Greece. *Candollea* 38: 317-323. In English, French abstract.

Two taxa of *Allium* from Greece are described as new, viz. *A. circinatum* subsp. *peloponnesiacum* Tzanoudakis (sect. *Molium* G. Don ex Koch) from the South of Peloponnesus and *A. goulimy* Tzanoudakis (sect. *Scorodon* Koch) from the Western part of Macedonia. Cytological studies showed that *A. circinatum* et *A. goulimy* are diploid with the chromosome numbers  $2n = 14$  and  $2n = 16$  respectively.

The genus *Allium* is represented in Greece by more than 50 species (STEARN, 1978; PHITOS & TZANOUDAKIS, 1981). However, during the course of our cytotaxonomic studies on the genus in Greece the presence of new, undescribed taxa has been revealed. It seems also that more information concerning the taxonomy and the geographical distribution of the Greek representatives of the genus *Allium* is to be expected.

**1. *Allium circinatum* Sieber, Reise Kreta 2: 136, t. 6. 1823.**

Sect. *Molium* G. Don

**1a. *A. circinatum* Sieber subsp. *circinatum***

Orig. Coll. *Sieber* (K, holotype).

Scapus gracilis, ad 10 cm altus. Umbella pauciflora, floribus (1-)2-4(-5). Tepala oblongo-lanceolata, 5-6 × 1.5-2 mm, obtusa usque acuta. Numerus chromosomaticus  $2n = 14$ .

Stem short, delicate, ca. 10 cm, with a solitary flower or a 2-4(-5) flower umbel. Perianth stellate; segments oblong-lanceolate 5-6 × 1.5-2 mm, obtuse or acute. Chromosome number  $2n = 14$ .

*Distribution:* Island of Kriti.

*Habitat:* Limestone cliffs, near the sea.

*Specimens studied*

Island Kriti; prov. Chania: Ep. Kidonia, Ad Promondorium Maleka, Sieb. sin. no (K), Monastery Ag. Triada (Akrotiri) *Goulimis 16* (K). Akrotiri, zw. den Buchten Kurupitos u. Seito öl. Rizoskloko, 50 m ü. M., *Greuter 3296* (Herb. Greuter). Akrotiri, N.E. part, near the sea, *Tzanoudakis 7116* (UPA). Akrotiri, near the sea at Perivolitsa, *6947* (Herb. Greuter). Akrotiri, prope Perivolitsa, *Davis 1352* (K). Ep. Kissamos; Rodopou H-1, sdl. der Menies-Bucht, 40-80 m ü. M., *Greuter 3492* (Herb. Greuter). Prov. Lassithion: Ep. Merambelou, in faucibus Selinaris, *Tzanoudakis 5889* and *5959* (UPA). Ep. Sitia, in ditone pagi Kavousi, ad locum Thergiospilios dict., *Tzanoudakis 5822* (UPA).

**1b. *A. circinatum* subsp. *peloponnesiacum* Tzanoudakis, subsp. nova**

Orig. Coll. *Iatrou 1095* (UPA, holotype).

Scapus robustior 10-17 cm altus. Umbella floribus (2-)4-6(-7). Tepala obovata vel late ellipsoidea, obtusa, 5-7 × 2.5-4.5 mm, exteriora inferioribus sensim vel manifeste latiora. Numerus chromosomaticus  $2n = 14$ .

Stem higher, 10-17 mm, and more robust than in subsp. *circinatum*, with a (2-)4-6(-7) flower umbel. Perianth cup-shaped; segments 5-7 × 2.5-4 mm obtuse, the outer wide elliptical or obovate, the inner elliptical. Chromosome number  $2n = 14$ .

*Distribution:* Southern Peloponnisos (Mani).

*Habitat:* calcareous rocky places.

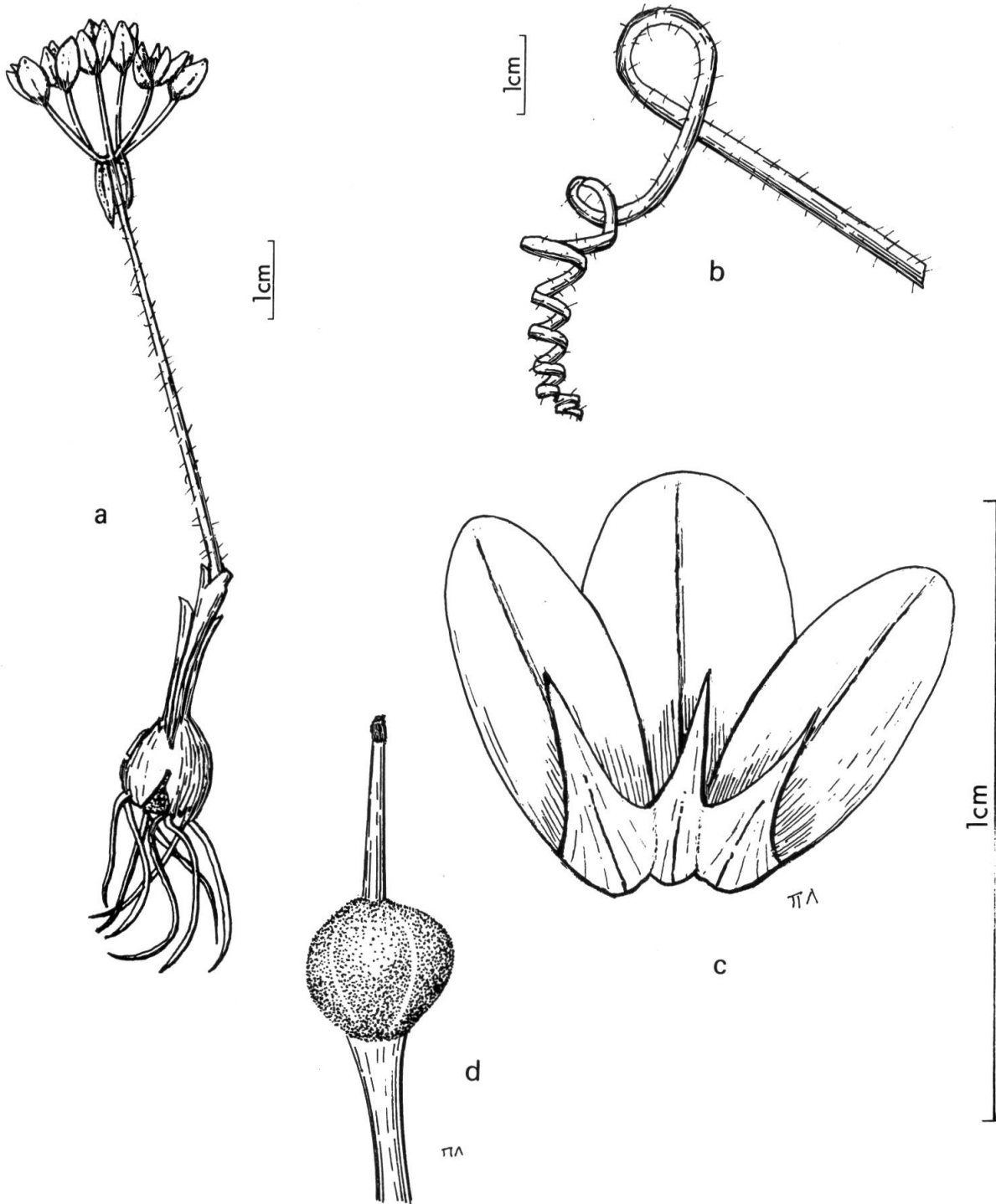


Fig. 1. — *Allium circinatum* subsp. *peloponnesiacum*.  
a, entire plant; b, leaf; c, perianth-segments and filaments; d, gynoecium.

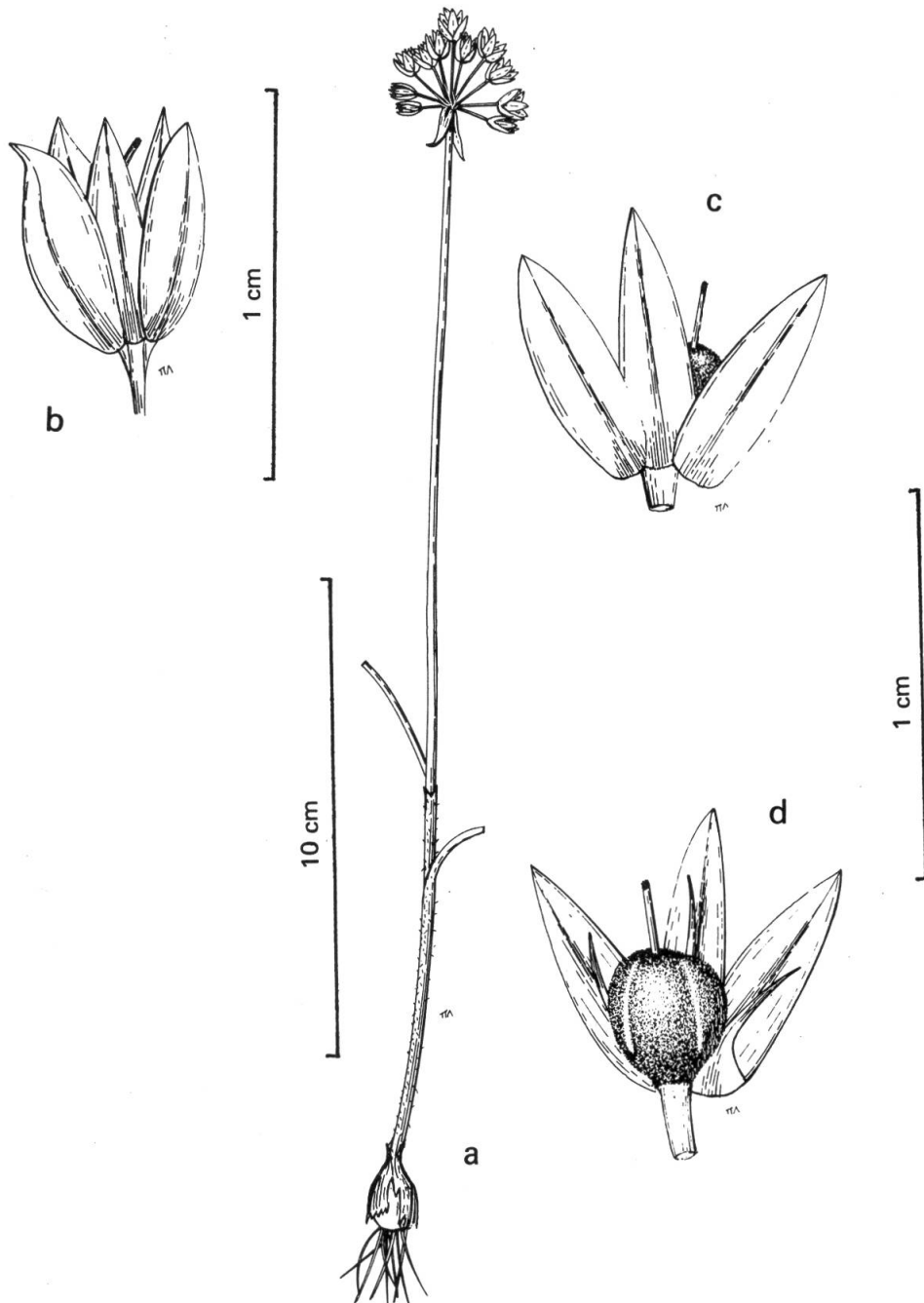


Fig. 2. — *Allium goulimyi*.

**a**, entire plant; **b**, flower; **c**, **d**, floral details, outer and inside view respectively.

*Specimens studied*

Peloponnesus; prov. Lakonia: Ep. Gythion, inter pagos Vathia et Achilion, in calcareis, *Iatrou 1095* (UPA).

Remarks: *A. circinatum* was considered as a local endemic species in Western Kriti (STEARN, 1978). HALACSY (1904) has mentioned that it has also been found in Peloponnesus but the presence of this taxon outside Kriti had not been confirmed.

*A. circinatum* subsp. *peloponnesiacum* compared to subsp. *circinatum* is a taller and more robust plant, with more flowers per umbel and perceptible wider perianth-segments.

The basic morphological characters of the species such as the pitted outer tunics of the bulbs, the hairiness of the whole plant and the coiling of the leaves, are observed in the material of both Kriti and Peloponnesus. For this reason the material collected from Peloponnesus is treated at a subspecific rank within *A. circinatum*.

Living material, from both the subspecies of *A. circinatum*, were examined from a cytological point of view and in both the diploid chromosome number  $2n = 14$  was found.

More information concerning the karyotypes and the geographical distribution of *A. circinatum* has been presented by Tzanoudakis & Iatrou in the 2nd Symposium of the Hellenic Botanical Society, held in Athens (May 8 and 9/1982).

**2. *Allium goulimy* Tzanoudakis sp. nova**

Sect. *Scorodon* Koch.

Orig. Coll. *Dudley & al. 17 063* (UPA, holotype).

Bulbus ovoideus vel anguste ovoideus, tunicis externis fibrosis. Scapus gracilis, (15-)20-25(-30) cm altus, vaginis foliorum glabris vel minute pilosis per 1/3-1/4 longitudinis tectus. Folia 2-4, anguste linearia sensim canaliculata, 1-1.5 mm lata, nervis longitudinaliter plerumque pilosa, raro glabra. Spatha bivalvis, persistens, valvis ovato-lanceolatis, superne angustatis, umbellam brevioribus. Umbella subglobosa, (7-)20-25(-35)-flora, pedicellis subaequalibus, 9-15 mm longis. Perigonium campanulato-tubulosum, tepala anguste lanceolata, 5-6 × 1-2 mm acuta, pallide rosea. Stamina tepalis breviora; antherae purpureae. Ovarium obovatum; stylus 1-2 mm longus, perigonio non dehiscens. Numerus chromosomaticus  $2n = 16$ .

Bulbs ovoid to narrowly ovoid; outer tunics becoming fibrous. Stem (15)20-25(30) cm. Leaves filiform 1-1.5 mm wide, slightly canaliculate, sheathing the lower 1/3-1/4 of the stem. Sheaths, lower part of leaves and leaf veins minutely pilose, rarely glabrous. Spathe 2-valved persistens; valves ±

equal, ovate or ovate-lanceolatae at base, contracted above into a slender apentage, shorter than the pedicels. Umbel fastigiate to subglobose with (7-)20-25(-35) flowers, pedicels 9-15 mm, subequal. Perianth tubular-campanulate; segments angust-lanceolate, 5-6 × 1-2 mm, acute, pink with darker mid-vein. Stamens included, anthers purple. Ovary obovate, style 1-2 mm. Chromosome number  $2n = 16$ .

*Distribution:* Western part of the Greek Macedonia.

*Habitat:* in sunny calcareous rocky places, among shrubs.

#### *Specimens studied*

Flora Hellenica (Macedonia); prov. Kozani: Mons Vourinos, in declivibus calcareis cacuminis Tsamia, alt. 1200-1300 m, T. R. Dudley, D. Phitos, D. Tzanoudakis, Gr. Iatrou & D. Christodoulakis 17 063 (UPA).

Remarks: *A. goulimyi* is closely related to the species *A. meteoricum*, *A. moschatum* and *A. bornmuelleri* which also appear in the Greek Macedonia. The only known population of *A. goulimyi*, which was found on the calcareous base of mount Vourinos, is very large and the individuals indicate a remarkable morphological variation. This variation is concerned with morphological characters of a quantitative and qualitative nature as well viz., the size of the plants, the number of flowers and the hairiness of the sheaths and leaves.

Although several of the morphological characters of *A. goulimyi* also occur in species such as *A. meteoricum*, *A. moschatum* and *A. bornmuelleri*, it can be clearly distinguished by a number of morphological characters.

- From *A. meteoricum* by its fibriate bulbs and purple anthers.
- From *A. moschatum* by its wider bulbs which have no reticulate fibres at its apex, the subglobose umbel, which also has more flowers and the shorter perianth segments.
- From *A. bornmuelleri* by its longer, acute and pinkish perianth segments.

The population of Kastoria mentioned by TURILL (1935) as *A. bornmuelleri* also seems to be very closely related to *A. goulimyi*, but it is also easily distinguishable as it has small, 4 mm and obtuse perianth segments.

Like most Greek species of the section *Scorodon*, *A. goulimyi* is a diploid,  $2n = 16$ , taxon. It has however, a differentiated karyotype which includes 5 metacentric, 2 submetacentric and 1 subtelocentric chromosome pairs. The karyotypes of most Greek species of the section *Scorodon*, cytologically investigated (Tzanoudakis, in public.) include only one asymmetrical (submetacentric or subtelocentric) chromosome pair.

The species is named in honour of the famous Greek botanist C. Goulimy who has firstly stressed the botanical interest of mount Vourinos.

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