

Three New Species of the Genus *Canna* (Cannaceae) from Northern Argentina

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Abstract Three new species of the genus *Canna*, *Canna stenantha* Nb. Tanaka, *Canna jacobiniflora* T. Koyama & Nb. Tanaka and *Canna amabilis* T. Koyama & Nb. Tanaka, are described. All these species were collected in northern Argentina and show certain adaptation to swampy habitats.

Key words : Cannaceae, *Canna*, Argentina

A field expedition carried out by the second author in 1985 to the Argentinian-Bolivian frontier brought back a number of sterile plants of the genus *Canna*. The rhizomes of those then unidentifiable plants have been cultivated in the farm of the Iriomote Station of the Tropical Biosphere Research Center of University of the Ryukyus and in the garden of Makino Herbarium, Tokyo Metropolitan University, till they bloomed. Taxonomic studies of those revealed three new species, which are described below as *Canna stenantha*, *C. jacobiniflora* and *C. amabilis*. All of those, bearing elongated, slender rhizomes, show certain eco-morphological adaptation to swampy habitats.

1. ***Canna stenantha*** Nb. Tanaka, sp. nov. (Figs. 1, 2-A, B) differt ab omnibus huc usque cognitis staminodiis valde angustis, longioribus, plus minus introrsum volta autem non tubiformia, uno anteriore duabus posterioribus multo brevioribus.

Plantae exiguae, 1.2–1.5 m altae. Rhizoma stoloniferum etiam horizontaliter repens, non incrassatum neque tuberiferum, internodiis valde elongatis. Folia comparatione minoria, ovato-elliptica, 25–35 cm longa, 10–13 cm lata, valde viridia, apice acuta acuminatave, basi in vaginam gradatim attenuantia. Inflorescentia unica, terminalis, ut videtur subspiciformis, non ramosa, 30–40 cm longa. Flores binati, pedunculis 1–1.2 cm longis, bracteis plus minus grandibus, ovato-ellipticis, 2.5–3.3 cm longis, 1–1.5 cm latis, purpureo-tinctis; sepala 3, oblongo-lanceolata, 1.1–1.5 cm longa, purpureo-tincta; petala 3, lineari-lanceolata, plus minus introrsum volta autem non tubiformia, 4.5–5.5 cm longa, 0.7–1.1 cm lata, rubescentia, unum anteriorum duabus posterioribus multo brevioribus; staminodia 2, valde angusta, lineali-oblancea-

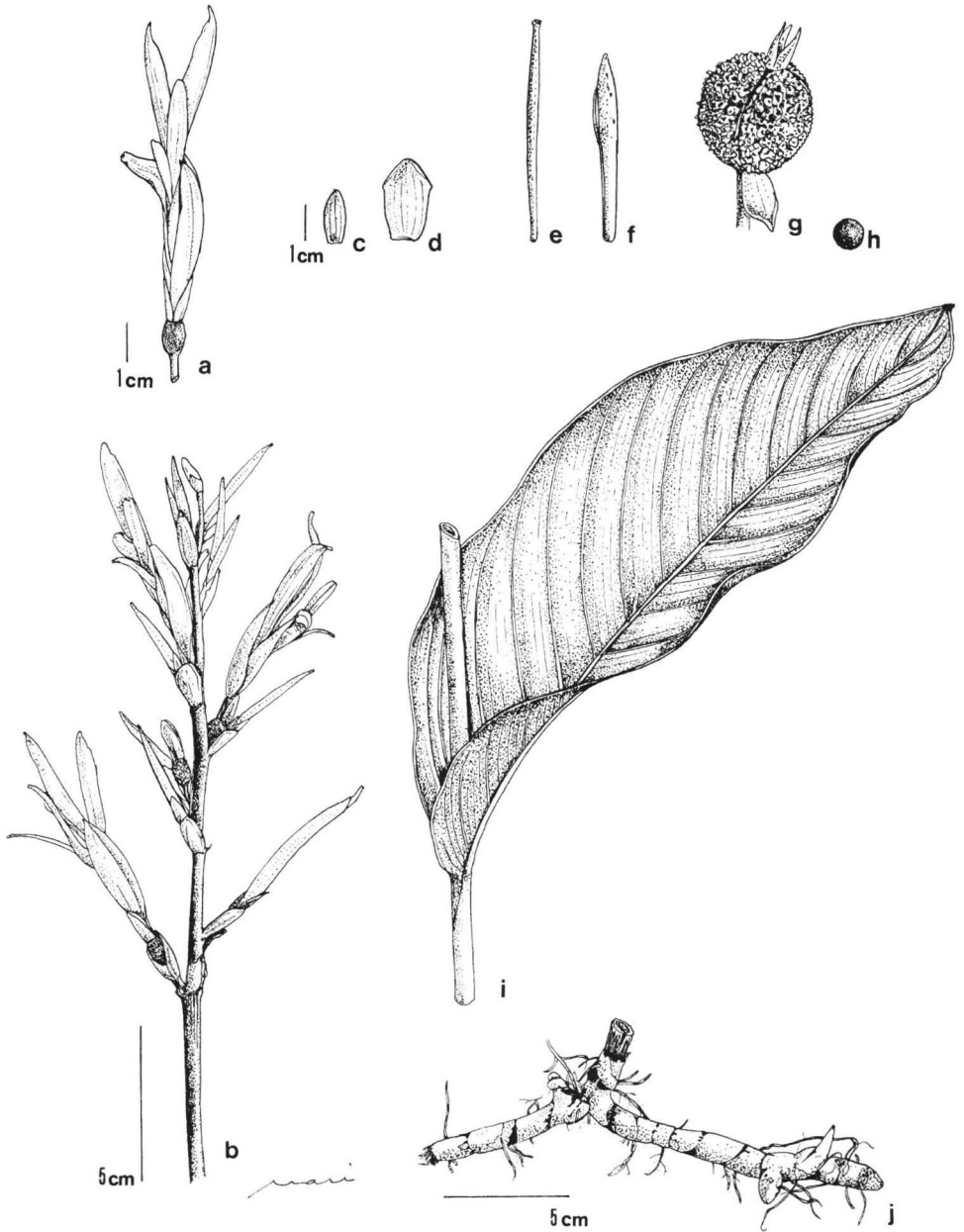


Fig. 1. *Canna stenantha*. a: Flower. b: Inflorescence. c: Sepal. d: Floriferous bract. e: Style. f: Functional stamen with 1-celled anther at the margin. g: Capsule crowned by persistent sepals. h: Seed. i: Leaf. j: Rhizome.

ta, 7.5–9 cm longa, 0.5–1 cm lata, apice dentata vel obtusa interdum mucronata; labellum erectum, aurantiacum, basi flavescens, apice incisulatum; stamen petaloideum aurantiaco-flavens, staminodia subaequans, anthera marginale, 1.2 cm longa, 1-cellulare; stylus aurantiacus, linearis, 6–6.5 cm longus. Capsulae globosae, parvulae, 1.5–2 cm longae, apice stylobasi persistente mucronatae; semina 1–3, globulosa, parvula, ca. 5 mm diam., maturitate nigrescentia.

Typus: ARGENTINA, Prov. Misiones, centre Obera, cultivated in the garden of the Makino Herbarium, Tokyo Metropolitan University, *N. Tanaka 15877R*, 30 June 1998 (Holotypus, TNS; isotypi, MAK, MBK).

ARGENTINA, Prov. Misiones, centre Obera, *R. Guaglianone, Y. Koyama, A. Schinini, M. Urbani, I. Caponio 15877*, 23 February 1985 (NY, SI).

PARAGUAY, Hassler 3194 (NY).

Distribution: Argentina and Paraguay.

Canna stenantha is well characterized by its very narrow, orange-red staminodes, erect labellum and long-creeping stoloniferous rhizomes. Its leaves are much smaller than those of *C. indica* proper and are morphologically closer to those of *C. jacobiniflora*, which will be described below. This species shows certain adaptation to swampy habitat like other two taxa here described. Thus far known only from Argentina and Paraguay.

2. ***Canna jacobiniflora*** T. Koyama & Nb. Tanaka, sp. nov. (Figs. 2-C, D, 4) distincta ob petalis staminodisque suberectis vix apertos hinc per anthesin subtubulosus.

Planta perennis, rhizomate repente stolonifero, non incrassato neque tuberifero, internodiis bene elongatis. Caules plerumque solitarii, simplices, 1.5–2 m alti, 5–7-foliati. Folia omnia caulina; laminae ellipticae, 25–35 cm longae, 12–13 cm latae, apice acutae, supra laete virides, subtus pallides, basi in vaginam gradatim attenuantes. Inflorescentia subracemosa, 15–20 cm longa, dense vel sublaxe florentia, rhachidi rufo-purpurecente 7–15-nodosa, basi in vagina inclusa. Flores quasigeminati, carminei, 9–10 cm longi, 1–2 cm lati; bractae florum ovaes vel tranverse late obovatae, 1–1.5 cm longae, ac latae, apice subtruncatae, rufescentes, sepala 3, lanceolata, acuta, 15–18 mm longa, 5–7 mm lata, rufo-purpurecentia; petala 3, suberecta, lanceolata, acuta, 5–6 cm longa, basi per longitudinis ca. 1 cm connata, margine laxo involuta, purpureo-rufescentia; staminodia 3 raro 4, suberecta, 3 exteriora oblanceolata vel lineari-oblonga, subacuta, basi per 1 cm connata, carminea vel leviter purpureo-rufa, unicum interior (si praesens) lineare usque 3 cm longum; stamen unicum 4–4.5 cm longum, 5 mm latum, apice breviter recurvum, anthera unica, ca. 1 cm longa, erecta; pistillum oblanceolatum 5–5.5 cm longum, ca. 5 mm latum, basi per 15 mm cum stamine connata; ovarium oboideum, fere 1 cm longum; capsula obovoidea, 1.5–2 cm longa, 3–3.5 cm lata, apice stylobasi persistente mucronatae; semina 10–15, globulosa, 7–8 mm diam.; maturitate nigrescentia.

Typus: ARGENTINA, Prov. Corrientes, depto. Capital, Av. Libertad, acceso ciu-

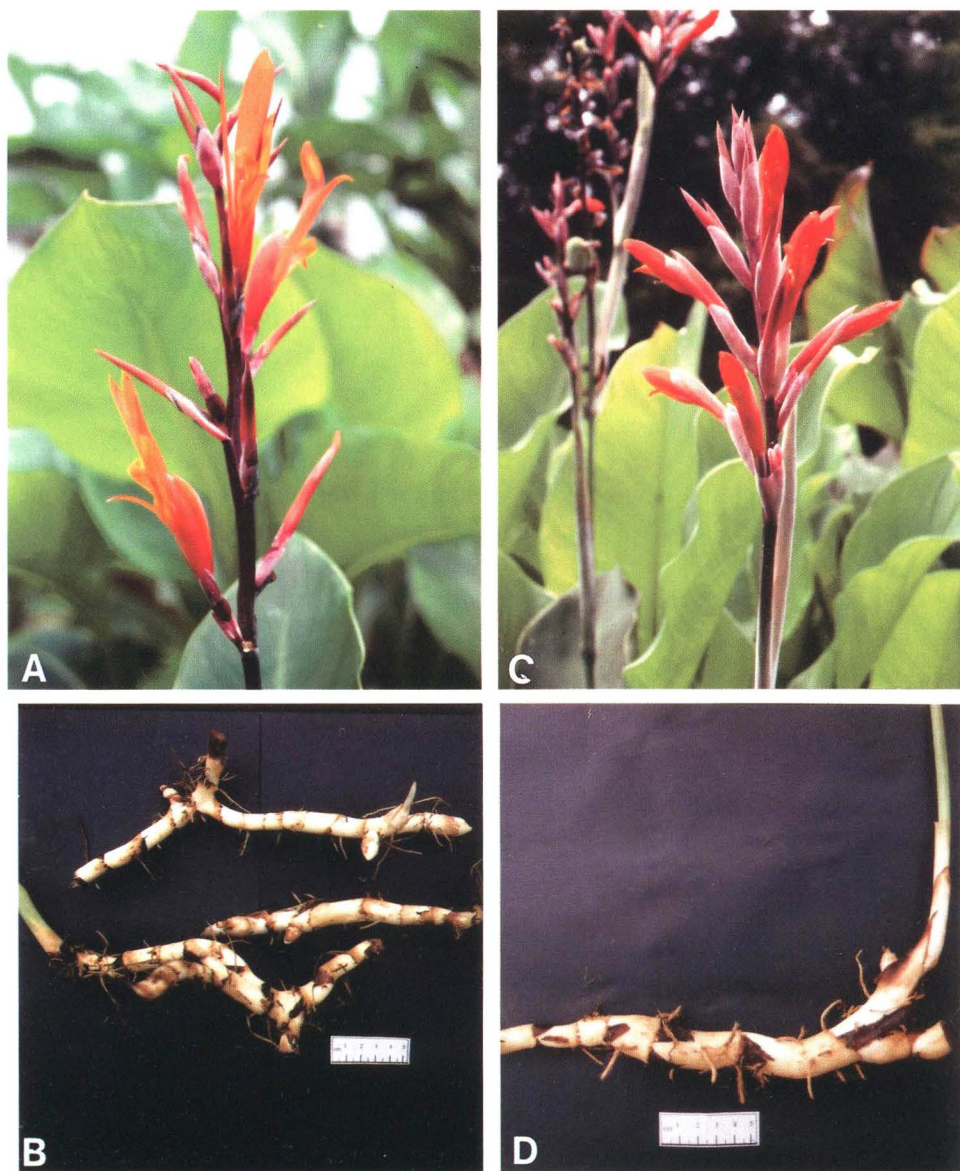


Fig. 2. Flowers and rhizomes of *Canna stenantha* (A, B) and *C. jacobiniflora* (C, D).

dad Corrientes, cultivated in the garden of the Makino Herbarium, Tokyo Metropolitan University, *N. Tanaka 15871R*, 1 September 1998 (Holotypus, TNS; isotypi, K, NY).

ARGENTINA, Prov. Corrientes, depto. Capital, Av. Libertad, acceso ciudad



Fig. 3. *Canna amabilis*. A: Flowers. B: Capsules.

Corrientes, cultivated in the garden of Nihon University, College of Bioresource Sciences, *N. Tanaka 15871N*, 17 September 1998 (MAK).

Canna jacobiniflora as described above stands distinct in its flowers (Fig. 4), which are tubular and not widely open during the anthesis because their staminodes are all standing upright. As a matter of fact, in most flowers only three staminodes are seen, and if the fourth one should exist such remains only vestigial and needle-like. The floriferous bracts are oblanceolate, purplish-red, and considerably large. The simple stems, usually solitary at nodes of slender long-creeping rhizomes, amply segregate this species from the very polymorphic *Canna indica* complex.

3. ***Canna amabilis*** T. Koyama & Nb. Tanaka, sp. nov. (Figs. 3, 4) e vicinia *C. glaucae* a qua petalis angustioribus brevioribusve, staminodiis etiam multo angustioribus seminibus globosis nec ellipsoidis grandioribus (5–7.5 mm vs. 9–9.5 mm in diametro) valde differt.

Perennis, rhizomate gracilibus longe repente. Caules plerumque solitarii simplices 50–70 cm alti, 3–vel 4–foliati. Laminae ellipticae vel late ellipticae 20–30 cm longae, 7–12 cm latae, apice subgradatim acutae, basi in vaginam 10–15 cm longam cuneatoattenuantes, supra subglauco-virides, subtus pallidiores. Inflorescentia subracemosa, simplex, e folia summa evaginante distincte exserta, 3–ad 8–flora, bracteae

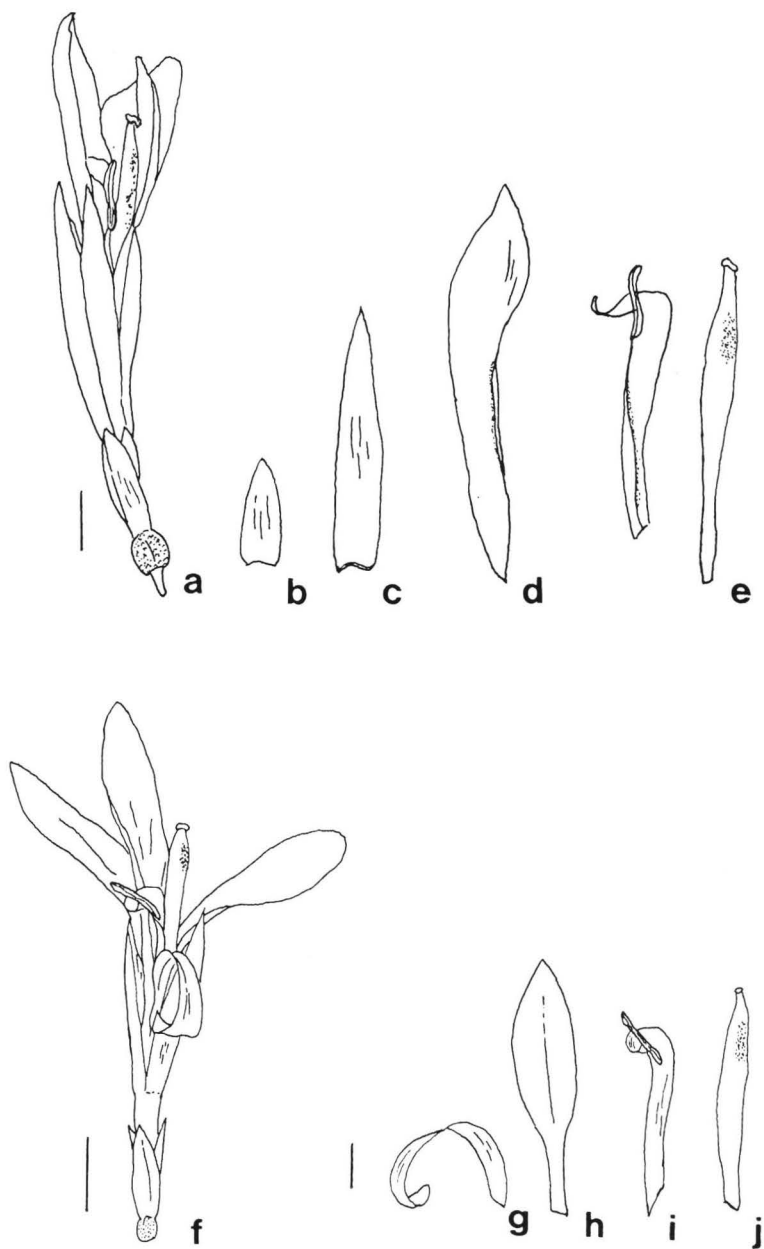


Fig. 4. Flowers of *C. jacobiniflora* (a–e) and *C. amabilis* (f–j). a: Flower. b: Sepal. c: Petal. d: Staminode. e: Functional stamen (left) and style (right). f: Flower. g: labellum. h: Staminode. i: Functional stamen. j: Style. Scale=1 cm.

florum ovalis vel late obovatae, 1 cm longae, obtusae. Flores solitarii, brevissime (ca. 3 mm) pedicellati, tote carminei, 5–6 cm longi, patuli; sepala 3, anguste ovato-elliptica, subacuta, 15 mm longa, 5 mm lata; petala 3, lineari-oblonga sublanceolatae, 4–5 cm longa, 6–8 mm lata, apice acuta, basi gradatim attenuata, margine incuva, pallide carmina; staminodia 4, basi tantum breviter connata, exteriora 3 e basi ca. 5 mm lata gradatum dilata, oblanceolato-oblonga, patentia, pulchre carmina, 6–7 cm longa, supra medium 10–13 mm lata, apice subobtusa, quarta (i.e., unicum interior) anguste oblongum, obtusum, valde recurvum; stamen 1, petaloideum, fere 3.5 cm longum, supra medium valde recurvum; anthera unica, 1 cm longa; pistilum lineari-oblanceolatum, 5.5–6 cm longa, 2–4 mm latum, carminatum; ovarium obovoideum, fere 1 cm longum 6 mm latum, pallide rufescens. Capsula obovoidea, 3–4 cm longa, 2–2.5 cm lata; semina 15–18, globulosa, 5–7 mm diam., maturitate nigrescentia.

Type: ARGENTINA, Prov. Chaco, Rd. 11 13.5 km al Norte del cruce de Rd. 16, cultivated in the farm of Iriomote Station of the Tropical Biosphere Research Center of Ryukyu University, *T. Koyama 15865*, 22 June 1995 (Holotypus, TNS; isotypus, MAK).

A beautiful species, which differs from *C. glauca* L. not only in its globose, relatively smaller seeds and deeply red color of flowers but in the following details. The staminodes of *C. amabilis* are oblanceolate-oblong and are only 10 to 13 mm wide at the broadest portion of them, while in *C. glauca* they are narrowly obovate and are 13 to 20 mm at the widest portion. The relatively smaller and globular, black seeds in the former are ca. 7 mm across in contrast to the ellipsoidal, larger and brown-mottled ones in the latter, which are 9 mm by 7 mm in size. As to the leaves, those of *C. amabilis* are truly cauline and well spaced with a broadly elliptical, thin blade, but in *C. glauca* the leaves, at least the lower ones, tend to be more radical with a lance-ovate, thickish blade.

摘 要

田中伸幸・小山鐵夫：アルゼンチン北部からのカンナ科の3新種

アルゼンチン北部のミシオネス州、コリエンテス州、及びチャコ州からカンナ科の3新種を記載した。*Canna stenantha*は開出した花卉、非常に細く長い仮雄蕊と直立した唇弁を有するものであり、現在までにアルゼンチンおよびパラグアイからしか知られていない。*Canna jacobiniflora*はあまり開かない直立した大型の花をつけ、葉は小さく、乾燥標本でも比較的容易に判別することが可能な種である。*Canna amabilis*は形態学的には*C. glauca*に近縁と考えられるが、濃い赤色のより小さい花をつけ、葉は*C. glauca*ほど厚くなく、広披針形とならずに広楕円形で、種子も球形、黒色で小さい。本稿で記載したこれらの種は、いずれも水平に匍匐する細長い根茎をもつもので、湿地帯に適応して生育するものである。

