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# FLORA OF LIBYA

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## **Editors :**

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**AMARYLLIDACEAE**

by A. EL-GADI

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## AMARYLLIDACEAE

A.EL-GADI

Perennial, bulbose, usually scapose herbs. Leaves basal, linear or lorate, glabrous. Inflorescence in raceme, umbel or panicle, sometimes solitary; flowers bisexual, regular, rarely zygomorphic; perianth segments 6, in 2 whorls, sometimes gamophyllous, corona sometimes present; stamens 6 included, dehiscing vertically, rarely by terminal pores, usually versatile, rarely basifixed, sometimes filaments connate to form a staminal corona; ovary inferior rarely semi-inferior to superior, 3-loculate (rarely uniloculate) with many ovules; style 1, stigmas 3 or 1, trilobed or capitate. Fruit a capsule splitting longitudinally into three valves at maturity, (rarely a berry). Seeds numerous with fleshy endosperm.

A family of 86 genera and more than 1000 species, mostly in tropical and subtropical regions, represented by 2 genera and 4 species in Libya.

- + Staminal filaments united to form a corona;  
corona white 1. **Pancratium**
- Staminal filaments free from corona; corona  
yellow-orange 2. **Narcissus**

### 1. PANCRATIUM

L., Sp. Pl. 290. 1753; Gen. Pl. ed. 5: 141. 1754

Bulbous herb; bulb subglobular-ovate, covered with dark brown tunics. Leaves linear, distichous, sometimes spiral, glabrous, green-bluish in colour. Scapes often equalling to slightly shorter than leaves; umbel few-flowered; spathe bivalvate, coriaceous; pedicels  $\pm$  equal at maturity, usually bracteolate. Flowers white, funnel-shaped; perianth segments 6, gamophyllous, forming a long tube; stamens 6, filaments fused together to form a corona; anthers versatile; ovary 3-loculate, style exerted, stigma inflated. Seed black, angular, numerous in each locule.

About 15 species in the Mediterranean region, trop. Asia and Africa; represented here by 2 species.

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Fig. 1 *Pancratium maritimum*: A, habit x 0.5; B, mature flower x 0.5; C, ovary, style and stigma x 0.5; D, portion of scape carrying fruit capsules some with dry styles x 0.5

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- + Pedicels short, not more than 1 cm long; stamens longer than corona teeth; (flowers in summer) **1. *P. maritimum***
- Pedicels long, more than 1 cm; stamens equalling to shorter than corona teeth; (flowers in autumn) **2. *P. foetidum***

1. ***Pancratium maritimum* L.**, Sp. Pl. 291, 1753; Durand & Barratte, Fl. Lib. Prodr. 225. 1910; Pamp., Pl. Trip. 58. 1914; Prodr. Fl. Cir. 162. 1931; Maire, Fl. Afr. Nord. 6: 35 fig. 941. 1959; Keith, Prelim. Check List Lib. Fl. 725. 1965. (Fig. 1).

Perennial bulbose herb; bulb subglobose c. 7 cm in diameter, outer tunics membranous, dark-brown in colour. Leaves basal, 5-6, linear, bluish-green, 40-70 x 1-1.5 cm, tip  $\pm$  acuminate. Scape usually developing before leaves, 40-60 cm long, up to 1 cm broad, slightly flattened with blunt edges. Spathe beaked, white-greenish, membranous with numerous nerves, 5-8 cm long, splitting open into two persistent valves. Pedicels short, 5-9 mm long,  $\pm$  equal at maturity, each subtended by a membranous bract, 2-5 cm long, withering at fruiting. Flowers funnel-shaped, fragrant; tepals white, greenish at base, forming a tube, 5-8 cm long, the free parts of tepals linear-lanceolate, reflexing or erect, 2-4 x 0.5-0.7 cm. Stamens 6, equal, filaments connate for most of their length to form 12-toothed corona, c. 10 cm long, inflated above. Corona teeth deltate, free part of filaments longer than corona teeth, c. 5 mm; anthers yellow, exerted 5-7 mm long, arched. Style white, longer than stamens,  $\pm$  at tepals level; stigma inflated. Capsule subglobular-elongated c. 2.5 cm in cross section. Seeds black, triangular or angular, 1-1.3 cm diameter.  $2n=22$

Syntypes: Habitat in Hispaniae maritimis Circa Valentiana and infra Monspelium.

**A-2** Surman sea coast, herb c. 30 cm long, flowers white-cream coloured in an umbel, before leaves, bulb dark-brown, sand dunes, 17.6.1977, *A. El-Gadi* 313 (ULT); **A-3** Liptis Magna, coastal dunes, 1.9.1970, *I.I. Choudhri* 15319 (ULT); **A-6** Dariana, c. 40 km from Benghazi, flowers white, fragrant, scape c. 40 cm., bulb large c. 5 cm across, sandy soil, 16.6.1972, *S.I. Ali* 472 (ULT); **A-7** Regione di Derna Litoral bu Msafer, 1934, *A. Rompietti* 10 (FI); **A-8** Bomba, 12.5.1934, *R. Pampanini and R. Pichi-Sermolli* 1613 (FI). Also reported by Keith (l.c.) from Busetta « Sea shore », 20 km Tripoli-Zavia road, Homs and Misurata near Ras Zarug.

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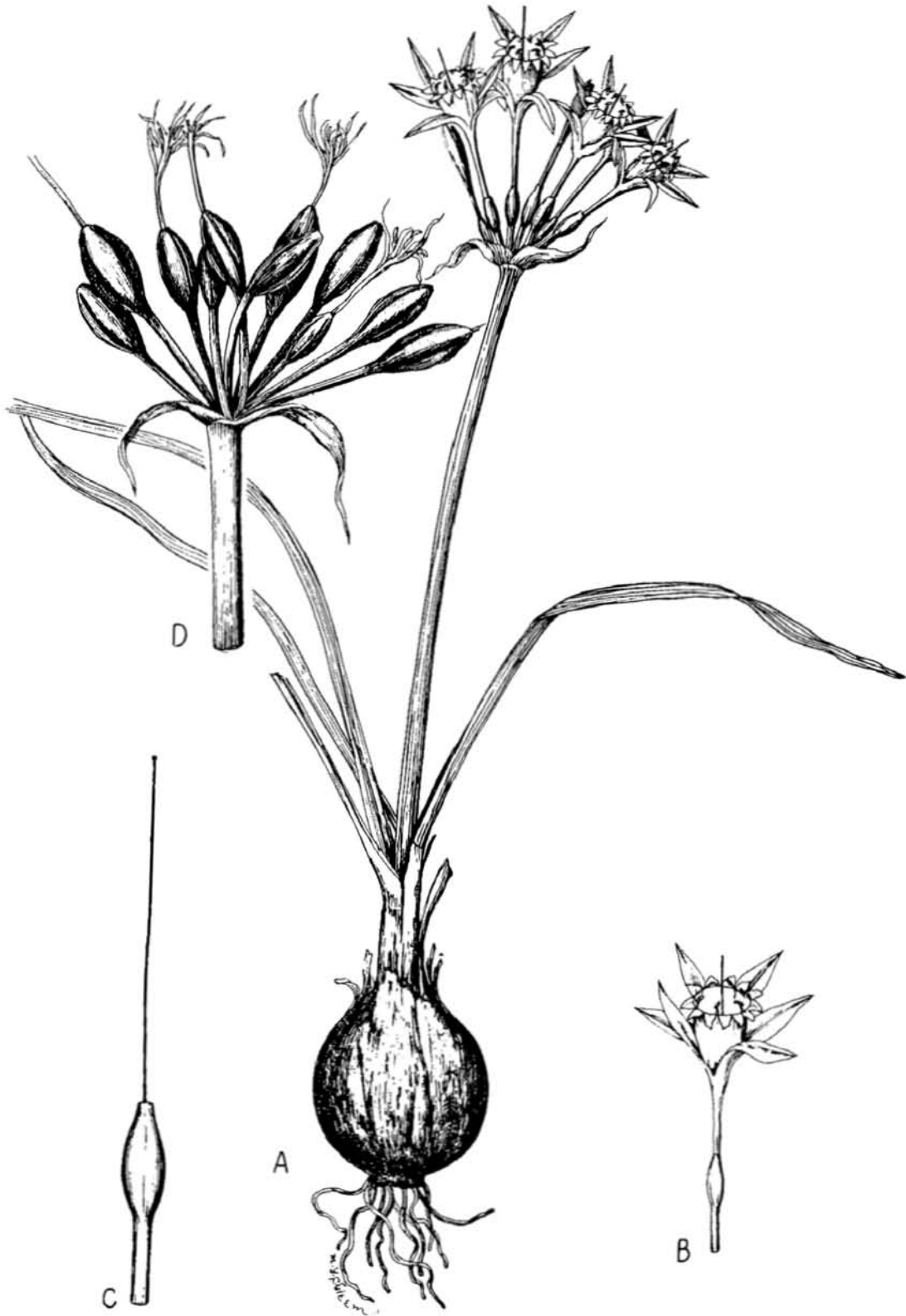


Fig. 2 **Pancratium foetidum**: A, habit x 0.5; B, mature flower x 0.5; C, ovary, style and stigma x 1; D, portion of scape carrying fruit capsules, some with dry calyces x 1.

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Distribution: Mediterranean region.

A good garden plant.

*Fl.* June-July; *Vern.* Sawsan sayfi, Bofraya, nuar el Kalb.

2. ***Pancratium foetidum*** Pomel, *Nouv. Mat. Fl. Atl.* 253. 1874; Maire, *Fl. Afr. Nord.* 6:37 fig. 942. 1959; Negre, *Fl. Maroc Aride* 140 fig. 150. 1961; Keith., *Prelim. Check List Lib. Fl.* 725. 1965. (Fig. 2).

*P. collinum* Coss. & Dur. ex Coss. in *Ann. Sc. Nat. Ser.* 4.1: 228. 1854; Pamp., *Pl. Trip.* 58. 1914.

Bulb 4-8 cm diameter, scape 30-50 cm long and 0.5-0.8 cm in girth. Leaves (15-20 days) after flowering, linear, spirally twisted,  $\pm$  obtuse, as long as the scape and 0.7-1.5 cm wide. Umbel 5-16 flowered, pedicels unequal (before fruiting) becoming equal later, longer than the previous species, 1.2-2.3 cm; stamens forming toothed corona; teeth, usually as long as to slightly longer than stamens; capsule oblong, c. 3 x 1.5 cm. Seeds  $\pm$  triquetrate or angular with black testa.

Type: Described from Algeria.

A-3 Gussbat, Hadida, wadi ben Tajura, 15-45 cm high, flowers white 4-13 in each umbel, style exerted, flowers before leaves, visited by insects, in the mountainous area *El-Gadi* 302, and 290 (ULT).

Also reported from Garian (Keith, l.c.).

Distribution: N. Africa (Libya, Tunisia, Algeria and Morocco).

*Fl.* After first rain usually Oct.-Nov.

## NARCISSUS

L., *Sp. Pl.* 289. 1753; *Gen. Pl. ed.* 5: 141. 1754

Bulbose green herb, scapigerous; bulb tunicate. Leaves linear appearing with or after flowers. Flowers usually umbelled, sometimes solitary; spathe one valved, membranous; pedicels green bracteolate. Perianth campanulate, corolla tube, cylindrical, tepals spreading or reflexed, corona usually inserted sometimes projected at the throat of the tube; stamens 6, included, sometimes exerted,

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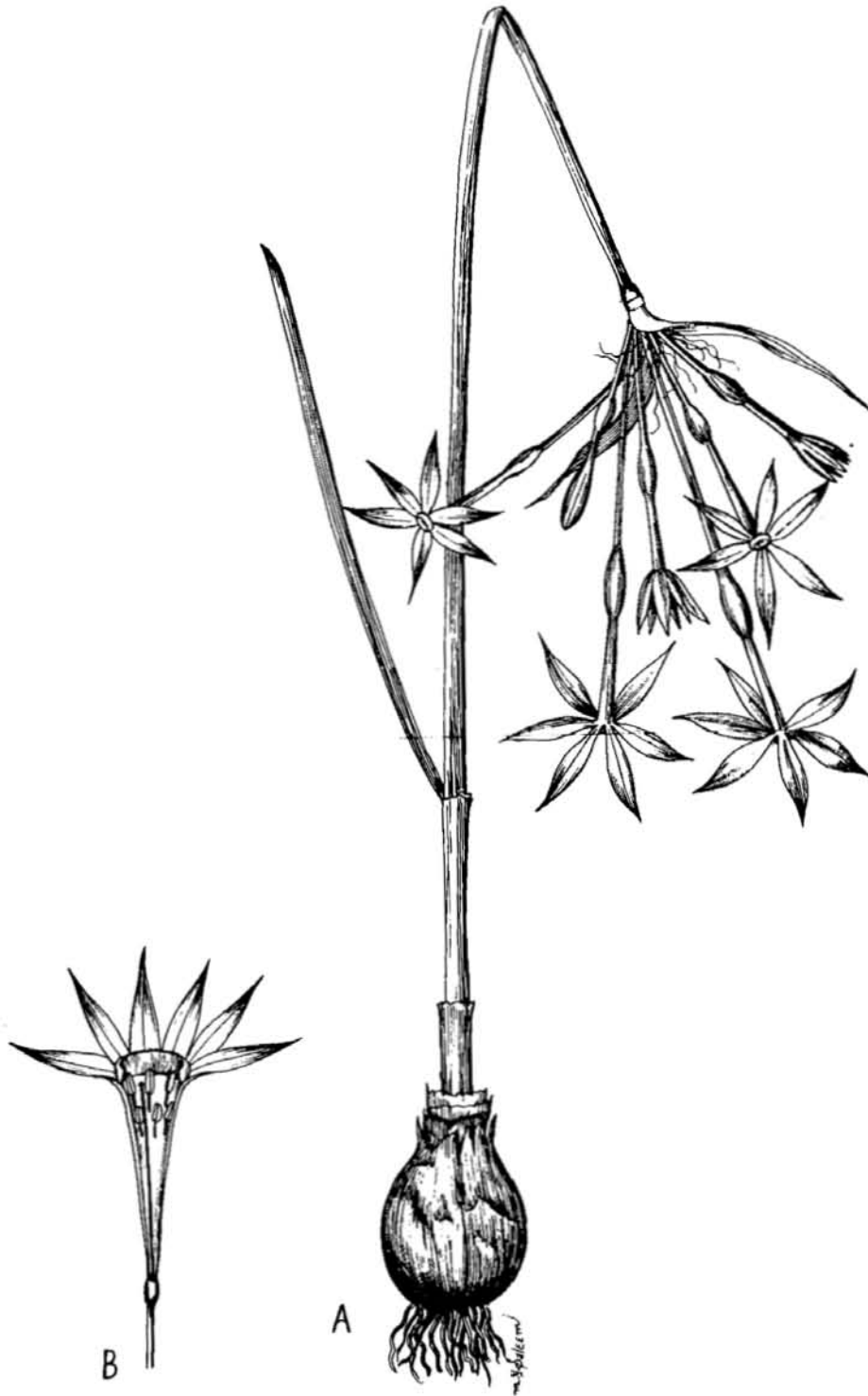


Fig. 3 *Narcissus elegans*: A, habit x 1; B, dissected flower showing corona, stamens and style x 1.5.

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unequal, free from corona; anthers basifixed or midfixed; ovary tri-loculate; style equalling to slightly exceeding the stamens, stigma trilobed. Capsule membranous, seeds black subglobular-angular.

About 60 species, mostly in Europe, Mediterranean and W. Asian regions, represented by 2 species in Libya.

+ Tepals linear-lanceolate	1. <i>N. elegans</i>
— Tepals $\pm$ ovate	2. <i>N. tazetta</i>

1. *Narcissus elegans* (Haw.) Spach., Hist. Nat. Veg. Phan., 12: 452. 1846; Durand & Barratte, l.c. 224; Pamp., Pl. Trip. 58. 1914; Pamp. in «Nuovo Giornale Bot. It.» n.s., 24: 127. 1917; Pamp. & Zanon, Ibid., 26:209.1919 ; Cavara & Grande in Bull. Soc. It. 101. 1925; Pamp., Prodr. Fl. Cir. 162. 1931; Maire, Fl. Afr. Nord. 6:64. fig. 955. 1959; Keith, Prelim. Check List Lib. Fl. 681. 19(65 (Fig. 3).

*Hermione elegans* Haw., Monogr. 51: 10. 1831; *H. obsoleta* Haw., Rev. 147. 1819; *N. serotinus* auct. non L.: Desf., Fl. Atl. 1. 283 tab. 82. 1798; *N. oxypetalus* Boiss., Voyage Espagne, 2: 606. 1845; *N. autumnalis* Link. in Linnaea 4: 569. 1834; Beg. & Vacc. in «Ann. d. Bot.», 12: 97. 1913.

Green-bluish, glabrous, bulbous herb; bulb ovoid-elongate, c. 1.5-3 cm in cross section, covered with coriaceous brown-blackish tunics. Leaves 1-2(3), sheathing all the underground part of the scape, linear, spirally twisted, shorter than scape, 15-30 x 0.4-0.6 cm,  $\pm$  obtuse. Scape robust fistulous, up to 50 cm long. Spathe whitish, coriaceous, univalved, with numerous nerves, always persistent. Umbel with 2-10 pedicellate, fragrant flowers. Pedicels  $\pm$  triangular 2.5-5 mm long, attaining maximum length at maturity; bracts hairy, many c. 1 cm long. Floral tube pale greenish, c. 1.5-2 cm long. Tepals linear-lanceolate 1.2-2 x 0.3-0.5 cm, white reflexed; corona short c. 0.2 cm long yellow-orange in colour; stamens 6, unequal, filaments adnate to floral tube, the longest three at the corolla level, the shortest included in the tube; anthers yellow; style  $\pm$  at corolla level, stigma trilobed at maturity. Capsule ovate- or obovate-oblong, grey-yellowish, seed black, angled, c. 0.25 cm long.

Type: Described from Mediterranean region.

A-7 c. 15 km East of Baida; flowers white umbel 2-10 flowered; corona yellow.



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Fig. 4 *Narcissus tazetta*: A, habit x 1; B, flower x 1.5; C, dissected flower showing corona and anthers x 1.5; D, ovary, style and stigma x 1.5

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24.10.1975, *S. M. H. Jafri* 6019 (ULT); 10 km west of Baida, clayey-stony soil,  
17.10.1977, *M. A. Siddiqi & F. B. Ratib* 95 (ULT); A-6 Bengasi, 1919, *V. Zamon*  
168, 191 (FI).

Distribution: N. Africa (Libya, Algeria, Morocco) and S. W. Europe.

All over Gebel Akhdar area to Benghazi, Khoms area and probably in Tripoli.

*Fl.* Oct.-Nov. *Vern.* Nargis, Kaleel

2. ***Narcissus tazetta* L.**, Sp. Pl. 290. 1753; Durand & Barratte, l.c. 225; Maire, Fl.  
Afr. Nord. 6: 68. 1959; Keith, l.c. 682. (Fig. 4)

Perennial bluish-green, glabrous. Bulbs ovoid-subglobular c. 2.5-7 cm diameter; tunics dark brown, coriaceous. Leaves 3-6, linear, canaliculate, obtuse, c. 40 x 2 cm; scape c. 30 cm long. Spathe, whitish, univalved, membranous, multi-nerved, c. 6 cm long. Umbel 3-20 flowered. Pedicels unequal c. 6 cm long, bractæolate. Flowers white-yellow, sometimes both colours present, with pleasant smell, forming greenish cylindrical tube c. 2 cm long. Tepals ovate-obovate, multi-nerved, the external usually larger than the central. Corona orange-yellow, c. 0.4-0.5 cm. Stamens 6 unequal, filaments very short (shorter than anthers), anthers yellow; style long, stigma  $\pm$  trilobed. Ovary oblong, capsule  $\pm$  ovoid c. 1.5 cm long. Seeds subglobular, black.

Syntypes: Habitat in Galliae, Narbonensis, Lusitaniae, Hispaniae *maritimis*.

A-7 Shahat, flowers white with simple cylindric disc, 26.10.1975, *S. M. H. Jafri* 6114 (ULT); Al-Gubba, Ain Mara, 28.4.1934, *R. Pampanini* and *R. Pichi-Sermolli* 1611 (FI).

It is also reported by Keith (l.c.) from Ain Mara in Gebel Akhdar.

Distribution: Mediterranean region (S. Europe), N. Africa to W. Asia (Syria).

It seems restricted to the Gebel Akhdar area in Libya. It has distinct nerves on the corona.

*Fl.* Nov.-Jan. *Vern.* Nargis

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In addition *Narcissus poeticus* L., (Sp. Pl. 289. 1753; Durand & Barratte, l.c. 224) is also reported from cultivation here.

**Acknowledgement:** We are grateful to the authorities of FI for herbarium and library facilities.

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