

*The Typification of Convolvulus corymbosus L.
and the Identity of Legendrea mollissima W. & B.*

by William T. Stearn *

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SUMMARY

Legendrea mollissima Webb & Berth. (1844), at one time considered a Canarian endemic, was based on the relatively uncommon form of **Turbina corymbosa** (L.) Raf. native to Middle America, which was cultivated during the first half of the 19th century in Tenerife and apparently became naturalized as a garden escape for a limited period in Gran Canaria but is now extinct there. The type of **Turbina corymbosa** is **Convolvulus corymbosus** L. based on a Plumier drawing made at Port de Paix, Haiti, which is thus the type locality.

RESUMEN

Legendrea mollissima Webb & Berth. (1844), considerada en el pasado un endemismo de las Islas Canarias, fue basado en la forma relativamente poco común de **Turbina corymbosa** (L.) Raf. nativa de América Central, la cual fue cultivada durante la primera mitad del siglo XIX en Tenerife y aparentemente se naturalizó como escapada de cultivo durante un período limitado en Gran Canaria, donde ahora está extinguida. El tipo de **Turbina corymbosa** es **Convolvulus corymbosus** L., basado en un dibujo de Plumier realizado en Fort de Paix, Haití, la cual es, por lo tanto, la localidad tipo. (Translation by Mrs. J. H. Price, née Suzanne Cabrera).

In 1844 Webb and Berthelot described and illustrated a new genus of *Convolvulaceae* apparently endemic to the Canary Islands which they named *Legendrea* in honour of Mlle Fannie Legendre (Mme Edouard Spach), a Parisian artist who provided a number of illustrations for their *Phyto-*

* British Museum (Natural History), London.

graphia Canariensis (1835-50). It was based upon a new species, *L. mollissima*, gathered near Las Palmas, Gran Canaria, by Despréaux. Later collectors of such diligence and experience as Eric Sventenius and Günther Kunkel have failed to find this again on Gran Canaria and it can be presumed to be extinct there. Hence *L. mollissima* would appear to be either a vanished endemic Canarian taxon or a species introduced from elsewhere and naturalized only for a limited period. Kunkel, referring to it as 'un así llamado endemismo canario', has published in *Monographiae Biologicae Canariensis* 3: 6 (1972) a photograph of the type specimen in the Webb Herbarium at Florence. To a botanist familiar with the plants of the West Indies, Webb and Berthelot's description and plate immediately recall the widespread tropical American bindweed with white flowers now commonly known as *Turbina corymbosa* (L.) Raf. though sometimes called *Rivea corymbosa* (L.) Hallier f.; it has a lengthy synonymy tabulated below. Since 1887, when Hermann Christ published a note based on information from Caruel, in Engler, *Bot. Jahrb.* 9: 125 (1887), they have been recognized as conspecific. They differ from species of *Ipomoea*, which otherwise they resemble in habit, globose spinous pollen and biglobose stigma, by having an indehiscent fruit.

This fruiting character led Webb to propose the genus *Legendrea*. However, a few years earlier Rafinesque in his *Flora Telluriana* 4: 81 (1838), printed in Philadelphia and unknown even to the great botanical bibliographer G. A. Pritzel, its existence seemingly not recorded in Europe before Daydon Jackson's citation of it in 1881, had published a genus *Turbina* as follows:

'1041. TURBINA R. diff. Convolv. capsula turbinata, uniloc. membranosa, 2-3 sp. Type *T. corymbosa* R. Conv. do. auct.'

As Rafinesque himself said in his introduction (p. 16)' so many Botanists establish Genera at remote places that these clashing names must often occur'. *Legendrea* (1844) based

on *L. mollissima* yields precedence to *Turbina* (1838) based on *Convolvulus corymbosus* L.

The protologue of *Convolvulus corymbosus* L., Syst. Nat. 10th ed., 2: 923 (1759) rivals that of *Turbina* in terseness:

'*corymbos.* C. fol. cordatis, pedunc. umbellatis, caule repente. *Plum. ic.* 89 f.2'

In his *Species Plantarum*, 2nd ed. 1:225 (1762) Linnaeus slightly expanded this:

'33. CONVOLVULUS foliis cordatis, pedunculis umbellatis, caule repente.

Convolvulus niveus polyanthus, folio subrotundo majore. Plum. Spec. 1. lc. 89 f. 2.

Habitat in America'.

There is no specimen representing this in the Linnaean Herbarium.

The identity of *Convolvulus corymbosus* would be quite obscure but for the reference to '*Plum. ic.* 89 f.2', i.e. Burman's *Plantarum Americanarum ... Carolus Plumierus*. pl. 89 fig. 2 (1756), from which Linnaeus's diagnosis was taken and which is the type of his specific name. This figure (Fig. 1) was copied from part of a copy of a drawing (Fig. 2) made by Charles Plumier (1646-1704) in the West Indies. Plumier's original drawings and manuscripts are in Paris, but a set of uncoloured copies of the drawings made for the Dutch physician and botanist Herman Boerhaave (1668-1738) passed after his death into the hands of Jan Burman (1706-1779), who based his engravings and descriptive notes on them but unfortunately had no access to Plumier's unpublished descriptions. The Boerhaave drawings now belong to the University Library, Groningen, north Netherlands; the Royal Botanic Gardens, Kew, possess another set of copies together with transcripts of many of Plumier's descriptions. Plumier was one of the best botanists ever to visit the West Indies. A friend of Tournefort, he had a good understanding of genera and was a remarkably accurate and acute observer, whose detailed descriptions, being

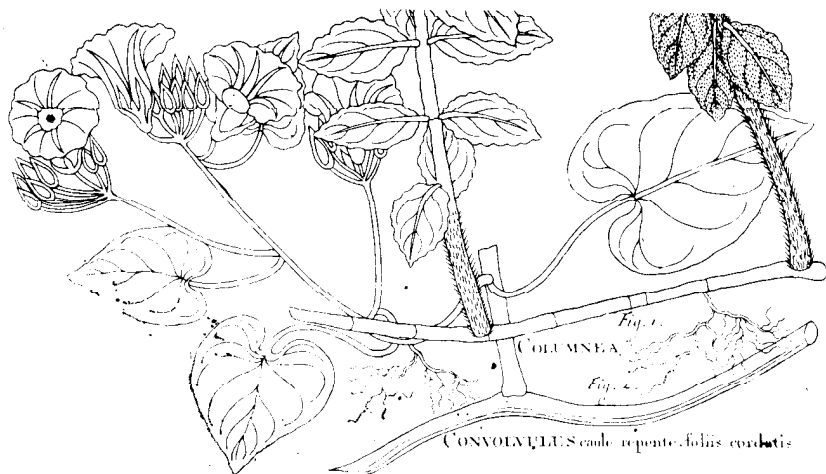


Fig. 1: *Turbina corymbosa* (L.) Raf. (*Convolvulus corymbosus* L.) holotype; engraving as *Convolvulus caule repente, foliis cordatis* in Burman, *Pl. Amer. Plum.* t. 89 f.2 (1756).

packed with relevant information, accordingly complement his drawings. They often enable Linnaeus's vague indication of origin 'America' to be translated into a fairly precise geographical statement. Plumier made three expeditions to the West Indies between 1689 and 1697; he spent most of his time botanizing in Haiti and Martinique but also visited Guadeloupe, St. Vincent, St. Thomas and St. Kitts, any of which could thus be the type-locality for species named from his drawings. Comparison of Burman's published engravings with the copies of Plumier's drawings at Groningen and Kew shows that for the sake of economy Burman often reproduced merely a part of the original. Thus his pl. 82 fig. 2 (Fig. 1) portrays only one flowering shoot from a full-page drawing, which is in vol. 2 fol. 42 (Fig 2) of the Kew copy under the name *Convolvulus lacteus polyanthus*. The accompanying description in vol. 1 fol. 49 is more than adequate: it even refers to the pistil 'quod deinde abit in fructum membranaceum turbinatum calyce ipso obvolutum', thus anticipating by a century and a half the attention of Rafinesque and of Webb to these distinctive frui-

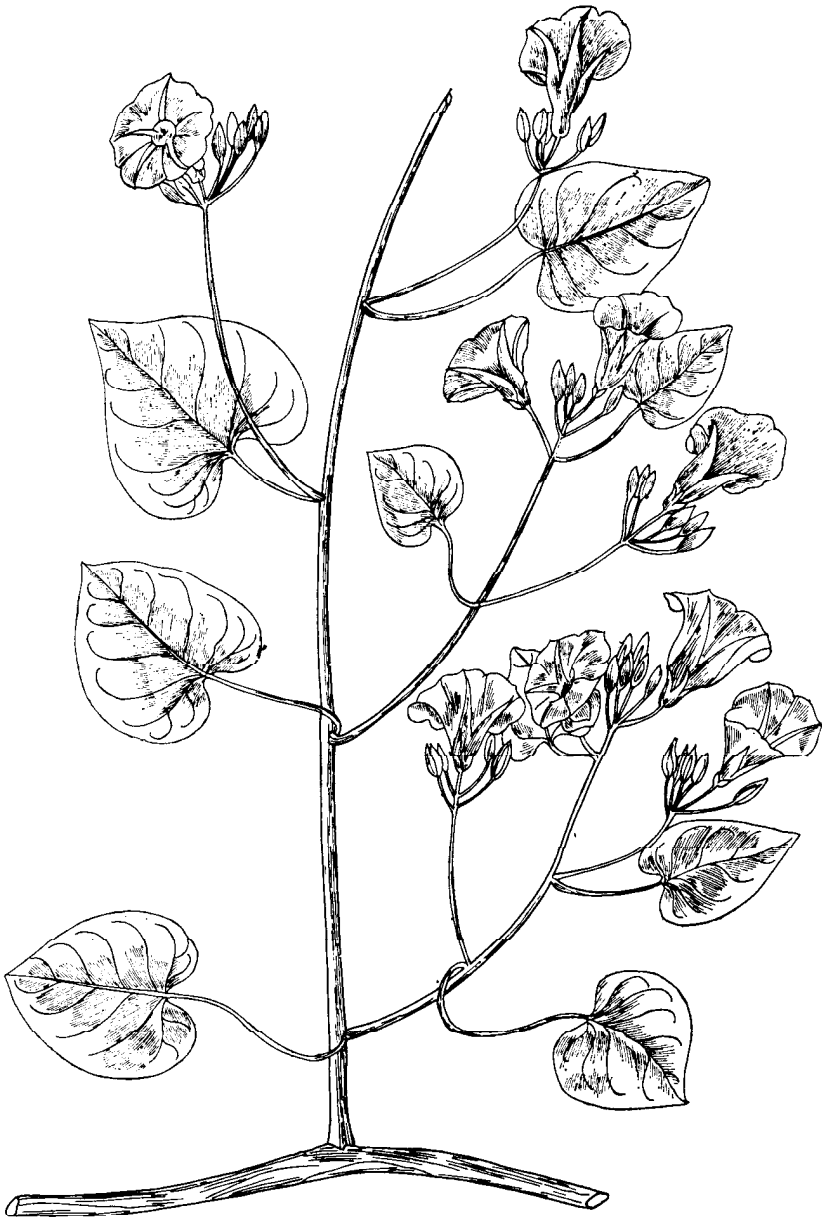


Fig. 2. *Turbina corymbosa* (L.) Raf. (*Convolvulus corymbosus* L.); copy of original drawing by Plumier as *Convolvulus lacteus polyanthus* im Kew Herbarium.

ting characters. Burman's published engraving is the holotype of *Convolvulus corymbosus*, Plumier's original drawing at Paris its type.

Regarding the origin of his white and many-flowered bindweed, Plumier's text states 'Plantam novembri et decembri florentem inveni circa regionem portus pacis ad insulam sandominicarum', in other words, he found it in flower in November and December around Port de Paix on the north coast of Haiti, in the island of Hispaniola. This is accordingly the type-locality of *Convolvulus corymbosus* and hence of *Turbina corymbosa*. The species concerned is a familiar West Indian one conspicuous for its profuse white flowers, followed by brown fruits, and is known in Jamaica as 'Christmas Pops' on account of its blooming there in December. The leaves are glabrous in almost all West Indian specimens and one can reasonably accept those of Plumier's plant as being likewise glabrous. The pollen is globose and spinous as in *Ipomoea*.

Webb described the leaves of his *Legendrea mollissima* as being 'supra pilis simplicibus crispis molliter pubescentia, saturate viridia, subtus velutino-pannosa'. There is nothing else to distinguish the plant from the West Indian *Turbina corymbosa*. Widespread as are many species of *Convolvulaceae*, it is inconceivable that a plant differing from an American species only in such pubescence should be a Canarian endemic. Bourgeau, who collected material in 1845 in the Orotava botanic garden, Tenerife, distributed as *Plantae Canarienses* no. 889, then noted that it was 'stirps virisimiliter exotica quam ut videtur per errorem pro spontanea olim habebat Despreaux'. Despreaux, however, was not the first to gather this in the Canary Islands. In 1819 Kunth described a *Convolvulus sidaefolius* from material collected in gardens near Orotava by Humboldt and Bonpland in June 1799, which likewise had 'folia utrinque pubescentia'. It is undoubtedly the same as the later-named *Legendrea mollissima*.

Thanks to the co-operation of Professor Carlo Stein-

berg of the Istituto Botanico dell'Università, Florence, I have been able to examine the pollen and foliage of the type of *Legendrea mollissima* in the Webb Herbarium. Its pollen is globose and spinous, exactly matching that of *Turbina corymbosa*. Although the latter is usually glabrous, some specimens from tropical America have leaves just as pubescent as those of the Canarian plants. Two such gatherings are G. F. Gaumer, *Plantae Yucatanæ* no. 2052 (BM) from Mexico and L. R. Holdridge, *Flora of Haiti* no. 886 (BM) from Hispaniola.

From the above it is evident that *Legendrea mollissima* was based on the relatively uncommon pubescent form of *Turbina corymbosa* native to Middle America, which was cultivated during the first half to the middle 18th century in Tenerife and seemingly became naturalized for a time in Gran Canaria but is now extinct there. Within the species *Turbina corymbosa* it merits no higher rank than that of *forma*. The generic and specific synonymy are as follows:

TURBINA Raf., Fl. Tellur. 4: 81 (1838).

Type by monotypy: *Convolvulus corymbosus* L.

Legendrea Webb & Berth., Phyt. Canar. (Nat. Hist. Iles Canar. III. 2) 3: 26, t. 137 (1844).

Type by monotypy: *Legendrea mollissima* Webb & Berth.

Turbina corymbosa (L.) Raf., Fl. Tellur. 4: 81 (1838) f. ***corymbosa***
Convolvulus polyanthos, niveus, folio subrotundo, majori
Plumier, Cat. Pl. Amer. 1 (1703).

Convolvulus caule repente, foliis cordatis, pedunculis umbellatis Burman, Pl. Amer. Plum. 78, t.89, f.2 (1756).

Convolvulus corymbosus L., Syst. Nat. 10th ed., 2: 923 (1759).

Ipomoea corymbosus (L.) Roth, Novae Sp. Pl. 109 (1821).

Ipomoea burmanii Choisy in DC., Prodr. 9: 350 (1845).

Rivea corymbosa (L.) Hallier f. in Engler, Bot. Jahrb. 18: 157 (1893).

Ipomoea antillana Millsp. in Field Mus. Chicago Publ. Bot.
2: 84 (1900).

Legendrea corymbosa (L.) Ooststr. in Blumea 5: 355 (1943).
Type: Burman, *Pl. Amer. Plum.* t.89, f.2 (Fig. 1), based on
a drawing (Fig. 2) made by Plumier of a plant growing
near Port de Paix, Haiti, Hispaniola.

f. mollissima (Webb & Berth.) Stearn, **stat. nov.**

Convolvulus sidaefolius Kunth in Humb., Bonpl. & Kunth,
Nova Gen. Sp. 3: 99 (1819).

Ipomoea sidaefolia (Kunth) Choisy, Convolv. Orient. 77
(1834).

Legendrea mollissima Webb & Berth., Phyt. Canar. (Hist.
Nat. Iles Canar. iii.2) 3: 27, t.137 (1844).

Rivea corymbosa var. *mollissima* (Webb & Berth.) Hallier
f., loc. cit. 157 (1893).

Type: Gran Canaria, *Despréaux* (Herb. Webb; F.).