

***Commelina mascarenica* (Commelinaceae): an overlooked Malagasy species in Africa**

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ABSTRACT

Until 2006 *Commelina mascarenica* had been recorded with certainty only from Madagascar and the Comoro Islands. It is here reported also from Africa in Somalia, Kenya, Tanzania and Mozambique. African specimens have been overlooked, misidentified as *C. imberbis*, or treated as a distinct but unnamed species. *Commelina mascarenica* is apparently most closely related to the African and Arabian peninsular species *C. imberbis*. A full description, illustration and the first chromosome number for *C. mascarenica* are provided.

KEY WORDS

Commelinaceae,
Commelina,
Madagascar,
East Africa.

RÉSUMÉ

Commelina mascarenica (Comelinaceae): une espèce malgache négligée en Afrique.

Jusqu'en 2006 l'espèce *Commelina mascarenica* était connue avec certitude seulement de Madagascar et des Comores. Nous confirmons également sa présence en Afrique, en Somalie, au Kenya, en Tanzanie et au Mozambique. Les échantillons d'Afrique avaient été négligés, mal identifiés avec *C. imberbis*, ou traités comme espèce distincte mais non nommée. *Commelina mascarenica* a apparemment le plus de proximité avec *C. imberbis* d'Afrique et de la péninsule arabe. Une description complète, une illustration et le premier nombre chromosomique pour *C. mascarenica* sont fournis.

MOTS CLÉS

Commelinaceae,
Commelina,
Madagascar,
Afrique de l'Est.

INTRODUCTION

Studies of undescribed species often lead to unexpected discoveries. For example, the need to examine previously unstudied taxa, in order to contrast them with a putative new species of *Commelina* from Uganda, led me to discover that my “new” species was instead *C. zenkeri* C.B. Clarke from Cameroon (Faden 2001b). Similarly, as part of an investigation of a new species of *Commelina* L. (Commelinaceae) from the East African coast (Faden in press) it became necessary to examine the Malagasy species *C. mascarenica* C.B. Clarke. A revelation from this study was that *C. mascarenica* was present in Africa, from which it had never been recognized, except as an unnamed species (Faden 1974, 1994, 1995). The purpose of this paper is to review our knowledge of *C. mascarenica*, to relate how it was found to occur in Africa, to provide a detailed description of this species, and to document its distribution.

HISTORY OF *COMMELINA* *MASCARENICA*

Commelina mascarenica was described from a single collection recorded as coming from “Mauritius, Madagascar and Comoros” (Clarke 1881). Its most distinctive feature seems to have been its oblong-ellipsoid, smooth seeds. Perrier de la Bâthie (1936) provided a fuller description of the capsules and seeds and cited 15 collections from Madagascar and the Comoro Islands. He furnished a more comprehensive description of the species in the *Flore de Madagascar* family treatment (Perrier de la Bâthie 1938). Mathew (1978) included *C. mascarenica* in *Flore des Mascareignes* but only as a note.

Until Faden (2006) reported *Commelina mascarenica* from Somalia, the species had been recorded for certain only from Madagascar and the Comoro Islands (Perrier de la Bâthie 1936, 1938). Clarke’s record of the species from Mauritius, Madagascar and Comoros, based on the printed label on the type, had led to confusion about the species’ distribution as well as the provenance of the type. The type specimen, *MacWilliam s.n.* (G), consists of a single sheet containing four small shoots with spathes

plus an immature fruit in a packet. This material clearly did not come from all three islands/island groups recorded on the label. Dorr (1997) lists MacWilliam as having collected *C. mascarenica* in the Comoro Islands and does not cite him as a collector in Madagascar. So the Comoro Islands is the most likely source of the type collection.

Other reported distribution records for *C. mascarenica* are unsubstantiated. Clarke (1881) recorded it from Mauritius because of the label data on the type. Perrier de la Bâthie (1936, 1938) reported the species from Mauritius but indicated that the record was based on Clarke. Mathew (1978) likewise cited this species from Mauritius only because of Clarke’s record. Neither Perrier de la Bâthie nor Mathew recorded having seen any collections from the island. Perrier de la Bâthie (1938) also reported *C. mascarenica* as probably from the Seychelles. He provided no evidence, however, and, in the apparent absence of collections, this record and those from Mauritius are at best dubious and should be discounted.

COMMELINA MASCARENICA IN AFRICA

The plant that would prove to be *C. mascarenica* was first recognized in Africa as a distinct species in Kenya (Faden 1974). Because no name could be found for it, the species was designated as “*Commelina* sp. D”. No name had yet been discovered 20 years later, so the same designation was used in Faden (1994). This species was recognized from Somalia in Faden (1995), where it was called “*Commelina* sp. #5”.

The identification of *Commelina* sp. D and *Commelina* sp. #5 as *C. mascarenica* happened as a result of a study that I began in 2000 of an apparently undescribed species of *Commelina* from coastal and subcoastal Kenya and Tanzania. That species (Faden in press) also has elongate, smooth seeds, so it became necessary to determine whether it might actually be *C. mascarenica*. I had not studied that species before, so in March 2002, in a loan from the Muséum national d’Histoire naturelle, Paris (P) to the Royal Botanic Gardens, Kew (K), I examined 14 of the 15 collections – all except *Perrier de la Bâthie 9018*, which was not sent – that were cited as *C. mascarenica* in *Flore de Madagascar* (Perrier

de la Bâthie 1938). Thirteen specimens appeared to belong to a species that significantly differed from my new East African species. The fourteenth specimen, *Bojer s.n.*, was a mixed collection, one part of which – designated by Perrier de la Bâthie (1938) as “*Bojer B*” – was indeed my new East African *Commelina* species, and was not conspecific with the other 13 collections. The other part of the Bojer collection, “*Bojer A*”, belonged to an unrelated species, *C. lyallii* C.B. Clarke.

The 13 remaining collections from Madagascar and the Comoro Islands that were treated by Perrier de la Bâthie (1936, 1938) as *C. mascarenica* were recognized as conspecific with my *Commelina* sp. D and *Commelina* sp. #5 because some of them, e.g., *Decary 791* (P) from the Comoro Islands, had mature seeds that were identical to those of the African plants. However, because I now had evidence that my putative new species also occurred in Madagascar, it became necessary to examine the type of *C. mascarenica*, in order to determine to which species the name should be applied.

In August 2002, I was able to study the type of *C. mascarenica*, sent on loan to Kew from G. Although the type specimen was rather scrappy, and the capsule and seeds in the packet were immature, I had no doubt that this was same species as the 13 collections examined from P that were cited as *C. mascarenica* in *Flore de Madagascar* and also matched African *Commelina* sp. D and *Commelina* sp. #5. Therefore the African plants were *C. mascarenica* too.

The first reference to *C. mascarenica* in Africa was by Faden (2006), in an appendix to the *Flora of Somalia*. The species name was applied to a previously unnamed species (*Commelina* sp. #5) and the species was noted to also occur in Kenya, Tanzania, Mozambique, Comoro Islands and Madagascar.

SYSTEMATICS

Commelina mascarenica C.B. Clarke

(Fig. 1)

Commelina mascarenica C.B. Clarke in DC., *Monographiae Phanerogamarum* 3: 174 (1881); Perrier de la Bâthie, *Notulae Systematicae* 5: 189 (1936); *Flore de Madagascar et des Comores* 37: 22 (1938); Faden, *Flora of*

Somalia, vol. 3: appendix, 585 (2006). — Type: Comoro Islands [“Îles Maurice, de Madagascar et Comores” on label], VIII-X.1838, *MacWilliam s.n.* (G!).

Commelina sp. D, Faden, *Upland Kenya Wild Flowers*, 660 (1974); *Upland Kenya Wild Flowers*, 2nd ed., 304 (1994).

Commelina sp. 5, Faden, *Flora of Somalia* 4: 91 (1995).

MATERIAL EXAMINED. — **Comoro Islands.** Anjouan, V.1850, *B. Boivin s.n.* (P). — Mohély, III.1850, *B. Boivin s.n.* (P). — Grande Comore? Anjouan?, V.1850, *B. Boivin s.n.* (P). — Anjouan, Tsantsany, 12.XII.1921, *R. Decary 791* (P). — Anjouan, VIII.1923, *Waterlot 982* (P).

Kenya. District Unknown, “British East Africa”, *C. F. Elliott 236B (336B?)* (K). — Kilifi District, Sabaki, 4 mi [6.4 km] N of Malindi, alt. 20 ft [6.25 m], 14.XI.1961, *R. Polhill & S. Paulo 759* (EA, K). — Rabai Hills, Mombaz, IX.1885, *W. E. Taylor s.n.* (BM). — Vipingo, 20 mi N of Mombasa, 16.XII.1953, *B. Verdcourt 1056S* (EA). — Kwale District, just before Shimoni, 4°38'S, 37°23'E, alt. c. 5 m, cultivated at Smithsonian Institution, 21.XII.2005, *R. B. Faden 2005/004* (US) (grown from seed of *R. B. & A. J. Faden 77/362bis*). — Shimba Hills, Tanga road near Marere Water Works, alt. 700' [213 m], 20.IV.1968, *F. Magogo & P. Glover 904* (K). — Lamu District, Nyangore Bridge, W of Witu, 6.III.1977, *S. S. Hooper & C. C. Townsend 1217* (EA, K). — Mombasa District, Mombas, Ali's compound, VII.1932, *Lady M. Jex-Blake 2272* (EA, K). — Mombasa [or Kwale?] District, Nyali Beach Hotel, 6 mi [9.6 km] from Mombasa, alt. 30 ft [9.15 m], 24.IV.1950, *R. W. Rayner 294* (EA, K). — South Kavirondo District, beside the road 2 km after Osani market, alt. 1200 m, 5.V.1978, *A. C. Plaizier 1295* (EA). — Mainland, near Homa Point, Kavirondo Gulf, alt. 3300 ft [1006 m], IX.1933, *E. R. Napier 5384A* (EA, K). — Lukiri Island, VII.1934, *E. R. Napier 6814* (EA?, K). — Tana River District: Tana River National Primate Reserve, Mchelelo Research Camp, 24.VII.1988, *K. Medley 373* (K). — Teita District, Tsavo National Park East, road to Lugard's Falls, 3°03'S, 38°47'E, alt. 350 m, 22.I.1966, *M. Hucks 634* (EA). — Voi [original label; rewritten EA label has “Lugard's Falls”, as in *Hucks 634*], 9.III.1966, *M. Hucks 703* (EA). — Tsavo National Park, Voi, 31.IV.1962, *Lucas, Jeffrey & Kirika 271* (K). — Voi, alt. 2000 ft [610 m], 6.V.1931, *E. R. Napier 907* (EA).

Madagascar. Chiefly from NW Madagascar, *R. Baron 5329* (K).

N Madagascar, *R. Baron 6358* (K, P); *6435* (K, P). — Without locality, *R. Baron 6816* (K).

Est, sous-préfecture de Vohémar, commune rurale de Daraina, Fokontany d'Ankijabe, champs de M. Tombovelo, 134 m, 26.XI.2004, *A. Marais AM038* (US). — Sambirano, Nossi-Bé, IX.1879, *J. M. Hildebrandt 3157* (P, K). — Nossi-Bé, VI.1847, *M. Boivin 2010* (P). — Nossi-Bé, Forêt de Lokobe, VI.1933, *H. Perrier 7282*

bis (P). — Ambanja, *Waterlot* 286 (P).

Ouest, Diégo Suarez, *Bernier* 96 (P). — Mahatsinjo, 26.XI.1916, *R. Decary* 68 (P). — Mont Tsitondriana (Boïna), I.1902, *H. Perrier* 7282 (P).

Mozambique. North, Mouth of Msalu River [= Rio Mes-sala], X.1911, *C. E. F. Allen* 25 (K). — Cabaceira Grande beim Institut Leo XIII, IV.1894, *Prelado* 58 (BM).

Somalia. S1, Irrigation S of Baidoa, 3°05'N, 43°39'E, alt. 375 m, 14.II.1982, *J. J. Beckett* 1478 (EA). — S2, Burane-Mahaddei road, 1.9 km, c. 2°59'N, 45°35'E, 5.XII.1988, *R. B. Faden & P. Kuchar* 88/269 (US). — Marka, alt. 60 m, *Gerrard* 311/2 (K).

Tanzania. Bagamoyo District, 12 km on Chalinze-Korogwe road, 6°2'08"S, 38°18'50"E, alt. 485 m, 2.VI.1996, *Faden, Phillips, Muasya & Macha* 96/26 (K, US).

Handeni District, Kwa Mkono, alt. 1500 ft. [457 m], 27.VI.1966, *M. E. Archbold* 754 (K). — Kilwa District: Selous [Game Reserve], Kingupira, 8°28'S, 38°33'E, alt. c. 125 m, 19.IV.1976, *K. Vollesen* 3496 (EA).

Morogoro District, Morogoro Agricultural College, 6.VII.1970, *C. H. S. Kabuye* 291 (K).

Pare District, 3 km on Hedaru-Same road, c. 4°30'S, 37°54'E, alt. 610-910 m, 28.VI.1970, *C. H. S. Kabuye* 165 (EA, K). — Pemba, Vitongoge, 14.X.1929, *J. H. Vaughan* 915 (EA).

Rufiji District, Rufiji, alt. 50 ft [15 m], 1.I.1931, *H. Musk* 59 (K).

Tanga District, Muheza, alt. 100 m, 5.X.1984, *M. E. Archbold* 3027 (K). — Tanga, road to jetty, alt. 5 m, 5.IX.1987, *M. E. Archbold* 3151 (K). — Kulhinlaus [?], I.1893, *C. Holst* 2079a (K).

Uzaramo District, Silver Sands [Hotel?], N coast of Dar-es-Salaam, 13.VI.1965, *B. J. Harris* 105 (K).

Zanzibar, Migombani, 10.II.1931, *J. H. Vaughan* [K]1859 (EA). — Zanzibar, near Kufile, 12.I.1931, *J. H. Vaughan* [K]1828 (EA, K). — Zanzibar, 1931, *J. H. Vaughan* 1859 (K).

DISTRIBUTION. — Madagascar, Comoro Islands (Anjouan, Mohély), Somalia (S1, 2), Kenya (K5, 7), Tanzania (T3, 6, P, Z), Mozambique (MOZ-N) (Fig. 2).

DESCRIPTION

The following description is based on all of the herbarium specimens that have been examined as well as the plants in cultivation.

Perennial herb; roots thin, fibrous, usually confined to the base of the plant, occasionally produced from decumbent stems; shoots sprawling, scrambling or more or less scandent, often straggling through other herbaceous vegetation or shrubs, much branched, to 1.2 m tall or long; internodes to 17 cm long, glabrous, or with a line of hook-hairs continuous with the pubescence of the distal sheath. Leaves

distichous or spirally arranged, sheaths to 4 cm long, often split longitudinally, sometimes tinged with red, with a line of hook-hairs along the fused edge or occasionally more widespread, sometimes subglabrous, apex ciliolate with hook-hairs or eciliolate, lamina sessile, asymmetric at the base, linear-lanceolate to lanceolate, lanceolate-elliptic or ovate-elliptic, 3.5-14.5 × (0.6-)1-3(-3.5) cm, apex acuminate to acute, base cordate to cordate-amplexicaul in the distalmost leaves, rounded to cuneate in the more proximal leaves, margins usually planar, rarely finely undulate, especially proximally, scabrous, at least distally, adaxial surface sparsely to densely puberulous with minute hook-hairs which are usually most concentrated on the midrib, abaxial surface glabrous to sparsely puberulous (rarely ± densely puberulous) usually with longer hook-hairs, occasionally with all short hook-hairs or with a mixture of long and short hook-hairs. Spathe solitary, rarely 2 or 3 in close proximity, sometimes bracteate, peduncle 1-3.8 cm long, puberulous with hook-hairs of two sizes, at least distally and in a line continuous with the fused spathe margins, sometimes densely puberulous all around, spathes usually slightly falcate because of a deflexed tip, less commonly because the whole folded edge is curved, occasionally not falcate, 1.8-2.9 cm long, 0.9-1.6 cm high, apex acute to acuminate, sometimes mucronate, base cordate to hastate, margins fused for 3-6(-6.5) mm, sparsely ciliolate along the fused edge and just distal to it with hook-hairs, otherwise glabrous, surfaces slightly paler towards the folded edge, puberulous with hook-hairs of two sizes, the long ones 3-celled, the smaller ones very inconspicuous; upper cincinnus 1(-2)-flowered, the flowers male, peduncle long-exserted from the spathe, 13-28 mm long, densely puberulous with hook-hairs of two sizes; lower cincinnus 4-6-flowered, peduncle 7-16 mm long, puberulous at least distally with minute hook-hairs, occasionally a few longer ones intermixed; bracteoles usually present. Flowers bisexual and male, (1.5-)2.1-2.3 cm wide; pedicels of flowers of both cincinnati 3-6 mm long, glabrous; sepals hyaline white with transparent margins, upper sepal lanceolate to lanceolate-oblong, 3.5-5 × 1.5-2 mm, paired sepals ovate to ovate-elliptic or obovate-elliptic, 4-6.2 × 3-4.4 mm;

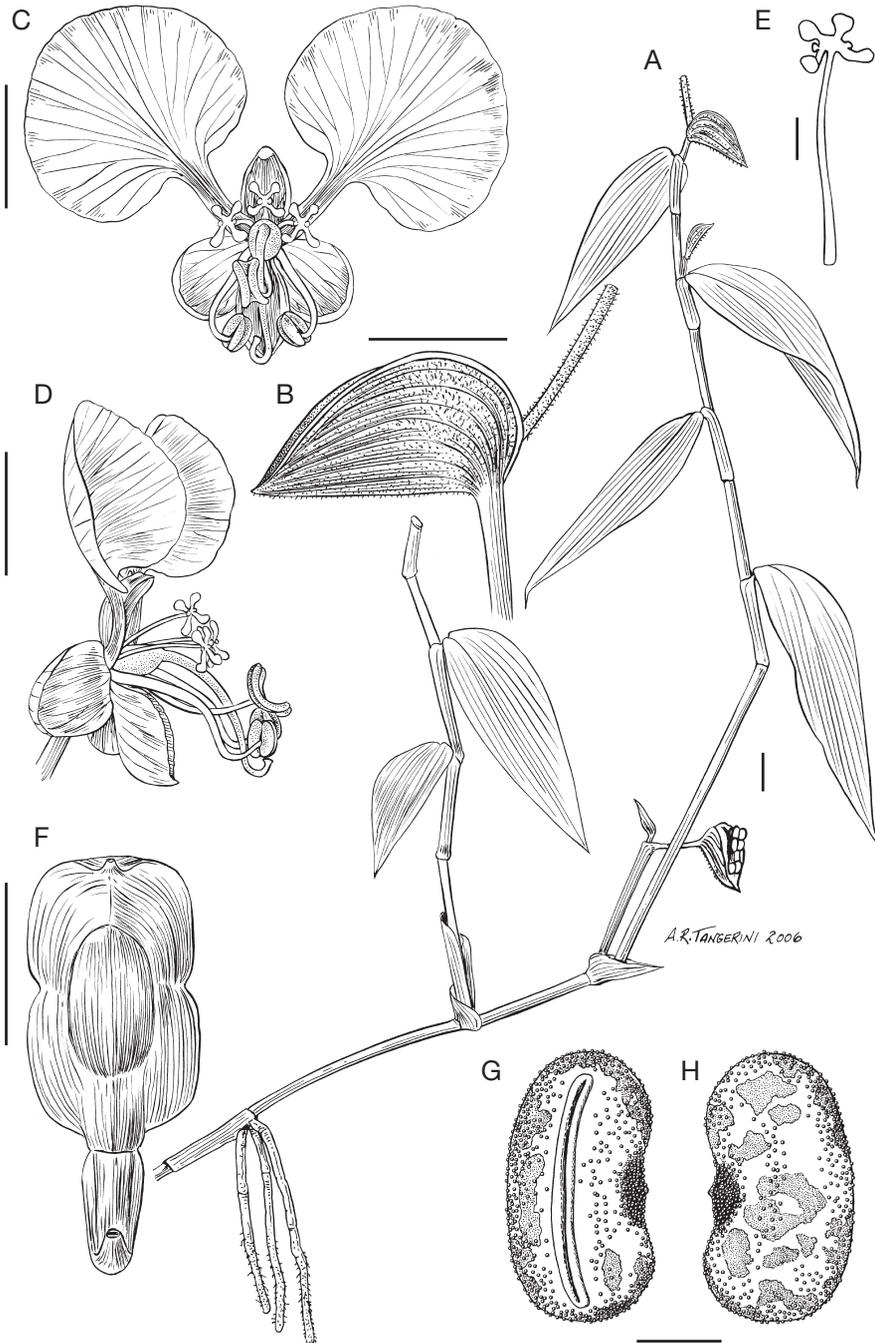


FIG. 1. — *Commelina mascarenica* C.B. Clarke: **A**, habit; **B**, spathe; **C**, bisexual flower, front view; **D**, bisexual flower, lateral view; **E**, staminode; **F**, capsule (before dehiscence), dorsal view; **G**, ventral locule seed, ventral view; **H**, ventral locule seed, dorsal view. All from Faden 2005/004 (US) (grown from seed of Faden & Faden 77/362bis) except G and H, which are from the original field collection of Faden & Faden 77/362bis. Scale bars: A, B, 1 cm; C, D, F, 5 mm; E, G, H, 1 mm.

paired petals 10-15 × 8-12 mm, blue (pale blue, sky blue, flax blue, powder blue), occasionally mauve-blue, pale mauve or white, limb broadly ovate or ovate-reniform, *c.* 8.5 × 12 mm, apex rounded to truncate or emarginate, base truncate to cordate, claw 4-7 mm long, concolorous with the limb; medial petal somewhat boat-shaped, ovate, *c.* 4-7 × 3.5 mm, concolorous with the paired petals; staminodes 3, subequal or occasionally 1 abortive, filaments 3.5-7 mm long, lavender or bluish tipped with yellow, antherodes 6-lobed, *c.* 2 mm in diameter, yellow; lateral stamens with filaments (8-)9.5-14.5 mm long, whitish, or lavender to bluish and tipped with greenish yellow or white, anthers elliptic to oblong-elliptic or ovate, (1-)1.3-2 mm long, greenish white with a grey connective, pollen golden yellow; medial stamen with filament 5.5-8.5 mm long, lavender or bluish at base, greyish yellow-green or yellow above, anther saddle-shaped, *c.* 1.7-2.9 mm long, yellow with grey-green margins or entirely yellow, pollen golden yellow; ovary *c.* (1-)2-2.5 mm long, green, style 10-12 mm long, lavender shading to blue at apex, stigma slightly enlarged, violet. Capsule trilocular, bivalved, oblong, 5-seeded, 8.3-10 × (3.6-)4.7-6 mm, constricted between the seeds, stramineous with dark brown flecks, apex emarginate-apiculate or retuse-apiculate, dorsal locule 1-seeded, indehiscent, striate, with a low, longitudinal, middorsal ridge, ventral locules 2-seeded, dehiscent. Dorsal locule seed embedded in the capsule wall, represented by a low striate hump, dorsiventrally compressed, narrowing in thickness on the ventral surface both apically and basally, oblong-elliptic to oblong, 3.85-4.34 × 2.25-2.3 mm, the basal end of the seed rounded to truncate or emarginate, the apical end emarginate, testa medium brown to dark brown, smooth, not farinose; ventral locule seeds cylindrical to ellipsoid, not at all compressed, 3.1-4.1 × 2-2.35 mm, very rarely with a weak middorsal ridge, testa smooth or faintly alveolate or faintly radially ribbed, dark brown with conspicuous or inconspicuous lighter brown mottling or gray mottled with dark brown, densely white-farinose, embryotega a very low hump not well differentiated from the testa, with a short, blunt or sharp apicule, otherwise inconspicuous, hilum dark brown or black, with light brown

margins, raised, neither winged nor appendaged, straight, 75-92% the length of the seed.

HABITAT

Roadsides, grassland, open bush, scattered trees and shrubs, herbaceous vegetation, wet ground, thicket edge, disturbed riverine areas; sea level to 700(-1000) m; flowering specimens have been seen from January, March to July, and September to November.

CHROMOSOME NUMBER

$2n = 60$ (counted from plants grown from seeds of *Faden & Kuchar 88/269* from Somalia by Mauro Grabile, Universidad Nacional de Córdoba, Córdoba, Argentina, the same count that we approximated from that collection and also from cultivated material of *Faden 2005/004* from coastal Kenya).

DISCUSSION

African specimens of *C. mascarenica* have caused much confusion over the years. Except in western Kenya and in Somalia, where this species was recognized as distinct but apparently unnamed (Faden 1974, 1994, 1995), plants have usually been identified as *C. imberbis* Ehrenb. ex Hassk. because both species have elongate capsules and seeds. In Kenya and Tanzania, *C. imberbis* differs from *C. mascarenica* by typically lacking an exerted upper cincinnus. It further differs by having proportionally broader seeds that are weakly to strongly radially ridged, usually with warty material along the ridges. In *C. imberbis* the testa is uniformly dark brown to nearly black (or rarely medium brown), whereas in *C. mascarenica* the testa is always mottled in different shades of brown or gray and brown.

Other differences between the two species are mainly more subtle. The upper sepal is longer in *C. mascarenica* than in *C. imberbis* (3.5-5 vs. 2.7-3 mm). The lower petal is inconcolorous with the paired petals and typically blue in *C. mascarenica*, whereas in *C. imberbis* this petal is white or bluish white and contrasts with the paired petals. In *C. mascarenica* the staminode filaments are lavender

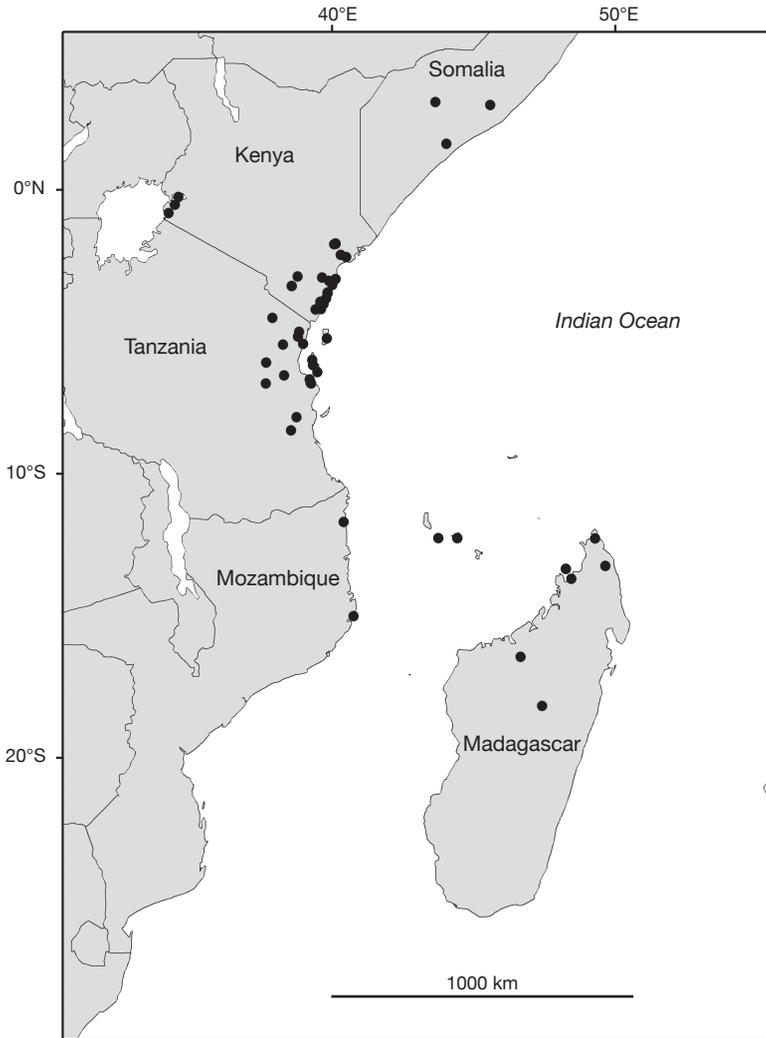


FIG. 2. — Distribution of *Commelina mascarenica* C.B. Clarke.

to blue with yellow tips, but in *C. imberbis* they are entirely yellow. Similarly, the stamen filaments of *C. mascarenica* are usually at least partly lavender to bluish (rarely white), whereas in *C. imberbis* they are wholly yellow or yellowish white.

Within Africa the two species are geographically separate. *Commelina imberbis* occurs generally farther inland and at higher elevations ([780-]1000-1730 m) in the two countries (Kenya and Tanzania) in which both species occur. The two species would appear

to overlap only near Lake Victoria in southwestern Kenya, but *C. imberbis* has not been collected in the area, so in fact they are not at all sympatric.

Distinguishing *C. mascarenica* from *C. imberbis* has been difficult not only because the two species are so similar but also because *C. imberbis* itself has often been confused with other species (Faden 2001a). *Commelina imberbis*, which ranges from the Arabian Peninsula (Yemen) west to Nigeria and south to northern Zambia, was recorded for

the *Flora of Southern Africa* (Obermeyer & Faden 1985), but the corresponding specimens actually belong to *C. kotschyi* Hassk. The species reported as *C. imberbis* from India (Rao 1967) is *C. petersii* Hassk. The specimens treated as *C. petersii* in *Flora of West Tropical Africa* (Brenan 1968) are actually *C. imberbis*. *Commelina imberbis* of Faden (1974, 1994) also includes *C. kotschyi*.

Commelina mascarenica has also been confused with my new species from the East African coast, where both may occur together. They may be separated by their leaf bases (not all amplexicaul in *C. mascarenica*), shape of the capsule apex, presence or absence of appendages on the seeds (seeds not appendaged in *C. mascarenica*) and the type of pubescence on the adaxial leaf midrib (Faden in press). There have been at least three mixed collections of these species, including one by this author. I also made a mixed collection of *C. mascarenica* and *C. petersii* in Somalia.

Commelina mascarenica appears to be most closely related to *Commelina imberbis*. Their great morphological similarity – the seeds are the best distinguishing character – allopatric distributions, and identical chromosome numbers – only the counts $n = 30$, reported in Lewis & Tadesse (1964) from Ethiopia for *C. imberbis* and our unpublished count of $2n = 60$ for a plant from Yemen are definitely attributable to that species – would suggest that they could be considered subspecies, but until the total variation in the more widespread *C. imberbis* is better understood, I consider it preferable to maintain them as distinct species.

None of the collections that penetrate the drier, inland areas of southeastern Kenya and northeastern Tanzania from the Indian Ocean coast, such as *Kabuye 165* (K) from near the Pare Mountains, in Tanzania, and *Hucks 703* (EA) from Tsavo National Park East, in Kenya, has capsules and seeds. Thus their separation from *C. imberbis* was considered uncertain. However, all of them have an exerted upper cincinnus, so they are best treated as *C. mascarenica*. Definite *C. imberbis* occurs further inland and at higher elevations. Possible confusion with *C. petersii*, which, like *C. mascarenica*, regularly produces an upper cincinnus in the spathe, could occur in these dry habitats. Although the petiolate lower

leaves of *C. petersii* are usually distinctive, some collections are difficult to separate from *C. mascarenica* without fruiting material.

The disjunct occurrence in southwestern Kenya, near Lake Victoria, of this otherwise (within Africa) Zanzibar-Inhambane species, is puzzling. Most likely it resulted from an accidental introduction of *C. mascarenica* from the coast. The species has been collected over a long period of time and from several localities near the lake, so it appears to be well established in the region.

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