

NAUTILICALYX CATARACTARUM (GESNERIACEAE),
A NEW SPECIES FROM ANGEL FALLS, VENEZUELA

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The neotropical genus *Nautilocalyx* Lind. ex Hanst., a group of terrestrial herbs with sappy stems, contains over 45 species of which many are still undescribed. The genus is distributed from Chiapas, Mexico [*N. panamensis* (Seem.) Seem.] and the Lesser Antilles [*N. melittifolius* (L.) Wiehler, *N. mimuloides* (Benth.) Morton] throughout northern South America into the Amapá area of eastern Brazil, and along the Amazon basin to Bolivia. *Nautilocalyx* and the related genera *Alloplectus* Mart. and *Drymonia* Mart. are not found in the gesneriad-rich region of southeastern Brazil. Native to Venezuela are *N. villosus* (Kunth & Bouche) Sprague, *N. membranaceus* (Morton) Wiehler, *N. pallidus* (Sprague) Sprague, *N. porphyrotrichus* (Lwbg.) Wiehler, and several undescribed species.

One of these undescribed species is now in cultivation at the Marie Selby Botanical Gardens. With its comparatively small size, compact habit, and bright pink corolla (Red-Purple Group 64C, R. H. S., 1966) it is likely to become a choice horticultural subject after its release for commercial distribution. This species was collected by Mr. and Mrs. G. C. K. Dunsterville in the summer of 1972 along Rio Churún at the base of Angel Falls which cascades from the Auyan-tepui in the State of Bolívar in southeastern Venezuela. The Dunstervilles brought their find to their greenhouses in Caracas where they kindly shared this material and other interesting gesneriads with me while I was in Venezuela on an exploration trip for Gesneriaceae in the last two months of 1972. The proposed name for the species is *Nautilocalyx cataractarum*, in reference to the famous Angel Falls which are the tallest on earth. This species is apparently not represented in any herbarium collection, at least not at VEN, US, NY, and GH; but since the Venezuelan part of the Guayana Highland with its fascinating tepuis is still relatively unexplored botanically, *Nautilocalyx cataractarum* may eventually be recorded from other areas. Harboring a very distinct flora, the tepuis are small, table-shaped and island-like plateaus arising abruptly (up to over 2000 m) from the Guayana Highland savannah or rain-forest. The steep, usually sheer vertical slopes make an ascent almost impossible; the plateaus are now mostly reached by helicopter. Auyan-tepui with its 700 km² is the fourth largest tepui in Venezuela, somewhat larger than the island of Barbados. The famous falls were "discovered" by western society in 1935 by the explorer, adventurer, and stunt pilot Jimmy Angel who was then searching for gold in this magnificent wilderness. The only gesneriad found on the plateau of Auyan-tepui is *Nautilocalyx porphyrotrichus* (Steyermark, 1967), a high-altitude endemic of the Guayana Highland which I collected recently in the Sierra de Lema. In the Marie Selby Botanical Gardens this handsome red-flowered species, ready for distribution to the general public, grows now in several leaf color forms. From several points in the Sierra de Lema and the Gran Sabana we could see the majestic outline of the Auyan-tepui 110 km westward.

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The following description is based on living material.

***Nautilocalyx cataractarum* Wiehler, sp. nov. (Figure 1.)**

Herba perennis, saxatilis et terrestri; caules ascententes, 3-10 cm alti, 5-8 mm crassi, basiramiferi, internodiis 3-35 mm longis, viridibus, sericeis. Folia opposito-decussata, rosularia, aequalia, petioli, 5-20 mm longi, sericei, laminae lanceolato-obovatae, apice obtuso vel acuto, margine crenato, basi cuneata vel attenuata, 9-14 cm longae, 3.5-6 cm latae, venis lateralibus primariis 6-10-jugis, in vivo supra profunde impressis, subtus crassissimis elevatis, membranaceae, supra conspicue bullatae, atrovirentes, secus costas subtusque pallide virides, pilosae. Florescentia cyma axillaris, floribus 4-10, pedunculo destituto, prophyllis viridibus, 8-9 mm longis, 1-2 mm latis, pedicellis 6-10 mm longis, pallide viridibus vel vinaceis, sericeis, trichomatibus vinaceis; calyx sericeo-pilosus, lobis aequalibus e basi discretis, lanceolatis, integris, 6-7 mm longis, 1.2 mm latis, supra viridibus, subtus vinaceis; corolla obliqua, tubulari-campaniformis, calcarata, 20-22 mm longa, calcare 1.5 mm longo, constricta supra basim ad 4 mm diametro, dorsaliter vertraliterque inflata, sub lobis leviter constricta, limbus obliquus, 15-17 mm diametro, lobis subaequalibus, patentibus, suborbicularibus, integris, 5-7 mm longis et latis, tubus pallide roseus, pilosus, limbus vivide roseus, frontaliter glaber, circa faucem pallide roseus, introrsum trichomatibus glanduliferis brevibus; stamina 4, inclusa, filamentis albis, parce pubescentibus, basi 1.5 mm cum tubo corallae adnatis, 8-9 mm longis, 1 mm latis basaliter, 0.3 mm latis apicem versus, antheris in quadram 1.8 mm longam adque latam cohaerentibus, loculis leviter confluentibus, 0.8 mm longis, 0.4 mm latis, rimis longitudinalibus dehiscentibus; ovarium 2 mm longum, glabrum, apice versus pilosum, stylo 9-10 mm longo, albo-roseo, glabro, stigmatate stomatomorpho, albo; nectarium glandula duplo-connata, alba, glabra, 1 mm longa, 0.9 mm lata. Fructus capsula carnosae, bivalvis, pilosa, 2-5 mm longa et lata; semina striata, brunnea, 0.4 mm longa, 0.2 mm lata, funiculis 0.5 mm longis. Chromosomata collectionis typi $n = 9$.

TYPE: VENEZUELA: BOLIVAR: Auyan-tepui, Rio Churún, at the base of Angel Falls, ca. 500 m elevation. Living plants collected by Mr. & Mrs. G. C. K. Dunsterville, summer 1972, grown in their greenhouses in Caracas, given to author, 4 Dec. 1972 (*H. Wiehler 72414*), grown in greenhouses at BUS and SEL, acc. no. W-1799; type from cultivated material, 21 May 1975, *H. Wiehler 75159* (HOLOTYPE: US; ISOTYPES: VEN, NY, SEL).

DISTRIBUTION: Apparently endemic to Venezuela; known only from type locality, a rain forest at ca. 500 m elevation.

Nautilocalyx cataractarum is distinct from all other described species of *Nautilocalyx* by the following combination of characters: low habit, bullate leaves, small calyx with narrow lobes, and pink corolla. The other four species of the genus from Venezuela are taller in habit, have larger calices with wider lobes, with larger and much longer corollas, either white, marked with purple inside (*N. villosus*, *N. membranaceus*), or cream white with maroon dots (*N. pallidus*), or bright red with a yellow throat (*N. porphyrotrichus*). A key will follow after more species of *Nautilocalyx* from Venezuela are described.

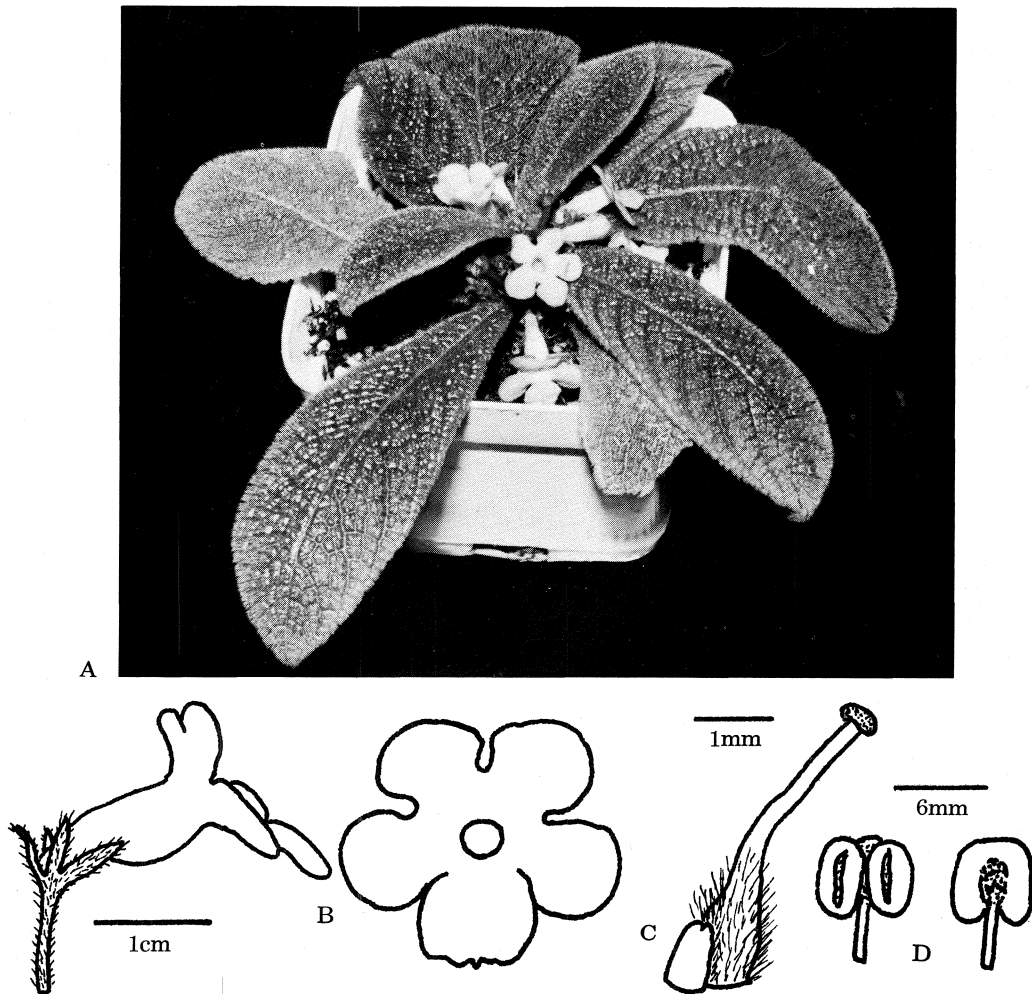


Fig. 1. *Nautilocalyx cataractarum*. A, plant in 4-inch pot, photo by Richard Kent; B, flowers; C, nectary, ovary, style, and stigma; D, anthers, dorsal (right) and ventral (left) views.

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LITERATURE CITED

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