

**Nomenclatural notes on Neotropical *Lisyantheae* (Gentianaceae)**

by Paul J.M. Maas

*Institute of Systematic Botany, State University of Utrecht,  
Transitorium 2, Heidelberglaan 2, Utrecht, the Netherlands*

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**ABSTRACT**

As a result of a revision of the Neotropical *Lisyantheae* (Gentianaceae) several new species and subspecies have to be described, and some new combinations have to be made. The names of all 17 species of *Irlbachia* currently recognized are given, together with their most common synonyms.

**INTRODUCTION**

Grisebach (1838) was the first to make a classification of Gentianaceae. This classification includes, among others, the tribe *Lisyantheae*, in which several Neotropical genera are placed. Some characters of *Lisyantheae* are:

Plants often woody at the base, stems often 4-winged. Inflorescence a terminal cyme (the first branching dichasial, the following branches monochasial). Calyx composed of 5 partly connate or completely free sepals, the inner side provided with squamellae at the base, the outer side with distinct nectarial glands. Corolla much exceeding the calyx, variously colored and shaped. Stamens often unequal in length, the apical part often recurved after shedding of the pollen. Ovary 1-2-locular, with strongly intruding placentae. Style with a 2-lobed stigma. Fruit a septicial, often woody capsule.

Classifications of Gentianaceae were subsequently made by Bentham & Hooker (1876) and Gilg (1895). Gilg's classification is mainly based on the structure of the pollen grains, and this resulted in a very unnatural grouping. Therefore Maas and collaborators several years ago started a multidisciplinary revision of the *Lisyantheae*, including gross morphology, anatomy, and microstructure of pollen and seeds. The genera studied are: *Adenolisianthus*,

*Calolisianthus*, *Celiantha*, *Chelonanthus*, *Helia*, *Irlbachia*, *Lagenanthus*, *Lehmanniella*, *Leiothamnus*, *Lisianthus*, *Macrocarpaea*, *Pagaea*, *Prepusa*, *Purdieanthus*, *Rusbyanthus*, *Senaea*, and *Symbolanthus*. The investigating team included various taxonomy students and staff members of the Institute of Systematic Botany, Utrecht, and the pollen morphologist S. Nilsson (Stockholm, Sweden). Preliminary results of this research were presented during the 7th Symposium "Morphology, Anatomy, and Systematics" at Amsterdam (Maas et al. 1984). The revision of the *Lisyantheae*, including introductory chapters, keys, full descriptions, nomenclature, typification, and geography will be published shortly.

The present publication gives a nomenclatural survey of all species of *Irlbachia* and *Lehmanniella*.

1. *Irlbachia* Martius, Nov. Gen. Sp. Pl. 2(2): 101. 1827.

*Helia* Martius, Nov. Gen. Sp. Pl. 2(2): 122. 1827.

*Pagaea* Grisebach in A.P. de Candolle, Prodr. 9: 70. 1845.

*Brachycodon* (Bentham) Progel in Martius, Fl. Bras. 6(1): 229. 1865.

*Chelonanthus* (Grisebach) Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 98. 1895.

*Adenolisianthus* (Progel) Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 98. 1895.

*Calolisianthus* (Grisebach) Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 99. 1895.

1. *Irlbachia pumila* (Bentham) Maguire, Mem. New York Bot. Gard. 32: 372. f. 82A-L & 83. 1981.

Basionym: *Lisianthus pumilus* Bentham, Hooker's J. Bot. Kew Gard. Misc. 6: 200. 1854.

2. *Irlbachia poeppigii* (Grisebach) Cobb & Maas, Proc. Kon. Ned. Akad. Wetensch., Ser. C., 86(2): 131. pl. 1D-F. 1983.

Basionym: *Pagaea poeppigii* Grisebach in A.P. de Candolle, Prodr. 9: 71. 1845.

3. *Irlbachia plantaginifolia* Maguire, Mem. New York Bot. Gard. 32: 372. f. 80A-D & 84A-L. 1981.

4. *Irlbachia nemorosa* (Willdenow ex Roemer & Schultes) Merrill, Proc. Amer. Philos. Soc. 86: 88. 1943.

Basionym: *Claytonia nemorosa* Willdenow ex Roemer & Schultes, Syst. Veg. 5: 436. 1819.

5. *Irlbachia tatei* (Gleason) Maguire, Mem. New York Bot. Gard. 32: 377. f. 85A-M & 86. 1981.

Basionym: *Calolisianthus tatei* Gleason, Bull. Torrey Bot. Club 58: 449. 1931 (as "Tatei").

6. *Irlbachia pratensis* (Kunth) Cobb & Maas, Proc. Kon. Ned. Akad. Wetensch., Ser. C., 86(2): 132. pl. 4A-B. 1983.

Basionym: *Lisianthus pratensis* Kunth in Humboldt, Bonpland & Kunth, Nov. Gen. Sp. 3: 180. 1819.

7. *Irlbachia caerulescens* (Aublet) Grisebach, Gen. Sp. Gent. 195. 1838.

Basionym: *Lisyanthus caerulescens* Aublet, Hist. Pl. Gui. Franç. 1: 207. t. 82. 1775.



Fig. 1. *Irlbachia alata* subsp. *longistyla* (Maas & Steyermark 5344).

8. *Irlbachia purpurascens* (Aublet) Maas, comb. nov.

Basionym: *Lisyanthus purpurascens* Aublet, Hist. Pl. Gui. Franç. 1: 201. t. 79. 1775.

9. *Irlbachia alata* (Aublet) Maas, comb. nov.

Basionym: *Lisyanthus alatus* Aublet, Hist. Pl. Gui. Franç. 1: 204. t. 80. 1775.

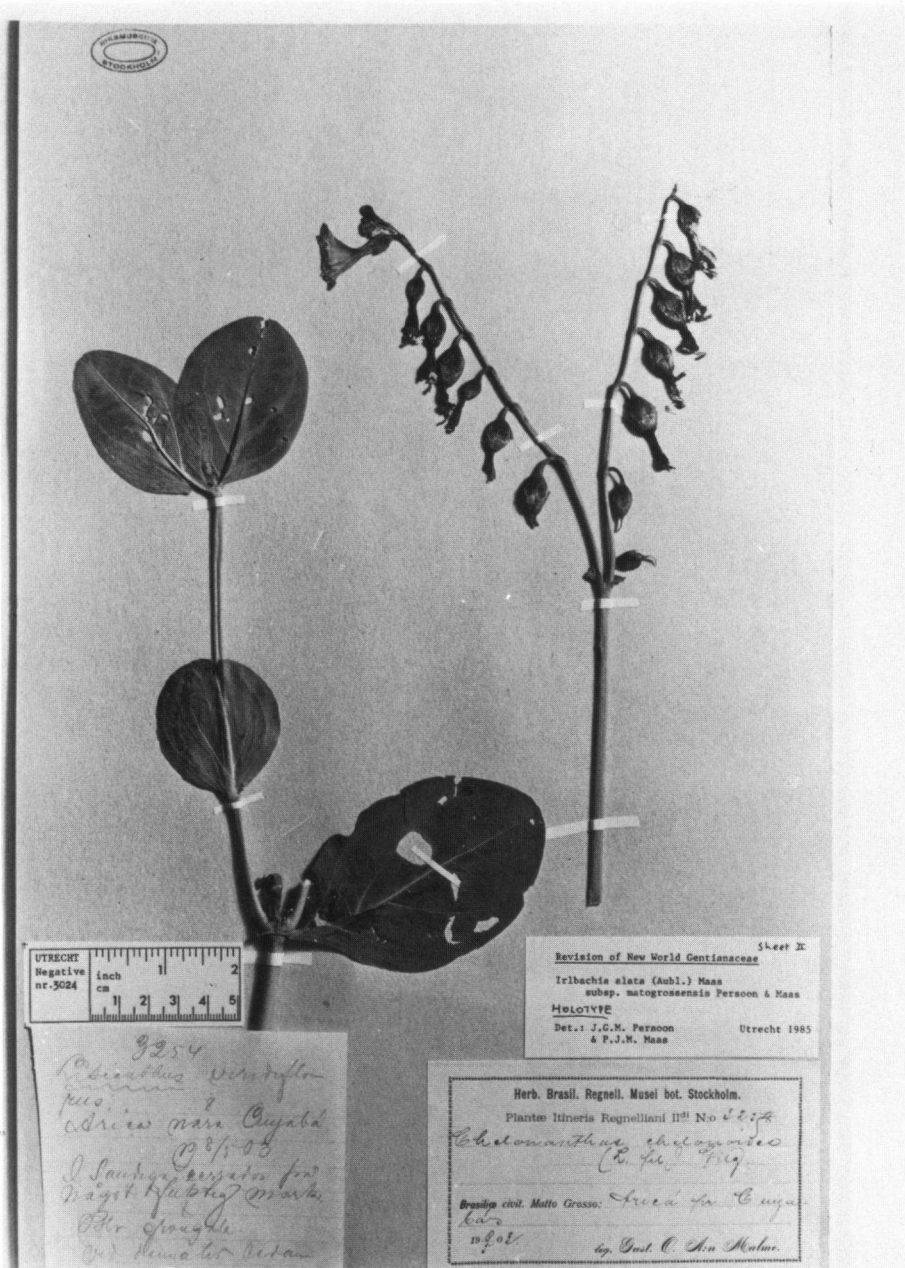


Fig. 2. *Irlbachia alata* subsp. *matogrossensis* (Malme 3254).

9a. subsp. *alata*

9b. subsp. *alba* (Spruce ex Progel) Persoon & Maas, comb. nov.

Basionym: *Lisianthus albus* Spruce ex Progel in Martius, Fl. Bras. 6(1): 237 1865.

9c. subsp. *angustifolia* (Kunth) Persoon & Maas, comb. nov.

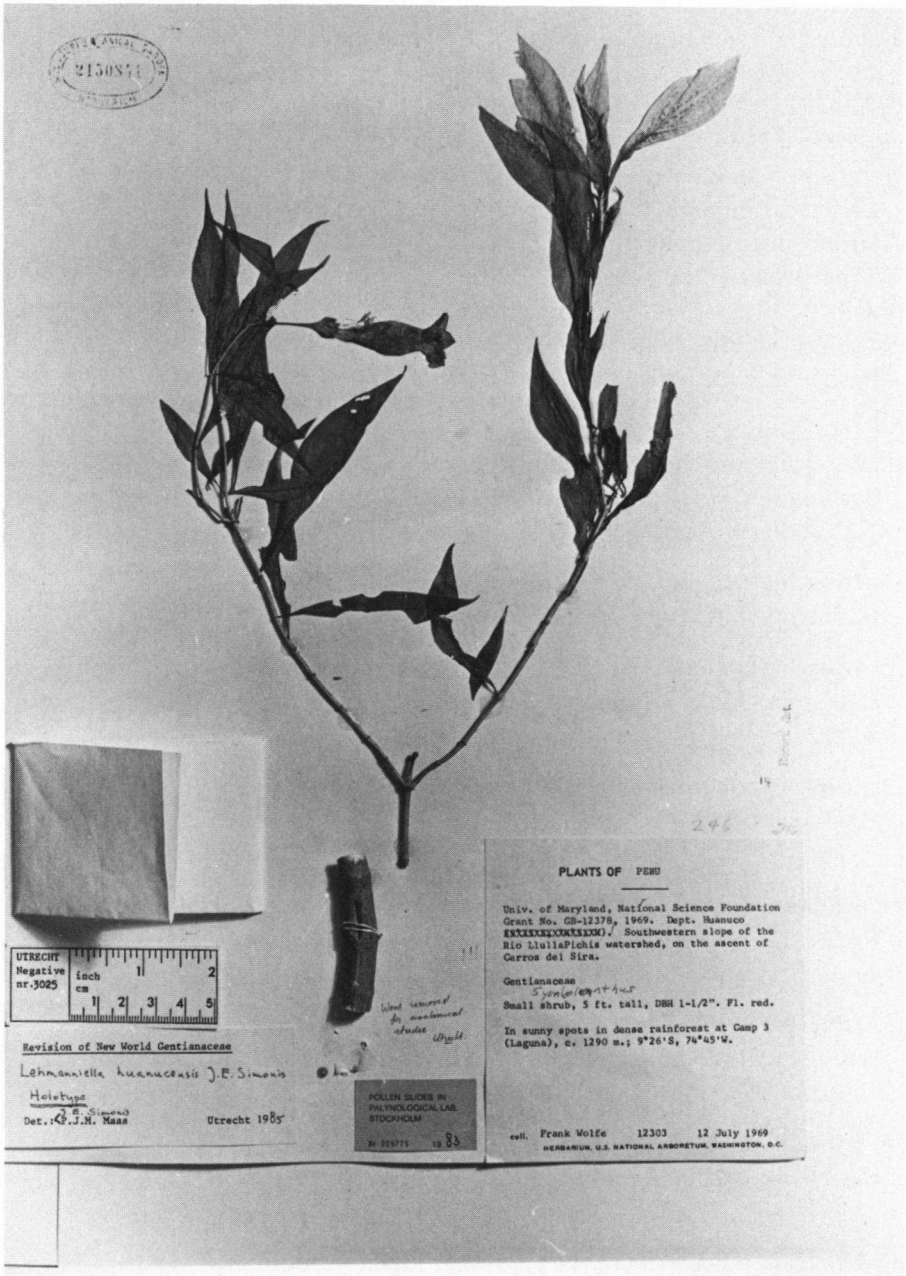


Fig. 3. *Lehmanniella huanucensis* (Wolfe 12303).

Basionym: *Lisianthus angustifolius* Kunth in Humboldt, Bonpland & Kunth, Nov. Gen. Sp. 3: 181. 1819.

9d. subsp. **arborea** (Spruce ex Progel) Persoon & Maas, comb. nov.

Basionym: *Lisianthus arboreus* Spruce ex Progel in Martius, Fl. Bras. 6(1): 240. t. 64, f. 1. 1865.

9e. subsp. **longistyla** Persoon & Maas, subsp. nov. Fig. 1.

Differt ab omnibus subspeciebus floribus saepe albis tubulosis vel infundibuliformibus, capsula recurvata stylo longo coronata.

Type: *Maas & Steyermark 5344* (holotype, U; isotopes, COL, K, MO, NY, P, US, VEN), near km. 106 of road from El Dorado to Sta. Elena de Uairén, alt. 700 m, Bolívar, Venezuela.

9f. subsp. **matogrossensis** Persoon & Maas, subsp. nov. Fig. 2.

Differt ab omnibus subspeciebus caulibus verrucosis et foliis ovatis vel circularibus interdum emarginatis.

Type: *Malme 3254* (holotype, S, 2 sheets), Arica, near Cuiabá, Mato Grosso, Brazil.

9g. subsp. **viridiflora** (Martius) Persoon & Maas, comb. nov.

Basionym: *Lisianthus viridiflorus* Martius, Nov. Gen. Sp. Pl. 2(2): 94. t. 173. 1827.

10. **Irlbachia quelchii** (N.E. Brown) Maas, comb. nov.

Basionym: *Lisianthus quelchii* N.E. Brown, Trans. Linn. Soc. London, Bot. ser. 2. 6: 50. pl. 9, f. 6–9. 1901 (as “*Quelchi*”).

11. **Irlbachia frigida** (Swartz) Maas, comb. nov.

Basionym: *Lisianthus frigidus* Swartz, Prodr. 40. 1788.

12. **Irlbachia oblongifolia** (Martius) Maas, comb. nov.

Basionym: *Helia oblongifolia* Martius, Nov. Gen. Sp. Pl. 2(2): 123. t. 191, f. 1. 1827.

13. **Irlbachia amplissima** (Martius) Maas, comb. nov.

Basionym: *Lisianthus amplissimus* Martius, Nov. Gen. Sp. Pl. 2(2): 96. t. 175. 1827.

14. **Irlbachia speciosa** (Chamisso & Schlechtendal) Maas, comb. nov.

Basionym: *Lisianthus speciosus* Chamisso & Schlechtendal, Linnaea 1: 198. 1826.

15. **Irlbachia pedunculata** (Chamisso & Schlechtendal) Maas, comb. nov.

Basionym: *Lisianthus pedunculatus* Chamisso & Schlechtendal, Linnaea 1: 199. 1826.

16. **Irlbachia pendula** (Martius) Maas, comb. nov.

Basionym: *Lisianthus pendulus* Martius, Nov. Gen. Sp. Pl. 2(2): 94. t. 172. 1827.

17. **Irlbachia pulcherrima** (Martius) Maas, comb. nov.

Basionym: *Lisianthus pulcherrimus* Martius, Nov. Gen. Sp. Pl. 2(2): 97. t. 176. 1827.

II. *Lehmanniella* Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 101. 1895.

*Schlimia* Regel, Acta Horti Petrop. 3(2): 285. 1875. Illegitimate name.

*Wallisia* Regel, Gartenflora 24: 230. 1875. Illegitimate name.

*Lagenanthus* Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 99. 1895.

*Purdieanthus* Gilg in Engler & Prantl, Natürl. Pflanzenfam. ed. 1. 4(2): 99. 1895.

1. *Lehmanniella splendens* (W.J. Hooker) Ewan, *Caldasia* 5: 87. 1948.

Basionym: *Lisianthus splendens* W.J. Hooker, London J. Bot. 6: 264. t. 8. 1847.

2. *Lehmanniella huanucensis* J.E. Simonis, sp. nov. Fig. 3.

Frutex usque ad 1.5 alta, ramis quadrangularibus ad teretis. Petioli ad 8 mm longi. Lamina membranacea, anguste elliptica, 4.5–8 cm longa et 1–2 cm lata, basi acuta vel attenuata, apice acuta vel acuminata, venis secundariis utroque latere 2. Flores singulares, terminales. Bractee triangulares, 2 mm longae et 1 mm latae. Calyx cyathiformis, 8–9 mm longus, lobis late ellipticis, 4.5–5.5 mm longis, obtusis. Corolla rubra, tubulosa, 40–45 mm longa, tubo ad 35 mm longo, basi et apice constricto, lobis subrotundatis, 6–7 mm longis, acuminatis, leviter fimbriatis. Stamina infra medium tubo corollae insertae, ad 35 mm longa. Ovarium ellipsoideum, 4–5 mm longum, stylo ad 40 mm longo, stigma bilobata. Capsula ignota.

Type: *F. Wolfe 12303* (holotype, MO; isotypes, F, USM), Cerros del Sira, Río Llula-Pichis watershed, open spots in rainforest, alt. 1300 m, dep. Huánuco, Peru.

This species is related to *L. pulchra* and *L. splendens*, but differs by its solitary flowers.

3. *Lehmanniella princeps* (Lindley) J.E. Simonis, comb. nov.

Basionym: *Lisianthus princeps* Lindley, J. Hort. Soc. London 4: 261. 1849 (as “*Princeps*”).

4. *Lehmanniella pulchra* (W.J. Hooker) J.E. Simonis, comb. nov.

Basionym: *Lisianthus pulcher* W.J. Hooker, Bot. Mag. 75: t. 4424. 1849.

A selected list of synonyms is included for practical use. The number after each name indicates the species in the synonymy of which it should be included (e.g., *Calolisianthus amplissimus* I, 13 means that this name is a synonym of species 13 of genus I: *Irlbachia amplissima*).

#### Calolisianthus

*amplissimus* I, 13

*frigidus* I, 11

*macranthus* I, 14

*pedunculatus* I, 15

*pendulus* I, 16

*pulcherrimus* I, 17

*speciosus* I, 14

*tepuiensis* I, 10

- Chelonanthus**  
 alatus I, 9  
 arboreus I, 10  
 candidus I, 9g  
 cardonae I, 4  
 uliginosus I, 8  
**Helia**  
 brevifolia I, 12  
 loeseneriana I, 12  
 micrantha I, 12  
**Irlbachia**  
 elegans I, 4  
 parwana I, 4  
 phelpsiana I, 4  
**Lagenanthus**  
 princeps II, 3  
**Lehmanniella**  
 acuminata II, 1  
**Lisianthus**  
 acutangulus I, 9a  
 acutilobus I, 4  
 alpestris I, 14  
 amoenus I, 8  
 bifidus I, 9c  
 breviflorus I, 4  
 brittonii I, 10  
 campanulaceus I, 9a  
 campanuloides I, 6  
 chelonoides I, 9a  
 elegans I, 17  
 fistulosus I, 9a  
 gracilis I, 8  
 grandiflorus I, 9a  
 inflatus I, 14  
 parvifolius I, 7  
 ramosissimus I, 2  
 recurvus I, 4  
 scabridulus I, 4  
 spruceanus I, 8  
 subcordatus I, 4  
 tenuifolius I, 17  
 trifidus I, 9a  
 uliginosus I, 8  
 virgatus I, 9d  
**Macrocarpaea**  
 arborea I, 10  
 cerronis I, 10  
 salicifolia I, 10  
**Purdieanthus**  
 pulcher II, 4

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 Grisebach, A.H.R. – *Genera et Species Gentianearum*. 1–364 (1838).  
 Maas, P.J.M., S. Nilsson, A.M.C. Hollants, B.J.H. ter Welle, J.G.M. Persoon & E.C.H. van Heusden – *Systematic studies in Neotropical Gentianeaceae – the Lisianthus complex*. *Acta Bot. Neerl.* 32: 371–374 (1984).