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Notes on Indian Commelinaceae. V

BY ROLLA S. RAO, F.L.S. AND R. V. KAMMATHY

Botanical Survey of India, Poona

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During work on the Indian species of Commelinaceae, it has been found that a new name is necessary for the genus previously treated as *Zygomenes* by us, and that a new species of *Cyanotis* D. Don grows along the Anamalai hills, South India. The descriptions of both are given below.

Salisbury in *Trans. Hort. Soc. London* 1: 271 (1812) considered *Commelina axillaris* Linn. Sp. Pe. 42 (1753) as a distinct new genus, and gave it the name *Zygomenes axillaris*. He mentioned the procuring of seeds of this species from Calcutta and its vegetative propagation, but unfortunately did not describe the genus *Zygomenes*. Subsequently, Hasskarl in Schweinfurth's *Beitrag zur Flora Aethiops* 211-14 (1867) adopted the name *Zygomenes* and under it described 4 African species which belong to the genus *Cyanotis* (*sensu stricto*). His explanation for this action, given in Obs. 2 on p. 213, was that *Cyanotis* D. Don (1825) must give place to the earlier *Zygomenes* Salisb. (1812, misquoted as '1820'). Hasskarl in fact was not justified in changing the name, *Zygomenes* Salisb. being merely a *nomen nudum*; nevertheless by taking up the name *Zygomenes* in this way he validly (but illegitimately) published it as a superfluous substitute for *Cyanotis*.

Later, W. F. Wright in *Contr. U.S. nat. Herb.* 9: 404 (1905) also adopted the name *Zygomenes* as a substitute for *Cyanotis*, for exactly the same reason as Hasskarl.

Thus *Zygomenes* as a validly published name, is a nomenclatural synonym of *Cyanotis* and cannot be used for a genus separate from *Cyanotis*.

This was not realized when the new combination *Zygomenes cucullata* (Roth) Rolla Rao et Kammathy together with *Z. axillaris* (Linn.) Salisb. was published by Rolla S. Rao (the senior author) in *Notes from Royal Botanic Garden Edinburgh*, 25: 187 (1964) wherein, however, the necessary justification for considering the 2 species under a distinct genus was given. It has therefore, become necessary to suggest a new generic name for these 2 species. The authors are grateful to Dr J. E. Dandy, Keeper, British Museum, for his kind suggestions on this point when the senior author was working at the British Museum in August 1964.

Amischophacelus Rolla Rao et Kammathy *gen. nov.*

Affinis *Cyanotidi* D. Don, distinctus vero inflorescentia sessili, in axilla cava vaginae, bracteolis translucidis, linearibus, inconspicuis, capsula distincta acuta ad apicem, vel ad medium depressa tribus projectionibus ornata. Chromosomatum numero $2n = 20$, et forma distincta, in *Cyanotide* vero $2n = 24$.

Herbae annuae succulentae. Radicibus fibrosis. Folia linearia, gracilia, vel paulisper succulenta; vagina paulum tumescente. Inflorescentia cymosa valde condensata, floribus 4-5 sessilibus, immersis in axillam cavam vaginae. Flores sessiles, immersi in axillam immaturi, maturi vero exserti, bracteolati, bracteola lineari, gracili, translucida, inconspicua; corollae tubo angustiore quam in *Cyanotide* et longiore; filamentis pilosis vel nudis. Capsulae immersae in axillam vaginae, apice acuto et quasi rostrato, vel depresso ad medium et projectionibus tribus cornu similibus ornato. Semina foveolata.

Typus: *Amischophacelus axillaris* (Linn.) Rolla Rao et Kammathy. [= *Cyanotis axillaris* (Linn.) Roem. & Schult.]

The genus is closely allied to *Cyanotis* D. Don, but differs from it in producing a sessile inflorescence embedded in the hollow axil of the leaf-sheath, a transparent, linear, inconspicuous bracteole and a distinct capsule with the tip pointed or depressed in the centre with three projections.

The genus also differs in having the chromosome number $2n=20$ with distinct morphology as against $2n=24$ of *Cyanotis* D. Don.

Annual succulent herbs. *Roots* fibrous. *Leaves* linear, thin or slightly succulent; leaf-sheath slightly bulged to form a hollow pit. *Inflorescence* a much condensed cyme with 3-5 flowers, sessile, embedded in slightly hollow axil of leaf-sheath. *Flowers* sessile, embedded in the axil when young and exserted when mature, bracteolate, bracteole linear, thin, transparent, inconspicuous; corolla tube narrower and longer than corolla tube of *Cyanotis*; filaments hairy or naked. *Capsules* embedded in axil of leaf-sheath, tip pointed with beak-like projection or depressed in centre with 3 horn-like projections. *Seeds* pitted.

Type of the genus: *Amischophacelus axillaris* (Linn.) Rolla Rao et Kammathy. [= *Cyanotis axillaris* (Linn.) Roem. & Schultz.]

Two species.

Distribution in the tropics of the world.

Amischophacelus axillaris (Linn.) Rolla Rao et Kammathy *nov. comb.*

Syn: *Commelina axillaris* L., Sp. Pl. 42 (1753).

Tradescantia axillaris (L.) L., Syst. Veg. ed. 13, 260 (1774).

Cyanotis axillaris (L.) J. A. & J. H. Schult, Syst. Veg. 7 (2): 1154 (1830).

Amischophacelus cucullata (Roth) Rolla Rao et Kammathy *nov. comb.*

Syn: *Tradescantia cucullata* Roth, Nov. Pl. Sp. 189 (1821).

Cyanotis cucullata (Roth) Kunth, Enum. 4, 107 (1843); C. B. Clarke in DC., Mon. Phan. 3, 245 (1881).

Zygomenes cucullata (Roth) Rolla Rao et Kammathy in Notes R. B. G. Edinb. 25, 187 (1964).

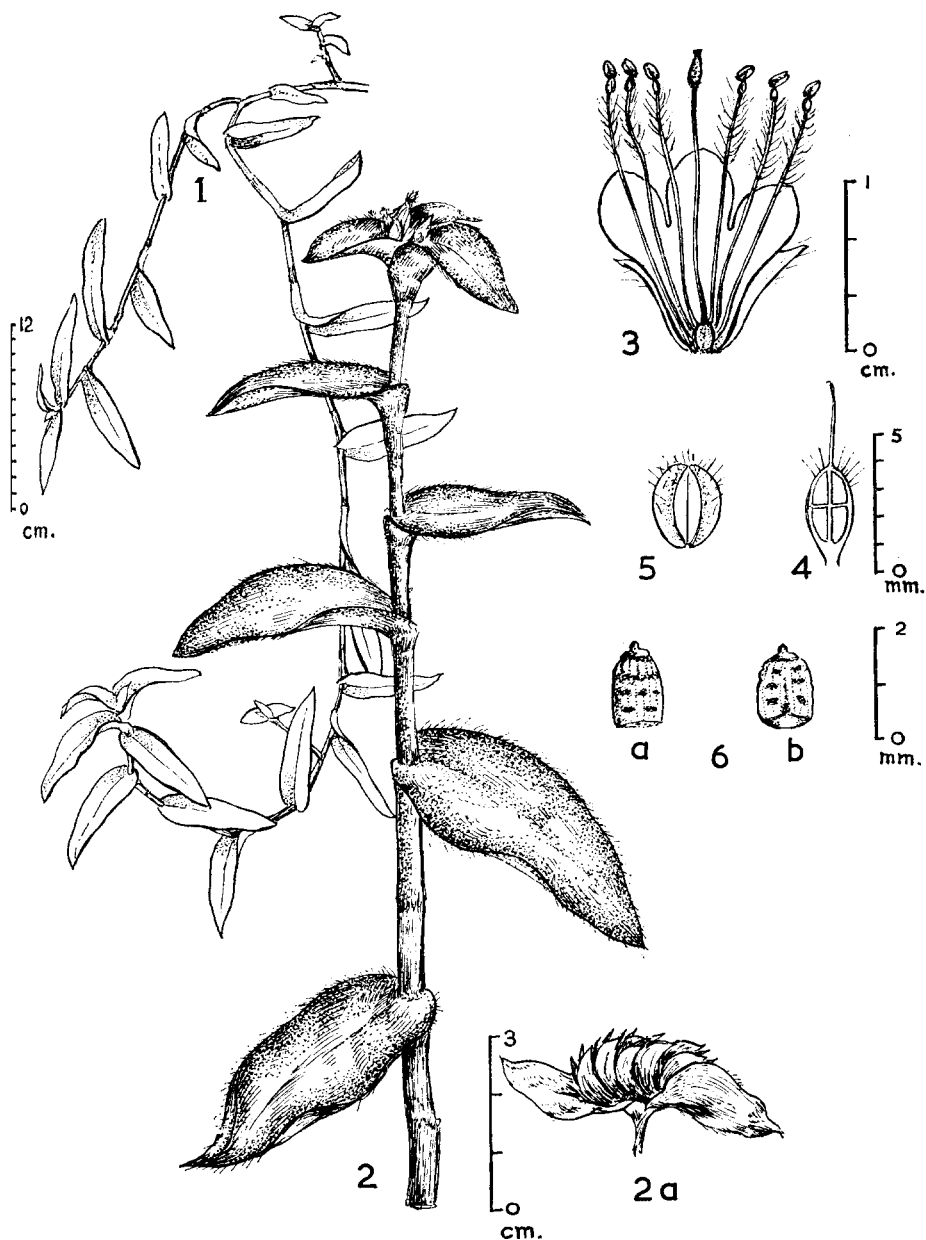
Cyanotis cerifolia Rolla Rao et Kammathy *sp. nov.*

Proxime affinis *Cyanotidi pilosae* J. A. & J. H. Schult., distincta vero caulibus vix ramosis, robustis, glabris, internodiis brevioribus, foliis crassioribus, glabris, nitentibus, cereo-levibus, cinereis.

Herba perennis, robusta. Radicibus fibrosis. Caulis 50-200 cm. longus, patens et radicans ad nodos; internodi ad 1 cm. diam., viridescens vel purpurascens, saepe cineri, glabri. Foliorum vaginae 1-2.5 cm. longae, glabrae, marginibus saepe disperse pilosis; lamina sessilis, alterna, 3-8 cm. longa, 1-3 cm. lata, oblonga vel lanceolata vel ovato-lanceolata, acuta vel plus minus obtusa, lata ad basin, semi-amplexicaulis, viridis, maculis violaceis vel purpureis notata, cerea, levis, cinerea, pagina superiore cerea tactui, et digitorum maculas retinente, pagina inferiore glabra, nervis gracilibus, marginibus pulchre pilosis. Inflorescentia scorpioidea, valde condensata, axillaris et terminalis, 1-5 cymosa, sessilis vel breviter stipitata; bracteae ad 2 cm. longae, 1.5 cm. latae, foliosae; bracteolae lineares, biseriatae, falcatae, acuminatae, glabrae, marginibus paupers pilosis ad apicem. Flores 1.5 cm. longi, sepalis 3, liberis; petalis 3, infra unitis ad efformandum tubulum 6 mm. longum, lobis patentibus, caeruleo-roseis; stamina 6, filamentis tumescentibus ad apicem, pilosis, pilis pallide caeruleis vel caeruleo-violaceis, antheris complanatis, luteis; stylo non barbato. Capsula ca. 3 mm. longa, 3-locularis, singulis loculis 2-seminatis; capsula apice piloso; semina 1.5 mm. longa, irregulater foveolata.

Holotypis lectus in horto experimentalis, Botanical Survey of India ad Poonem, ex plantae oriunda ex collibus Waverlio, Anamlayanis (altit. 1300 m.) prope Coimbatore, die 8 Augusti anni 1962 lecta, positus in herbario CAL sub numero *Kammathy* 77785A.

Cyanotis cerifolia is closely allied to *Cyanotis pilosa* J. A. & J. H. Schult. but differs from it distinctly by its scarcely branched, robust, glabrous stems with shorter internodes and leaves thicker, glabrous, shining, waxy-smooth with ashy coating.



Figs. 1-6. *Cyanotis cerifolia* sp. nov. 1. Plant with long shoots. 2. Single shoot. 2a. Inflorescence. 3. Corolla and androecium. 4. Longitudinal section of ovary. 5. Capsule. 6a, b. Seed, dorsal and ventral sides.

Stout, perennial herb. *Roots* fibrous. *Stem* 50-200 cm. long, spreading and rooting at nodes; internodes up to 1 cm. in diameter, greenish or with dark-maroon tinge, often with ashy coating, glabrous. *Leafsheath* 1-2.5 cm. long, glabrous, margins often with a few scattered hairs; *lamina* sessile, alternate 3-8 cm. long, 1-3 cm. broad, oblong to

lanceolate or ovate-lanceolate, acute or slightly obtuse, base broad, semi-amplexicaul, green with small dull-maroon or violet patches, waxy-smooth with ashy coating, upper surface feeling waxy to the touch and retaining the finger print if pressed, lower surface glabrous with fine lines of venation, margins finely hairy. *Inflorescence* scorpioid cyme, much condensed, axillary and terminal, 1-5 cymed, sessile or shortly stalked; bracts up to 2 cm. long, 1.5 cm. broad, leafy; bractioles linear, biseriata, falcate, acuminate, glabrous, margins slightly hairy at the tip. *Flowers* 1.5 cm. long, sepals 3, free; petals 3, fused to form a tube below 6 mm. long, lobes spreading, bluish-pink; stamens 6, filaments swollen at top, hairy, hairs light blue or bluish-violet, anthers flat, yellow; style not bearded. *Capsule* about 3 mm. long, 3-celled, each with 2 seeds, capsule tip hairy. *Seeds* 1.5 mm. long, irregularly pitted.

During the collecting tour in South India, the junior author came across this species on 12 September 1961 growing in small patches, amidst grasses along moist rocky slopes, in a somewhat dried state in Weverly Estate (1000 m.) Anamalai Hills, Coimbatore District, Madras State. As most of the plant had dried up at this time of the year at such an altitude, only very few shoots could be collected in fresh condition (KAMMATHY 73950) and of those only two shoots were pressed for the herbarium and the rest were brought to Poona (600 m.) for propagation. The cut stems grew well both in pots and in open plots under moist conditions. Several specimens were collected from the cultivated plants during August and September 1962 when the plants were sufficiently well established. During October-November, the plant mostly dries up and renews its vegetative activity during the monsoon from June.

The correct identity as a new species is now established after it has been studied under cultivation along with the other closely allied species *Cyanotis pilosa* Roem. & Schult. and *C. villosa* Roem. & Schult. and after careful scrutiny at the herbaria of Kew, the British Museum, Edinburgh and Leiden. Its further distribution in other hilly parts of South India is under investigation.

Holotype KAMMATHY 77785 A and *Isotypes* KAMMATHY 77785 B-I were collected from the Experimental Garden, Botanical Survey of India, Poona (from cultivated material raised from the cuttings of wild plants growing in Weverly Estate, Anamalai Hills, Coimbatore District, Madras State) on 8 August 1962; the *Holotype* is deposited in the Central National Herbarium (CAL) and *Isotypes* and *Paratypes* in different herbaria as indicated below:

KAMMATHY 77785 B (BSI), KAMMATHY 77785 C (K), KAMMATHY 77785 D (BM), KAMMATHY 77785 E (L), KAMMATHY 77785 F (P), KAMMATHY 77785 G (G), KAMMATHY 77785 H (B) and KAMMATHY 77785 I (GH). *Paratypes*, KAMMATHY 77786 A-G collected on 10 September 1962 from the same locality are deposited in different herbaria: KAMMATHY 77786 A (BSI), KAMMATHY 77786 B (LE), KAMMATHY 77786 C (TI), KAMMATHY 77786 D (BR), KAMMATHY 77786 E (DD) and KAMMATHY 77786 F (BLAT) and KAMMATHY 77786 G (MH). *Paratypes*, KAMMATHY 73950 A and KAMMATHY 73950 B were collected from Weverly Estate, Anamalai Hills, Coimbatore District, Madras State at an altitude of 1300 m. on 12 September 1961; KAMMATHY 73950 A (BSI) and KAMMATHY 73950 E (E).

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