Novitates Gabonenses 55. Manuscript names and drawings of the French botanist Louis Pierre (1833-1905): a discussion about their validity with some examples of nomenclatural consequences for the Gabonese flora in particular

F.J. BRETELER

Herbarium Vadense, Biosystematics Group, Wageningen University, Foulkesweg 37, NL-6703 BL Wageningen (Netherlands) frans@breteler.demon.nl

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Louis Pierre, manuscript names, validity, nomenclature, new combinations, Euphorbiaceae, Irvingiaceae, Scytopetalaceae, Gabon.

ABSTRACT

The importance of the French botanist Louis PIERRE for Gabon, best known from his *Flore forestière de la Cochinchine*, is introduced. New species published by him by means of the distribution of drawings by E. DELPY are considered effective and valid, but mostly not treated as such. Nomenclatural consequences, ranging from change of author to change of generic name, are demonstrated from a few examples in the Euphorbiaceae, the Irvingiaceae, and the Scytopetalaceae.

RÉSUMÉ

Novitates Gabonenses 55. Noms manuscrits et dessins du botaniste français Louis Pierre (1833-1905): une discussion de leur validité avec quelques exemples de conséquences nomenclaturales, en particulier pour la flore gabonaise.

Si le botaniste français Louis PIERRE est renommé pour sa Flore forestière de la Cochinchine, son importance pour la flore du Gabon est rappelée. En effet, les espèces nouvelles qu'il a effectivement publiées grâce à la distribution de dessins exécutés par E. DELPY sont valides, mais n'ont le plus souvent pas été considérées comme telles par la suite. Il en résulte des conséquences nomenclaturales, variant d'une simple substitution d'auteur à un changement de nom de genre, ici démontrées par quelques exemples pris dans les Euphorbiaceae, Irvingiaceae et Scytopetalaceae.

MOTS CLÉS

Louis Pierre, noms manuscrits, validité, nomenclature, combinaisons nouvelles, Euphorbiaceae, Irvingiaceae, Scytopetalaceae, Gabon.

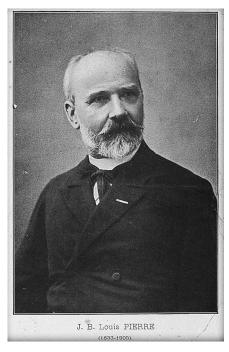


Fig. 1. — Portrait of Jean-Baptiste Louis PIERRE.

INTRODUCTION

The French botanist Jean-Baptiste Louis PIERRE (Fig. 1) is best known from his magnum opus Flore forestière de la Cochinchine (1880-1899) (CHEVALIER 1906; GAGNEPAIN 1906a, b; LEANDRI 1963). However, the more than 1600 entries in the *Index Kewensis* that bear his name as author, either alone or with a co-author or as "Pierre ex...", do not all concern taxa from Asia in general or Indochina in particular. His taxonomic work on the flora of tropical Africa, especially of Gabon, is less well known, but of great importance for that last country. Of the more than 1600 taxa mentioned, c. 350 are African of which c. 200 are cited as from "Pierre ex...", which indicates that PIERRE is not the publishing author. Some of these "Pierre ex..." names, especially those by CHEVALIER (Pierre ex A.Chev.), are indeed based on a manuscript name found on a herbarium label, but some others are not. These other names have in fact already been published by PIERRE by means of the distribution of "illustration with analysis, of the taxa in question" to

the important herbaria of that time (PIERRE 1896a: 1233; VAN TIEGHEM 1905: 289). These illustrations have been made by the artist E. Delpy, by order of his employer Pierre (e.g., Figs 2-5). These illustrations with analysis are accepted as equivalent to a description (GREUTER et al. 2000: Arts 42.3, 44.1) if published prior to 1 January 1908. They were copied and sent by DELPY soon after he had finished the illustration, quite often together with a duplicate of the collection(s) on which they were based (PIERRE 1896a; VAN TIEGHEM 1905; pers. obs. in BR, K, P). Sometimes this distribution was followed by a full description in print by PIERRE, mostly published a few months later in the Bulletin mensuel de la Société lineénne de Paris in the years 1896-1905 (CHEVALIER 1906; LEANDRI 1963) or were only mentioned there (PIERRE 1896a: 1233). A few have been published in his Flore forestière de la Cochinchine (Pierre 1892), e.g., Fegimanra Pierre, *Lavigeria* Pierre. In some cases the same taxon was published by another botanist, who took up Pierre's name, and, consequently the taxon became known by the authors Pierre ex...

So far there are very few cases in which taxonomists have recognized the validity of PIERRE's names, resulting in a correct author citation. *Dichapetalum integrum* is mentioned in the *Index* Kewensis as D. integrum Pierre ex Pellegr. (Pellegrin 1913). Delpy's drawing of this taxon with details was distributed not later than 25 March 1904, the official date of donation of PIERRE's entire collection to the Paris Herbarium (see next paragraph). Therefore the publishing author is Pierre (Breteler 1978: 31). Staphysora klaineana Pierre published in the same way and treated by HUTCHINSON (1912) as a nomen nudum was correctly taken up by LÉONARD (1994: 14) as validly published and became *Maesobotrya klaineana* (Pierre) J.Léonard.

In Berlin, like in Kew, the conception may have been that such names, published by the distribution of a detailed drawing, are not valid. GILG at least, and probably colleagues like PAX as well, were of this opinion. His comments (letter to PIERRE in P, dated 27 February 1900; GILG 1908) on PIERRE's Cerolepis (Flacourtiaceae) which name competed with his Camptostylus, is illustrative. A drawing of Cerolepis was sent to

Berlin in 1896, but a description in print (PIERRE 1899) appeared well after the publication of *Camptostylus* (GILG 1898; see also HUL 1995). GILG (1896) also argued that *Jollydora* Pierre, published by the distribution of an illustration with analysis in 1895, was not valid, and so the name was cited as *Jollydora* Pierre ex Gilg (DURAND & JACKSON 1899; BRUMMITT & POWELL 1992), but also as *Jollydora* Pierre in both editions of the *Flora of West Tropical Africa* (HUTCHINSON & DALZIEL 1927; HEPPER 1958; see also BRETELER & VAN ZIEL 1989).

The aim of this paper is to highlight PIERRE's publication of new taxa by means of the distribution of illustrations with analysis, of which many are incorrectly cited and/or wrongly treated. The cases dealt with below show the consequences of correct interpretation of these names, which may vary from a simple correction of author citation from "Pierre ex..." to "Pierre" (e.g., *Klainedoxa*) on the one hand, to a change of generic name (e.g., *Mildbraedia* to *Plesiatropha*) on the other.

PIERRE'S WORK ON THE FLORA OF GABON

When Pierre returned from Saigon in 1877, where he had founded the botanical garden and was its first director for more than 12 years, he settled in Paris, 63 rue Monge, close to the Paris Herbarium. In 1883 he moved to Charenton (GAGNEPAIN 1906a) and later on to Villeneuve-Saint-Georges, where he lived at least in 1891, and then, probably in 1893, moved again, to Saint-Mandé. There was not enough space in the Paris Museum to house his large collection from Indochina, so Pierre must have worked on his Flore forestière de la Cochinchine at home together with his artist E. DELPY and it must have been from his home that the drawings and duplicates were sent away, not from the Paris Museum. PIERRE was already 70 years old, when, in 1903, two years before his death, he finally was offered a modest space for his collection in the Paris Museum together with a small office. Most probably this was also the occasion he moved back to Paris, and lived 18 rue Cuvier (Paris V^e), close to the Botanical Garden, till his death in 1905. He

donated (25 March 1904) his entire collection of 20850 specimens (LEANDRI 1963: 220) to the Paris Museum. It consisted of his own collection made in Indochina and the collections from Gabon (then a part of French Congo) which he had bought from his private funds. He was offered to sell these Gabonese collections to a rich amateur for a considerable amount of money (GAGNEPAIN 1906a: xxvi), but PIERRE decided that they belonged in the Paris Museum (GAGNEPAIN 1906b: 56, 57).

After this donation the Paris Museum distributed some material of his collection, notably some of the copies of plant illustrations that remained. This was then an official sending from the Paris Museum and was witnessed as such, e.g., by K on 4 June 1904 (stamps on drawings of *Megabaria klaineana* and *M. obovatum*) or as "ex Herbario Musei Parisiensis" in BR on the illustration of *Klaineanthus gabonii* PIERRE (Fig. 2). This illustration is also present in BR attached to a duplicate of *Klaine 1941*, a collection on which the illustration was based, at least partly, and concerns the first sending by PIERRE.

Before PIERRE, little had been published on the flora of Gabon because of botanical exploration had hardly begun (FLORET 1976). As a result of collections from Libreville and surroundings made by SOYAUX, but especially by the missionary KLAINE, the botanical wealth of Gabon was being unveiled and PIERRE set himself at work with his great intellectual energy to investigate it. This KLAINE collection, at least partly (LETOUZEY 1962) was acquired by him and was labelled as PIERRE's collection ("H.L.-P. No", on the illustrations) but mostly not numbered.

Pierre analyzed the material, made descriptions and some sketches, and then handed it on to DELPY for the illustration. PIERRE's knowledge of the tropical flora was not restricted to the area of his *Flore forestière de la Cochinchine*, but was much larger. This wide knowledge meant that he could make decisions such as the inclusion of the Euphorbiaceous genera *Galearia* and *Microdesmis* (PIERRE 1896b, 1897b) in Pandaceae, which is now well accepted (FORMAN 1966; VILLIERS 1973). PIERRE (1897a) was also aware of the close relationship between the Scytopetalaceae and *Napoleonaea* of the Lecythidaceae, which were

Table 1. — Dates of illustrations and distribution of some of Delpy's drawings.

Taxon	Illustration date	Distributed to	Proof
Staphysora klaineana Pierre (Euphorbiaceae) Jollydora Pierre (Connaraceae)	XII.1895 XII.1895	BR, P B, P	Pierre (1896a: 1233) in session of 6 March 1896: "précédemment distribués"
Klainedoxa gabonensis Pierre (Irvingaceae)	17.II.1896	B, BR, P	Pierre in session of 6 March 1896: 1236, nota
Klaineanthus gabonii Pierre (Euphorbiaceae) Plesiatropha klaineana Pierre (Euphorbiaceae)	XI.1900	BR, P BR. K. P	1200, 11014
Desbordesia insignis Pierre (Irvingaceae)	II.1901	B, BR, P	Van Tieghem 1905: 28 February 1901

recently united in the same family Lecythidaceae (MORTON *et al.* 1998; BRETELER 2002). Besides the correspondence between PIERRE and the collector KLAINE about the purchase of his collections, there was also contact about the novelties of the plant world around Libreville (e.g., PIERRE 1896a: 1233).

The cooperation between the collector KLAINE in the field and the botanist PIERRE in France was very fruitful. For Gabon it happened again when the collector LE TESTU and the Paris taxonomist PELLEGRIN worked together in the first half of the last century.

DATES OF PUBLICATION

According to article 31.1 of the ICBN (St Louis Code: Greuter et al. 2000) the date of publication is the date on which the printed matter became available. In the case of PIERRE's names, to be accepted as valid, evidence has to be produced about the distribution itself and at what date. In other words, when were the copied illustrations sent to the public institutions of that time? There is strong evidence that DELPY, very soon after he had finished the illustration, added his name and the date, copied it and then sent the copies away, as illustrated in Table 1.

As may be deducted from the examples in Table 1, distribution was very quick, and, at least sometimes, if not always, in the same month in

which the illustration was produced and signed by DELPY. I have not observed a case in which DELPY's illustration was distributed at a later date than the month in which the illustration was produced.

In the absence of proof establishing some other date, DELPY's date is taken as the date of "printing" and also as the date of distribution (GREUTER et al. 2000: Art. 31.1). This means that the drawings of Klaineanthus gabonii and Plesiatropha klaineana are treated as having been distributed in November 1900.

TREATMENT OF SOME MANUSCRIPT NAMES OF PIERRE

EUPHORBIACEAE

General references. — Govaerts *et al.* 2000; Léonard 1962; Radcliffe-Smith 2001.

Cyclostemon klaineanum Pierre, tab. Herb. L. Pierre, del. E. Delpy 12/1900.

DELPY's illustration, bearing this name and present in K and P, is mentioned by HUTCHINSON (as *C. klaineanus*) in synonymy under his *Drypetes pierreana* in the *Flora of Tropical Africa*. However, PIERRE's name is validly published and by transfer to *Drypetes* the specific epithet should have been maintained. The correct name therefore is:

Drypetes klaineana (Pierre) Breteler, comb.

Cyclostemon klaineanum Pierre, tab. Herb. L. Pierre, del. E. Delpy 12/1900 (coll. Klaine 572). — Type: Klaine 572, Gabon, near Libreville, fl. fr. Nov. 1896-Feb. 1898 (holo-, P!; iso-, K!).

Drypetes pierreana Hutch., Fl. Trop. Afr. VI.1: 686 (1912). — Type: Klaine 572, Gabon, near Libreville, fl. fr. Nov. 1896-Feb. 1898 (lecto-, K, here designated; iso-, P).

Klaineanthus gabonii Pierre, tab. Herb. L. Pierre, del. E. Delpy 11/1900, Fig. 2.

The monotypic genus *Klaineanthus* is attributed to PRAIN (Bull. Misc. Inform., Kew 1912: 105 [1912]) who retained PIERRE's so-called Mss name, but changed the termination of PIERRE's epithet from "gabonii" into "gaboniae". DELPY's illustration is found at BR, together with a duplicate of *Klaine 1941* and also separately stamped "ex Herbario Musei Parisiensis", as well as in P, together with *Klaine 277*, the other syntype. PIERRE's name is validly published. Therefore the correct name with the correct author citation is:

Klaineanthus gabonii Pierre.

Megabaria klaineanum Pierre, tab. Herb. L. Pierre, del. E. Delpy 12/1900. Megabaria obovatum Pierre, tab. Herb. L. Pierre, del. E. Delpy 12/1900.

These two names are invalid, because they are simultaneously published without a description of the genus *Megabaria*. For details see LÉONARD (1995).

Plesiatropha klaineana Pierre, tab. Herb. L. Pierre, del. E. Delpy 11/1900, Fig. 3.

The name of the monotypic new genus *Plesiatropha* and its illustration are cited by HUTCHINSON in the *Flora of Tropical Africa* (1912) under his *Mildbraedia klaineana*. The illustration, present at K, but also at BR and P, is based on *Klaine 846* and *1261* dated August

1898. PIERRE's valid new monotypic genus is congeneric with and has priority over PAX's heterotypic, at that time also monotypic, genus *Mildbraedia*, published in 1909 and based on *M. paniculata* Pax. This leads to the following nomenclature with two new combinations for two *Mildbraedia* species and two new combinations for two infraspecific taxa.

Plesiatropha Pierre

TYPUS. — *Plesiatropha klaineana* Pierre, tab. Herb. L. Pierre, del. E. Delpy 11/1900. — Type: *Klaine 1261*, Gabon, near Libreville, \mathcal{P} fl., fr. Aug. 1898 (lecto-, P!, here designated).

Mildbraedia Pax, Engl. Bot. Jahrb. Syst. 43: 319 (1909). — Type: M. paniculata Pax = Plesiatropha paniculata, see below.

Plesiatropha carpinifolia (Pax) Breteler, comb. nov.

Jatropha carpinifolia Pax, Pflanzenw. Ost-Afr. C.: 240 (1895). — Type: Stuhlmann 6372, Tanzania, Uzaramo District, Kidenge (holo-, B, delet.; drawing of holo-, K).

Mildbraedia carpinifolia (Pax) Hutch., Fl. Trop. Afr. 6 (1): 801 (1912); Radcliffe-Smith, Euphorbiaceae, part 1 in Fl. Trop. East Afr.: 340, fig. 64 (1987).

RADCLIFFE-SMITH subdivided this species into two varieties one *M. carpinifolia* var. *carpinifolia*, restricted to Kenya and Tanzania, and *M. carpinifolia* var. *strigosa* A.R.Sm. to Tanzania and Mozambique. This leads to the following combination:

Plesiatropha carpinifolia (Pax) Breteler var. strigosa (A.R.Sm.) Breteler, comb. nov.

Mildbraedia carpinifolia (Pax) Hutch. var. strigosa A.R.Sm., Kew Bull. 27: 507 (1972). — Type: Drummond & Hemsly 2021, Tanzania, Morogoro District, Turiani (holo-, K; iso-, EA).

Plesiatropha paniculata (Pax) Breteler, comb. nov.

Mildbraedia paniculata Pax, Bot. Jahrb. Syst. 43: 319 (1909). — Type: Mildbraed 2920, 3189, 3197, Congo (Kinshasa), Ituri, Njiapanda, montane forest, fl.



Fig. 2. — *Klaineanthus gabonii* Pierre, drawing by E. Delpy, XI.1900. After a copy in BR.

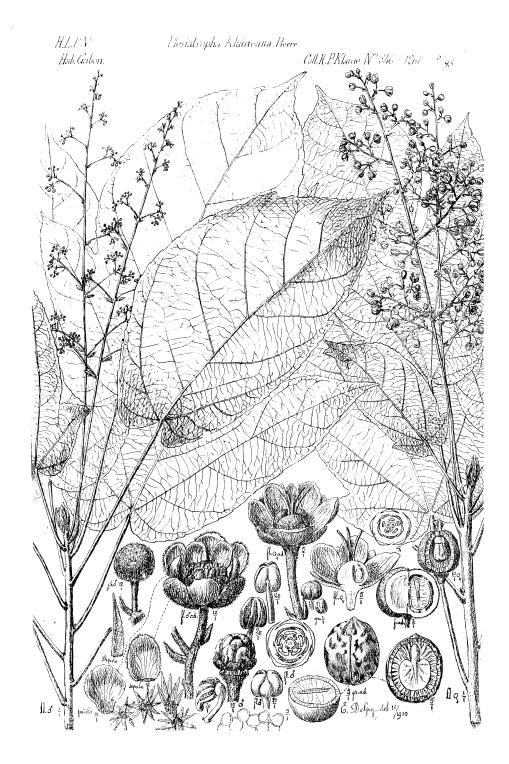


Fig. 3. — *Plesiatropha klaineana* Pierre, drawing by E. Delpy, XI.1900. After a copy in P.

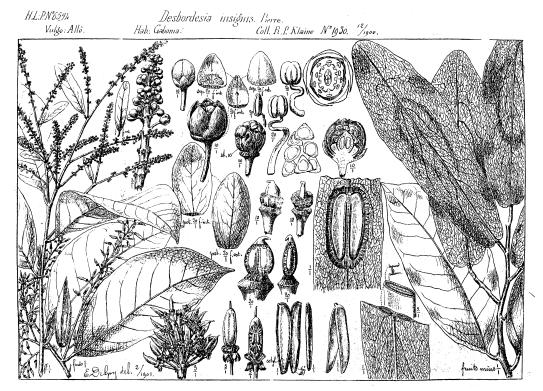


Fig. 4. — **Desbordesia insignis** Pierre, drawing by E. Delpy, II.1901. After a copy in BR.

Mar.-Apr. (syn-, B, delet.); neotype (here designated): Bequaert 2667, Congo (Kinshasa), Nandefu, Penghe-Irumu, virgin forest of Ituri R., & fl. Feb. (BR!).

LÉONARD has divided *M. paniculata* into two subspecies, *M. paniculata* subsp. *paniculata* from eastern Congo (Kinshasa) to NE Congo (Brazzaville), Cameroun and N Gabon, and *M. paniculata* subsp. *occidentalis* J.Léonard from Liberia, Côte d'Ivoire, and Ghana. The latter subspecies is now combined in *Plesiatropha*.

Plesiatropha paniculata (Pax) Breteler subsp. occidentalis (J.Léonard) Breteler, comb. nov.

Mildbraedia paniculata Pax subsp. occidentalis J.Léonard, Bull. Jard. Bot. État Brux. 31: 65 (1961). — Type: Leeuwenberg 3005, Liberia, right bank of Cavally R., 7 km S. of Taï (Côte d'Ivoire), & fl. Mar. (holo-, K; iso-, U, WAG!).

IRVINGIACEAE

General references. — Aubréville 1962; Harris 1996, 1999.

Desbordesia insignis Pierre, tab. Herb. L. Pierre, del. E. Delpy 2/1901, Fig. 4.

Untill now the monotypic genus *Desbordesia* is attributed to VAN TIEGHEM, who "validated" PIERRE's name in 1905. But the same author stated there, that the illustration of DELPY was distributed in February 1901 to the main "herbiers publics", which means the publication of an illustration with analysis, hence a valid publication. It has been located at BR and P. Between February 1901 and 1905, ENGLER (1902) described the single species as *Irvingia glaucescens* which became the basionym of *Desbordesia glaucescens* (Engl.) Tiegh. under which name the species is known at present. The correct name, however, is:



Fig. 5. - Klainedoxa gabonensis Pierre, drawing by E. Delpy, 17.II.1896. After a copy in P.

Desbordesia insignis Pierre, tab. Herb. L. Pierre, del. E. Delpy 2/1901 (coll. Klaine 1930).

Irvingia glaucescens Engl., Bot. Jahrb. Syst. 32: 124 (1902).

Desbordesia glaucescens (Engl.) Tiegh., Ann. Sc. Nat. Bot., sér. 9, 1: 290 (1905); Aubréville, Flore Gabon 3: 29, pl. 5 (1962); Harris, Bull. Jard. Bot. Belg. 65: 147 (1996). — Type: see HARRIS 1996.

Klainedoxa gabonensis Pierre, tab. Herb. L. Pierre, del. E. Delpy 17/2/1896, Fig. 5.

According to HARRIS (1996, 1999), Pierre ex Engl. are the authors of the genus *Klainedoxa* and its type species, but AUBRÉVILLE (1962) cited both correctly as from PIERRE alone, based on PIERRE's publication of 1896a. DELPY's illustration with analysis, dated 17 February 1896 (at present found in BR, K, P), was sent to Berlin, together with a duplicate of Klaine 188 and a full description of the genus and the species in DELPY's handwriting, signed "Saint Mandé, 17 février 1896, L. Pierre" (PIERRE 1896a: 1236). ENGLER, in his publication of April 1896 (ENGLER 1896: 227), refers to PIERRE and it is clear that he based Klainedoxa Pierre on what he had received from PIERRE: a description of the genus and of its single species together with DELPY's illustration and a duplicate of the type Klaine 188 (Pierre 1896a: 1236). Pierre's description in print (1896a) appeared shortly after ENGLER's. The correct author for the genus Klainedoxa and the species K. klaineana, however, is PIERRE.

SCYTOPETALACEAE

General Reference. — Letouzey 1978.

Egassea laurifolia Pierre, tab. Herb. L. Pierre, del. E. Delpy 5/1901.

This name, basionym of *Oubangia laurifolia*, is attributed to DE WILDEMAN as "Pierre ex De Wild." (as "Pierre in De Wild." by KEAY 1958: 300). DE WILDEMAN published *Egassea laurifolia* together with a plate in 1903. This plate was in part copied from DELPY's illustration cited

above, as mentioned on DE WILDEMAN's plate: "E. Menger sec. Delpit et ad. nat. del". This proves that DELPY's illustration of *Egassea laurifolia* Pierre had been distributed (at present found in BR, K and P), and that the name is validly published by PIERRE. The name with the correct author citation for the combination is therefore: **Oubanguia laurifolia** (Pierre) Tiegh.

Scytopetalum klaineanum Pierre, tab. Herb. L. Pierre, del. E. Delpy 8/1896.

Up to now ENGLER is cited as the publishing author of this species, based on ENGLER's publication (1897).

ENGLER made use of DELPY's illustration, now present in BR, K and P, for his figure 51a, as witnessed in the caption: "Teils nach Zeichnungen von Pierre, teils Original". The publishing author of this species therefore is PIERRE and not "Pierre ex Engl."

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