

REVISION OF THE GENUS *URGINEA* STEINHILL (LILIACEAE)  
IN INDIA

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## A B S T R A C T

The paper presents a taxonomic revision of the genus *Urginea* Steinh. (Liliaceae) in India. 4 species are described ; synonyms are given ; original citations and relevant references to Indian and regional floras are mentioned. Type specimens are indicated. A key to the species is worked out. Notes on distribution, phenology and ecology of the taxa are given. *Urginea coromandeliana* (Roxb.) Hook. f., *U. wightiana* Hook. f. and *U. govindappae* Boraiah et Fatima are reduced to synonyms of *U. indica* Kunth.

## INTRODUCTION

The genus *Urginea* was proposed by Steinhill (1834) after Ben Urgin (Bone) an Arabian tribe of the region. Steinhill (*l.c.*) distinguished this genus from allied ones for its sepal like petals being slightly larger and membranous seeds. In consideration of this delimitation some species, so long under the genera *Scilla* L., *Ornithogalum* L., *Albuca* L., *Anthericum* L. and *Phalangium* Lam. were brought into the folds of this genus. Accordingly Steinhill described 7 species under this genus, distinguishing them on the basis of leaves, bulb scales and scapes.

Lindley (1836) placed this genus under the tribe Scilleae (Reichenbach 1828), near *Scilla* L., *Bellevalia* Lap., *Barnardia* Lindl. etc. for its bulbs and smaller flowers. Endlicher (1836) did not recognise Scilleae. He placed this genus in the tribe Hyacintheae Endl. in between *Scilla* L. and *Ornithogalum* L. Kunth (1843) followed Endlicher (*l.c.*) in recognising the tribe but placed *Urginea* Steinh. in between the genera *Scilla* L. and *Ledebouria* Roth. Baker (1871, 1873) subdivided the bulbous Liliaceae with racemose inflorescence into two groups gamophyllous Hyacintheae and polyphyllous Scil-

leae and placed this genus under the latter near *Eucomis* L'Herit. Baker (1873) further added some 12 species to this genus. Bentham (1883) did not recognise the gamophyllous and polyphyllous series and kept all the genera under Scilleae, placing the genus *Urginea* near *Albuca* L. Engler and Prantl (1930) placed *Urginea* under the sub-family Scilloideae along with the allied genera. Hutchinson (1960) kept *Urginea* under *Scilleae* in between *Albuca* L. and *Whiteheadia* Harv.

About 100 species are found in Mediterranean region, Africa and India (Willis 1966).

The present paper is based on the specimens deposited in the Indian as well as some foreign herbaria. The species found in India are treated here. Specimens extant in the Indian herbaria collected from Nepal and Burma are also included in the study. Measurements of pollens are taken after acetolysis.

*Herbaria consulted:* Central National Herbarium, Botanical Survey of India, Calcutta (CAL); Northern Circle, Botanical Survey of India, Dehra Dun (BSD); Western Circle, Botanical Survey of India, Poona (BSI); Southern Circle, Botanical Survey of

India, Coimbatore (MH); Central Circle, Botanical Survey of India, Allahabad (BSA); Industrial Section, Indian Museum, Botanical Survey of India, Calcutta (BSIS); Forest Research Institute, Dehra Dun (DD); Blatter Herbarium, St. Xavier's College, Bombay (BLAT); Royal Botanic Garden, Edinburgh (E); Royal Botanic Gardens, Kew (K); British Museum of Natural History, London (BM).

**Urginea** Steinh. in Ann. Sc. Nat. Ser. 2, 1: 322, 1834; Endlich. Gen. Pl. 1131. 1840; Kunth, Enum. Pl. 4: 331. 1843; Baker in J. Linn. Soc. 13: 215. 1873; Benth. in Benth. & Hook. f. Gen. Pl. 3: 810. 1883; Hook. f. Fl. Brit. Ind. 6: 347. 1892; Prain, Bengal Pl. 2: 1074. 1903; Cooke, Fl. Pres. Bomb. 2: 768. 1907; Bamber, Pl. Punj. 441. 1916; Duthie, Fl. Upp. Gang. Pl. 3: 264. 1920; Haines, Bot. Bih. Or. 2: 1095. 1925; Fischer in Gamble, Fl. Pres. Madras 1526. 1928; Mooney, Suppl. Bot. Bih. Or. 202. 1950. *Phalangi-um* Adans. Fam. 2: 49. 1763. *Squilla* Steinh. in Ann. Sc. Nat. Ser. 2, 6: 276. 1836. *Fusifilum* Rafin. Fl. Tellur. 2: 27. 1837. *Tenicroa* Rafin. l.c. 3: 52. 1837. *Pilasia* Rafin. l.c. 3: 53. 1837. *Monotassa* Salisb. Gen. Pl. Fragm. 36. 1866. *Physodia* Salisb. l.c. 37. 1866. *Sypharissa* Salisb. l.c. *Thuranthos* C. H. Wright in Kew Bull. 1916: 233. 1916. Above synonyms are included on the basis of Willis (1973) and Hutchinson (1973). Types of these genera could not be examined.

*Type*: *U. maritima* (L.) Baker.

*Herbs* small, bulbous, scapigerous; bulbs globose, conical, tunicated, outer scales white, transparent, scarious, inner fleshy, deep coloured. *Leaves* hystranthus or synanthus, whorled, lanceolate, lorate, sessile, parallel veined, sheathing at the base, glabrous, radical, cauline. *Scape* narrow, long, terete, glabrous, stiff, naked. *Inflorescence* irregular, simple raceme of many flowers,

loose, long or dense, small. *Flowers* drooping, small, bisexual, hypogynous, campanulate, bracteate; bracts solitary, minute, deltoid or lanceolate, acute, often spurred and evanescent; pedicel long or short, narrow, often filiform outspreading or drooping, sometimes coiled. *Perianth* 6, in two whorls of 3 each, subequal, outspreading, free to the base or very nearly the base, lanceolate, oblong, obtuse or acute, scarious, one or few nerved at the centre, tubercled at the subapex, deciduous in fruits. *Stamens* 6, free, adherent to the base of the perianth segments; anthers oblong, bilocular, small, dorsifixed, versatile, introrse; pollen oblong, monocolpate, reticulate; filament long, straight, flattened, gradually narrowed to the apex. *Pistil* syncarpous; ovary ovate, ovate-oblong or narrowly ovate, sessile, superior, trilocular; style short, thick or long, narrow; stigma subglobose or flat, broad, obconic. *Fruit* capsule, loculicidal, oblong or globose, trilocular, triseptate; pericarp stiff, brittle, crustaceous, light yellow in colour. *Seeds* many, superposed, oblong, much compressed, winged, shining, deep brown in colour.

Chromosome numbers of *Urginea indica* Kunth have been determined as  $2n = 20$  by Raghavan (1935) and Raghavan & Venkatasubban (1940) while the haploid number  $n = 10$  has been determined by Kishore (1957). Raghavan (l.c.) further observed triploidy in *U. indica* Kunth. *U. govindapae* Boraiah et Fatima which is relegated to a synonym of *U. indica* Kunth has been found to have  $2n = 20$  (Boraiah & Fatima 1970). Raghavan and Venkatasubban (1940) have determined the chromosome number of *Urginea polyphylla* Hook. f. as  $2n = 20$ .

*Distribution*: This genus is distributed in India from the west coast in Gujarat and Maharashtra to Orissa in the east, to the Himalayan Borders of Uttar Pradesh and Nepal (upto 2600 m) in the north and to

Tamil Nadu in the south. There are 4 species in India.

*Key to the species*

- |  |                   |
|--|-------------------|
| 1. Pedicel longer than bract             |                   |
| 2. Pedicel long (10-35 mm); raceme loose | <i>indica</i>     |
| 2. Pedicel short (4-7 mm); raceme dense  |                   |
| 3. Capsule oblong; bract persistent      | <i>polyantha</i>  |
| 3. Capsule subglobose; bract evanescent  | <i>congesta</i>   |
| 1. Pedicel shorter than bract            | <i>polyphylla</i> |

1. ***Urginea indica*** (Roxb.) Kunth, Enum. Pl. 4: 333. 1843; Wt. Icon. t. 2063. 1853; Baker in J. Linn. Soc. 13: 222. 1873; Hook. f. Fl. Brit. Ind. 6: 347. 1892; Collett, Fl. Simlensis 526. 1902; Prain, Bengal Pl. 2: 1074. 1903; Cooke, Fl. Pres. Bomb. 2(4): 768. 1907; Bamber, Pl. Punj. 441. 1916; Duthie, Fl. Upp. Gang. Pl. 3(2): 264. 1920; Haines, Bot. Bih. Or. 3: 1096. 1925; Fischer in Gamble, Fl. Pres. Madras 1526. 1928; Mooney, Suppl. Bot. Bih. Or. 202. 1950. *Scilla indica* Roxb. Fl. Ind. 2: 148. 1832 (Type: Coromandelia, *W. Roxburgh s. n.*—not seen; the plate no. t. 1396! extant in CAL fully agrees with Roxburgh's description). *S. coromandeliana* Roxb. l.c. (Type: Sand hills of the coast of Coromandel, *W. Roxburgh s. n.*—not seen; the plate no. t. 1821! extant in CAL fully agrees with the description). *Urginea senegalensis* Kunth, Enum. Pl. 4: 334. 1843. *U. coromandeliana* Hook. f. Fl. Brit. Ind. 6: 347. 1892; Fischer in Gamble, Fl. Pres. Madras 1527. 1928. *U. wightiana* Hook. f. Fl. Brit. Ind. 6: 347. 1892 (Type: Seacoast, Tuticorin, *Wight s. n.*—not seen). *U. govindappae* Boraiah et Fatima in Bull. Bot. Surv. India 12: 128. 1970. (Type: Boraiah & Fatima 601—not seen). *Scilla cundria* Buch.-Ham. in Wall. Cat. 5062A. 1831, *nom. nud.* *S. denudata* Buch.-Ham. in Wall. Cat. 5062B, 1831, *nom. nud.*

*Urginea coromandeliana* (Roxb.) Hook. f. and *U. wightiana* Hook. f. are conspecific with *U. indica* (Roxb.) Kunth. Hooker (l.c.) distinguished *U. coromandeliana* for persistent bracts, smaller bulbs and linear leaves. But we have examined specimens where bigger bulbs are associated with linear leaves (Ramamurthy 16028 MH), smaller bulbs with broader leaves (*D. Prain s. n.* CAL; Rukmini Bai 134 BLAT), bigger bulbs with persistent bracts (*J. Joseph* 12439 MH), and characters intermediate between two extremes (*Barnes* 2179 K). Similarly Hooker distinguished *U. wightiana* from *U. indica* (Roxb.) Kunth on long pedicels, broad filament and narrow elongated style. But we have examined specimens with long pedicel, narrow filament, short style (*S. Kurz s. n.* CAL); long pedicel, broad filament, short style (*Santapau* 13702 BLAT) and short pedicel, narrow filament, long style (*Fischer* 3783 MH). In consideration of such evidences these 3 taxa are treated as conspecific.

Though the type material of *Urginea govindappae* was not available for study, the specimens collected from the type locality (Boraiah 1450 & Siddaiah 1370) were examined, having been sent on loan by G. Boraiah.

*Herbs* upto 1 m high, bulbous, scapigerous, hysteroanthus; bulbs 2.5-10 × 2.5-6.5 cm, globose, conical, tunicated; outer scales scarious, inner fleshy, yellowish white in colour. *Leaves* sub-bifarious, whorled at the base, 13-37 × 0.6-3 cm, linear, lanceolate or lorate, ensiform, narrowed towards the base, glabrous, acute at the apex. *Scape* solitary, longer than the leaves, 17-100 × 0.2-1 cm, erect, cylindrical, ribbed, glabrous, brittle, prominently scarred after flowers are fallen, purplish brown in colour. *Inflorescence* 12-60 cm long, simple, loose raceme, 4-30 flowered. *Flowers* 0.5-1.2 cm long, bracteate, pedicelled, one at the axil of each bract, distantly arranged, campanulate, hypogyno-

us, reddish green or greenish with brownish tinge at the centre and whitish margin or purplish and creamy white; bracts 1-2 mm long, deltoid, acute, evanescent, often spurred, falling before the flower matures; pedicels 1.0-3.5 cm long, slender or filiform, outspreading or drooping, sometimes coiling. *Perianth* 6, biseriate, 3 in each whorl, sub-

110  $\mu$   $\times$  54-76  $\mu$ , oblong, reticulate; filament 3.5-10  $\times$  .5-1 mm, erect, flat, broader at the base or in the middle and attenuated at the apex. *Pistil* syncarpous, carpels 3;

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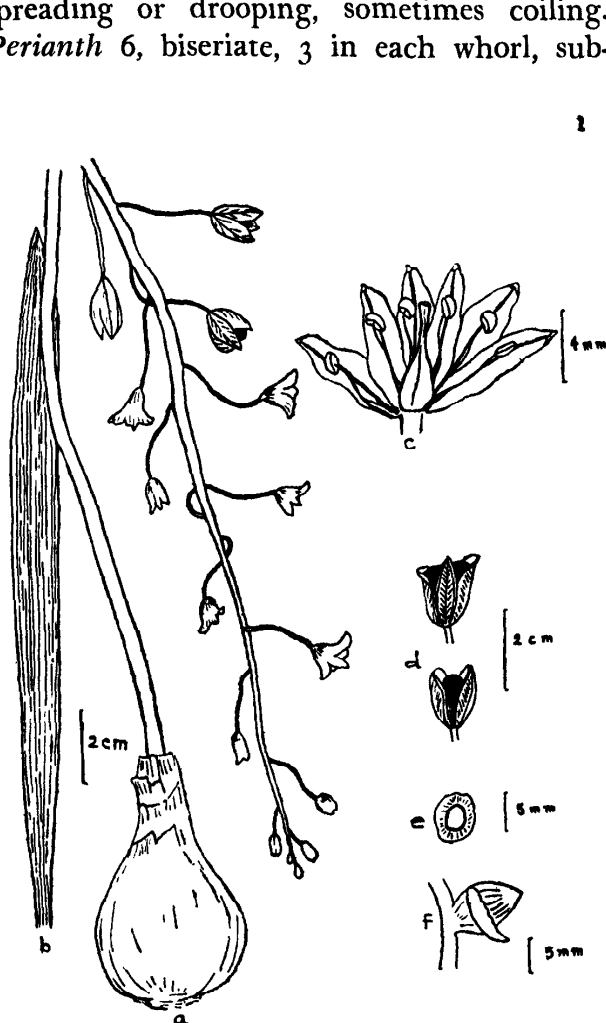


Fig. 1. *Urginea indica* (Roxb.) Kunth : a. bulb with inflorescence. b. leaf. c. flower showing parts. d. fruit dehiscence in two views. e. seed with wing. f. bract.

equal, oblong-lanceolate, connate at the base, acute or obtuse at the apex, slightly hooded and tubercled below the apex, thin at the margin, nerves one or few, median. *Stamens* 6, sometimes greenish, arising from the base of the perianth segments, free, included; anthers brownish, 1.2-5  $\times$  .7-1 mm, oblong, bilocular, dorsifixed, introrse; pollens 76-

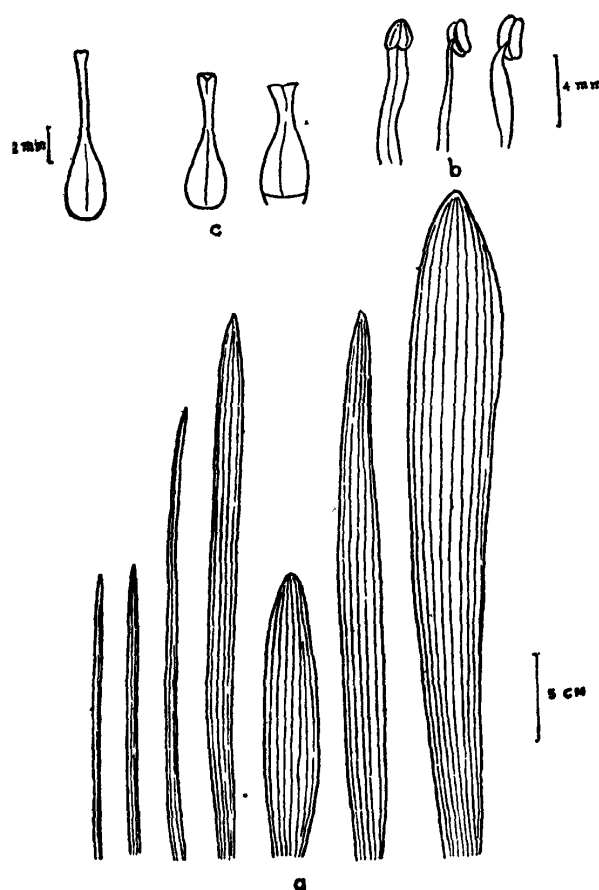


Fig. 2. *U. indica* (Roxb.) Kunth (showing range of variation of) : a. leaves. b. stamens. c. pistils.

ovary 3.5-8  $\times$  1.7-3 mm, superior, ovate-oblong, narrowly ovate, or elongated, sessile, trilocular; style very short, thick obconic or narrowly elongated; stigma trilobed or nearly so or broadly obconic. *Capsule* 10-20  $\times$  5-10 mm, oblong or ellipsoid, trilocular, pericarp stiff, brittle, brownish yellow in colour. *Seeds* 12-30, superposed, 4-10 in each chamber, 4.7  $\times$  3.4 mm, flat, rounded, oblong or obovate-oblong, winged, deep brown or brownish black in colour; wing rounded, transparent.

*Flowering time*: December to May: The flower lasts only for a night, opening in the night and closing in the morning (Haines 1925). *Fruiting time*: April to June, but occasionally in January (Burma). *Leaves*: April to July, occasionally in January (Burma).

*Local names*: Various local names have been given to *U. indica* Kunth in different states of India and adjoining countries. It is called *Vanapalandam* in Sanskrit, *Jungli piyaz* and *Kanda* in Hindi and Bengali, *Janglikanda* in Bombay, *Phapor* and *Karb-wassal* in the Punjab, *Gheswa* in Kumaon and *Banpiyaz* in Chamoli district. In South India different names have been given in different languages, such as *Nakkavalligadda* in Telegu, *Narivengayam* in Tamil, *Kanthanga* in Malayalam and *Adavirulli* in Kanaris. It is known as *Iskil* in N. W. Province (Pakistan) and Arab, *Piyaz* in Persia, *To-Kesum* in Burma, *Vullumu* in Singapore and *Kathulli* in Malay. In English it is known as *Indian squill*, *Indian drug squill* and *white squill*.

*Ecology*: This plant occurs in a range of altitudes from sea level to 2600 m. It grows on dry habitat such as sandy ground, sandy gravels, sandstone and soils derived from garnetiferous gneiss and Khondalite (Mooney l.c.). It is found in the pine forest as an undergrowth in the western Himalayas and Dipterocarpus forests in Burma.

*Occurrence in India and adjoining region*: This species is distributed almost throughout India from Gujarat and Maharashtra in the west extending upto Bihar and Orissa in the east, to the Himalayan Borders of U.P. and Nepal (upto 2600 m) in the north and down to Tamil Nadu in the south. This is also distributed in Burma and Tropical Africa.

*Herbarium sheets examined*: ANDHRA PRADESH: Ragupaliem, 4.5.1900, *Barber* 1536 (MH); Punyagiri village, 150 m, 8.5.1964, *Subba Rao* 19404 (MH). BIHAR:

Rajmahal hills, May 1867, *Kurz* s. n. (CAL); Chotanagpur, May 1902, *Cardon* s. n. (CAL & E); Monghir, 20.5.1811, *Buch.-Ham.* s. n. in *Wall. Cat.* no. 5062A (E). GUJARAT: Jamnagar, 1902, *Inayat* 26026 (CAL); sandy beach of Rajkot, 23.10.1951, *Santapau* 13702 (BLAT). KARNATAKA: Shore at Kanwar, April 1908, *Sedgwick & Bell* 3990 (K); Kasa, 1945, *Raizada* s. n. (DD); Bombay, *Dalzell* s. n. (BSD); North Division, *Cleg-horn* s. n. (E); Panchgani, 27.6.1954, *Rukmini Bai* 134 (BLAT); Panchgani, 3.7.1955, *Rukmini Bai* 315 (BLAT). MADHYA PRADESH: Bori R. F., 550 m, 29.4.1961, *Joseph* 12429 (MH); Korba, 17.4.1965, *Panigrahi & Arora* 8641 (BSA); Kolhagara, 1964, *Arora* 3705 (BSA). MAHARASHTRA: Khanda, 25.5.1899, *Blatter* 26099 (BLAT); Chat-tarashingi, 6.5.1917, *Ezekiel* 4 (BLAT); Maladh Madh Road, 8.4.1962, *Shah* 10571 (BLAT); Mumbra, 10.7.1964, *Santapau* 18887 (BLAT). ORISSA: In open on fire line, Bandh State, *Haines* 215 (K); Junagarh, Ghana forest, Kalahandi State, 26.4.1941, *Mooney* 1731 (K), exceedingly common in Kalahandi on soils derived from garnetiferous gneiss and Khondalite. RAJASTHAN: Parshad, 12.9.1963, *Verma* 129 (BSA). TAMIL NADU: Musiri, April 1937, *Gamble* 83292 (MH); Nellimalai R. F., 400 m, 20.3.1963, *Ramamurthy* 16028 (MH); Chintaldevi, March 1930, *Gamble* 84030 (MH); Horsely Konda, 5.5.1918, *Gamble* 15466 (MH); Tambaram, 15.4.1938, *Barnes* 1871 (K); Tambaram, June 1939, *Barnes* 2179 (K); Tiruppalani, 16.5.1944, *Chandrasekhar & Parthasarathy* 87109 (MH); Vandalpur, April 1941, *Barnes* s. n. (K); Peninsular India, *Wight* s. n. (E). UTTAR PRADESH: Gangani, 1500 m, 10. 6. 61, *Rau* 15615 (BSD); Tons valley, 1000-1330 m, 1895, *Duthie* 15581 (CAL & DD); Mussoorie, 1869, *King* s. n. (CAL); Dry hill side above Thal, April 1881, *Reid* s. n. (E); Nepal frontier, 1.5.1900, *Inayat* 23878 (CAL); Pipra, 1900, *Inayat* s. n. (DD); Nigol valley,

1800 m, 24.5.1960, *Singh* 11481 (BSD); Nilgol valley, 10.6.61, *Singh* 14855 (BSD); Hajeti Thal, 1207 m, 2.5.1964, *Pant* 31879 (BSD); Thorali Pindary valley, 800 m, 4.5.1967, *Bhattacharya* 37269 (BSD). NEPAL: Bhimnagar, 12.3.1810, *Buch.-Ham.* 363 in *Wall. Cat.* no. 5062B (E); Bhansaigota 1.5.1900, *Inayat* 23878 (DD & CAL); Tibrikot 31.5.1952, *Polumin, Sykes & Williams* 2134 (CAL & E). BURMA: Aracan-Akyab, *Kurz s. n.* (CAL); Pegu-Yowah, Engforest, *Kurz* 466 (CAL); Prome district, *Kurz* 2628 (CAL); Shan hills, 1896, *Kholil s. n.* flowered in garden 21.3.96—14.4.96, *Prain* (CAL).

*Note*—*Fischer* 3783, collected from Anaimalai hills, 466.6 m on 2.2.1915, shows gigantism, with a robust scape, bigger flowers with filiform pedicels and long, linear style, longer than ovary. *Shaik Ismail* 222 collected from Akyab on 21.1.1907, bears simultaneously flowers, fruits and leaves. This shows that this species is not strictly hysteranthus and that this phenomenon appears to be influenced by the climatic condition prevailing on the locality in which the plant grows.

2. *U. congesta* Wt. Icon. t. 2064 (left hand figure). 1853 (Type: Seacoast, Malabar, herb. *Wight*—not seen); Baker in J. Linn. Soc. 13: 218. 1873; Hook. f. Fl. Brit. Ind. 6: 348. 1892; Fischer in Gamble, Fl. Pres. Madras 1527. 1928.

*Herbs* bulbous, scapigerous, synanthus; bulbs  $\pm 5 \times 4$  cm, ovate, elongate, tunicated, outer scales white, scarious, inner deep coloured. *Leaves* 12.5–15 cm long. *Scape* 10–60  $\times$  2–4 cm long, slender, glabrous, grooved. *Inflorescence* dense raceme, 5–7.5 cm long, 10–14 flowered, ascending. *Flowers* 5–7  $\times$  2–3 mm, small, sub-erect, campanulate, white or purple in colour; bracts 2–4  $\times$   $\pm 1$  mm, minute, deltoid, or lanceolate, spurred, evanescent; pedicels 4–7 mm long. *Perianth* 6 in 2 whorls of 3 each,  $\pm 5 \times 2$  mm, oblong-lanceolate, obtuse, tubercled

at the subapex; nerves 1–2, median. *Stamens* 6, free; filaments 1.5–4 mm, narrow, as long as or shorter than anthers; anther 2–3.5  $\times$  1 mm, oblong, dorsifixed, introrse, pollen 60–87  $\mu \times$  45–53  $\mu$ , oblong, finely reticulate.

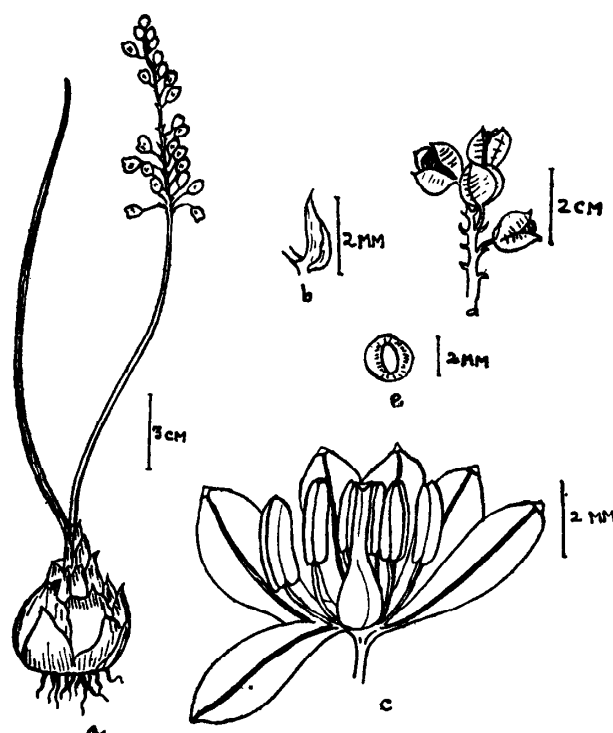


Fig. 3. *U. congesta* Wt.: a. bulb with leaf and inflorescence. b. bract. c. flower showing parts. d. fruits. e. seed with wing.

*Pistil* syncarpous, carpels 3; ovary 2–3  $\times$  1–1.7 mm, ovate, narrowly ovate or ovate-oblong, sessile; style  $\pm 3 \times .75$ –1 mm, stout, as long as ovary or slightly longer; stigma stout, trilobed. *Capsule* 8–10  $\times$  6–8 mm, subglobose, trilocular, loculicidal, 9–12 seeded. *Seeds* 6–7  $\times$  5–6 mm, elliptic, broadly winged, brownish black, shining.

*Flowering time*: April–May. *Fruiting time*: May.

*Ecology*: This plant grows on the hills near the sea coast.

*Occurrence in India and adjoining region*:

In the hills near the sea coast in Maharashtra, Tamil Nadu and Sri Lanka.

*Herbarium sheets examined:* TAMIL NADU: Kambakkam hills, 6.5.1913, *Barber* 2922 (MH). Maharashtra: Top of Vazirgad fort, Purandhar, 7.5.1945, *Santapau* 6189 (BLAT).

3. *U. polyantha* Blatter & McCann in J. Bomb. Nat. Hist. Soc. 32: 735. 1928. (Type: Panchgani, 1350 m, Maharashtra, *Blatter & McCann* 101 BLAT).

*Herbs* bulbous, scapigerous; bulb globose-ovoid, tunicated, pale, upto  $5 \times 4.5$  cm, neck 3.5 cm long, conical. *Leaves* appearing after the flowers. *Scape* 15-60 cm long and about 4 mm across at the base, slender, rigid, slightly bent above, greenish to purple. *Inflorescence* raceme, upto 25 cm long, dense flowered. *Flowers* many, upto 50, about 1 cm and less apart, bracteate, pedicelled, brownish-purple; buds obovate, gradually becoming clavate; bracts deltoid, about 1 mm long, persistent; pedicels filiform, 5-7 mm long, spreading in flower ascending or appressed and almost double the length in fruit. *Perianth* 6, in 2 whorls of 3 each, rotate, pale yellowish green inside, with a broad brownish band along the centre outside; segment oblong, 5-6 mm long, obtuse with one prominent nerve, bearded at the tip, outer ones 3 mm broad, inner 2-2.5 mm broad. *Stamens* 6, free, 2.5 mm long, whitish; filaments flattened, very narrow upwards; anthers versatile, cordate at base; pollens  $65-87 \mu \times 45-60 \mu$ , oblong, finely reticulate. *Pistil* syncarpous; ovary oblong, 6 grooved; trilocular, sometimes tetralocular; style short, stout, 3-grooved; stigma trigonous. *Capsule* 10-11  $\times$  6 mm, ovoid-oblong or ellipsoid, truncate, coriaceous, triquetrous, trilocular, each carpel with an elevated groove in centre and with a slightly higher rib or margin. *Seeds* 2-10 in each locule, broadly ellipsoid, 6-7  $\times$  5-6 mm; much compressed, broadly winged, shining black.

*Flowering time:* Middle of March to May. Flowers open before dawn and remain so until noon. The perianth persists to the fruit till it is semi-matured and then falls off. *Fruiting time:* April-July.

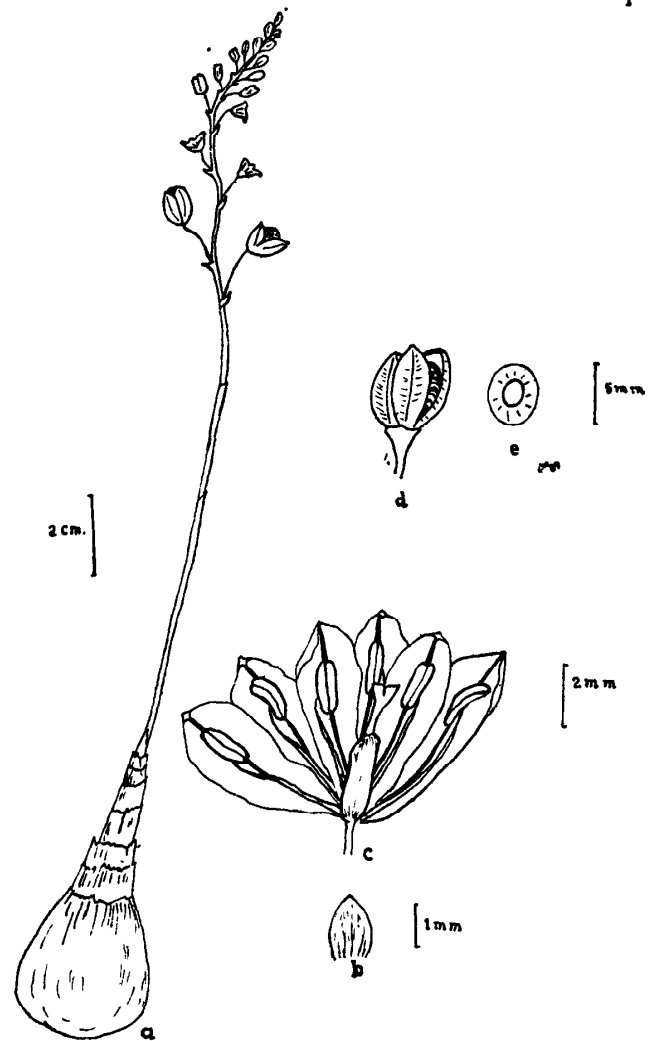


Fig. 4. *U. polyantha* Blatt. & McCann.: a. bulb with inflorescence. b. bract. c. flower showing parts. d. fruit. e. seed with wing.

*Ecology:* This species grows in association with short grasses, very common on table land, infrequent on the slopes.

*Note:* *Blatter & McCann* 101 (BLAT) is a gathering of plants collected in different stages of flowering and fruiting. Hence *Blatter & McCann* 101a is designated as the lectotype and all other gatherings (101 b-d; 101A-G) are treated as paratypes.

*Occurrence in India:* Maharashtra to Tamil Nadu.

*Herbarium sheets examined:* KARNATAKA: Mundged, May 1883, Talbot (BSI); Daugi, April 1884, Talbot (BSI). MADHYA PRADESH: Gwalior, 1891, *Maries* s. n. (CAL). MAHARASHTRA: Panchgani, 1350 m, Blatter & McCann, 101 (BLAT); Purandhar, 19.7.1963, R. S. Rao 88628 (BSI). TAMIL NADU: Coimbatore, Fischer 946 (CAL).

4. *U. polyphylla* Hook. f. Fl. Brit. Ind. 6: 348. 1892 (Type: Akya, Deccan Peninsula (?) Heyne in Wall. Cat. 5062 F—K—Wall.—not seen, the duplicate of the same gathering extant in herb CAL agrees with the description—vide note in seq.). *Ornithogalum polyphyllum* Heyne in Wall. Cat. 5062F, 1831, nom. nud. non Jacq. Icon. Rar. 2, t. 430. 1786.

*Herbs* bulbous, scapigerous; bulb 2.4.5 × 2.4 cm, ovate. *Leaves* 20.25 × 1.25 cm, filiform, involute at the margins. *Scape* longer than the leaves, very slender. *Inflorescence* raceme, 6-flowered. *Flowers* suberect; bracts persistent, longer than the pedicels, about .4 cm long, subulate, with broad membranous auricles; pedicels short. *Perianth* about .8 cm long, oblong-lanceolate, obtuse, thickened at the tips; nerves 5, median. *Stamens* 6, free; filaments slender, nearly as long as the perianth; style elongate, as long as the perianth.

*Note:* Hooker (*l.c.*) reports that there is but one specimen in herb. Wall.—K, without bulb. It resembles the Cape and European species and is fastened down with *Urginea wightiana* and *Dipcadi serotina*. But Wallich 5062F extant in herb. CAL is represented by 3 specimens with bulbs, leaves, scapes and bracts but without flowers. The parts present are having the characteristics of the species described. Description of the flower has been taken from Hooker (*l.c.*).

*Occurrence in India:* Deccan Peninsula; known only from the type collection.

*Herbarium sheets examined:* Akya, Dec-

can Peninsula, Heyne ex Wall. Cat. 5062F. (CAL.).

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\*Not seen.