



PLANT GATEWAY'S

The Global Flora

A practical flora to vascular plant species of the world



ANGIOSPERMS

302. Barbeuiaceae



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302. BARBEUIACEAE

by

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Field images by Christopher Davidson

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Cover image: *Barbeuia madagascariensis* © Christopher Davidson

SUMMARY

Barbeuiaceae is endemic to Madagascar and contains one species in one genus. The genus was originally described as an *insertae sedis*, and the species *Barbeuia madagascariensis*, was described later in Elaeocarpaceae and then treated as Phytolaccaceae for most of its history. Molecular studies found the genus to be placed in Caryophyllales where it formed an independent lineage. Diagnostic macro-morphological characters for the family are: glabrous scandent shrubs, leaves blackening when drying, stipules absent, flowers bisexual, perianth 1-whorled, free, imbricate and green, stamens many and fruit a loculicidal capsule with 1–2 seeds. Successive cambia are present in the wood, vessels are dimorphic in diameter, axial parenchyma is vasicentric and rays are multiseriate. Pollen grains are subprolate, pantoaperturate and with microechinate ornamentation. The sole species in the family is typified, illustrated and is accompanied by a detailed description including data on its habitat, known herbarium specimens at major herbaria and additional observations.

BARBEUIACEAE Nakai (1942: 105)

Glabrous scandent shrubs. Leaves simple, alternate, margins entire, venation pinnate, petiolate, articulated at base, **blackening when drying**; stipules **absent**. *Inflorescences* axillary solitary flowers or fascicles; pedicels long, smooth and slender; bracteate. *Flowers* **bisexual**, actinomorphic. *Perianth* **1-whorled**, 4-5, free, imbricate, unequal, persistent, apex rounded; green. *Stamens* **many**, filaments free from each other and perianth, inserted on an annular disc, white; anthers subbasifixed, bilocular, introrse, dehiscent by longitudinal slits, black. *Ovary* superior; carpels 2, fused; bilocular; ovule 1 per locule; placentation basal; style thick, white to pale-pink; stigmas 2, flattened. *Fruit* a **loculicidal capsule**. *Seeds* 1-2, aril partly enclosing seed, endospermic; embryo curved.

The family contains one genus and one species: *Barbeuia madagascariensis* Steud.

Distribution – Endemic to eastern Madagascar (Figure 1).

Classification – The genus was originally described as an *incertae sedis* and 34 years later the species was included in Elaeocarpaceae. For many years the genus was placed in Phytolaccaceae subfamily Barbeuioideae but its position as an independent lineage from Phytolaccaceae has been supported by several molecular phylogenetic studies (e.g. Cuénoud *et al.*, 2002; Hilu *et al.*, 2003; Schäferhoff *et al.*, 2009; Brockington *et al.*, 2009, 2011).

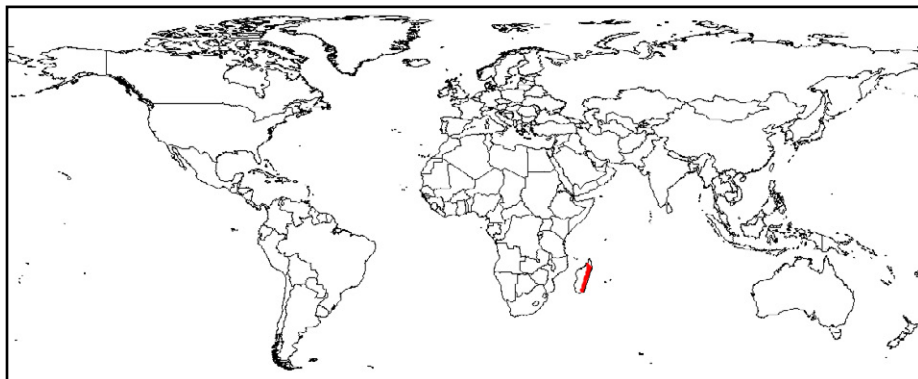


Figure 1: Global distribution of Barbeuiaceae (highlighted in red).

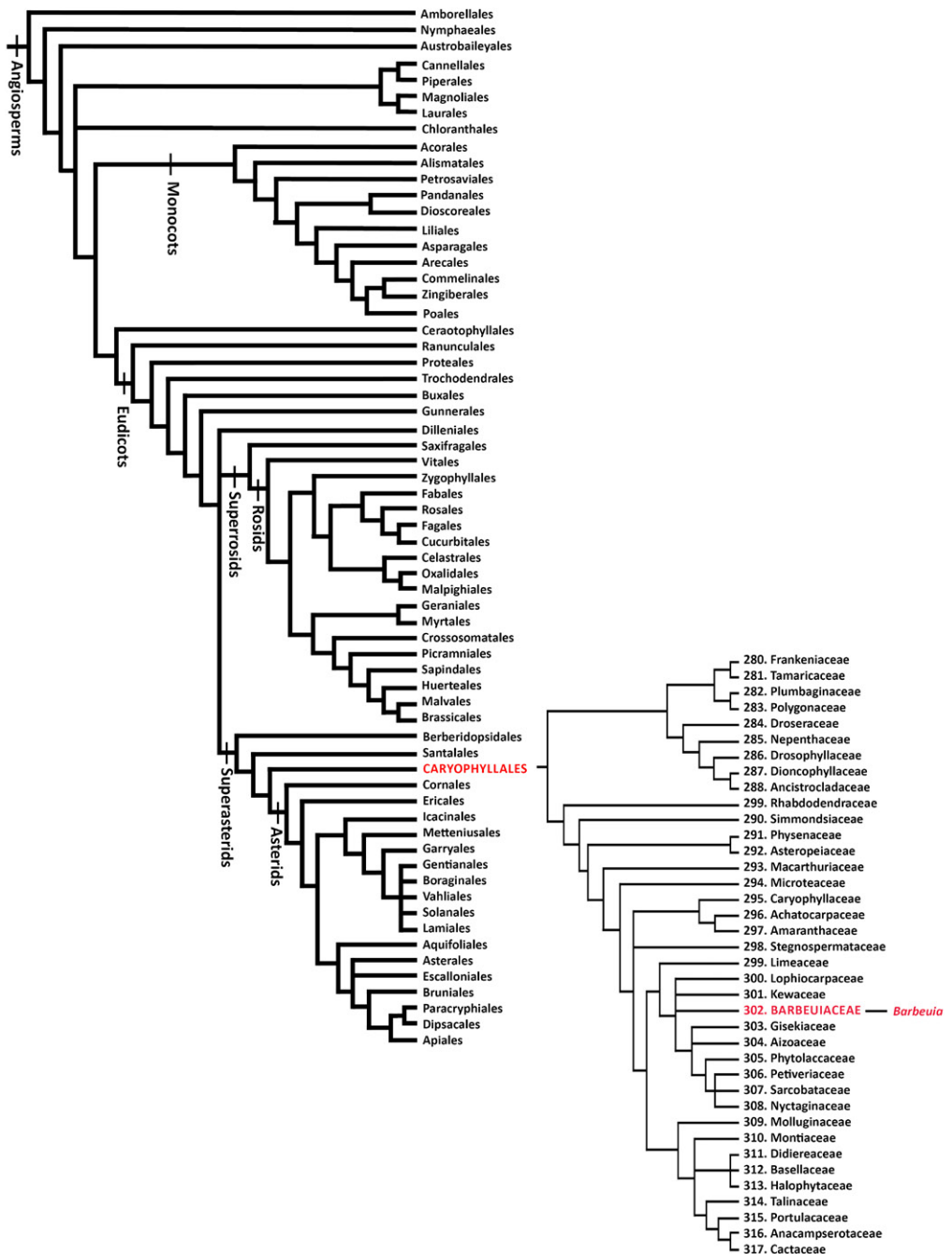


Figure 2: Classification of Barbeuiaceae showing the order and generic rank relevant to the family. Adapted from APG IV (2016) and Byng *et al.* (2018).



Figure 5: Images of living *Barbeuia madagascariensis*. A, climbing stem; B, habit; C, close-up of stems and leaves; D, inflorescence with buds and open flowers; E, close-up of flowers. © Christopher Davidson.

Table 1 continued

Fianarantsoa	Vatovavy-Fitovinany	About 15 km E of Iandiana along National Route 45.	Rogers, Z.S. <i>et al.</i>	1242	15 January 2009	MO, P, TAN, WAG	538	Fl
Fianarantsoa	Atsimo-Atsinanana	Vangaindrano	Scott Elliot, G.F.	2247	6 March 1890	K		Fl
Fianarantsoa	Vatovavy-Fitovinany	Ambahy	Koopman, M. <i>et al.</i>	158	7 December 2002	MO, P	5	Fl
Fianarantsoa	Vatovavy-Fitovinany	Ifanadiana	Phillipson, P.B. <i>et al.</i>	6105	11 January 2009	MO, TAN	570	Sterile
Fianarantsoa	Vatovavy-Fitovinany	Manarjary	Geay, F.	7850	March-April.1909	P		Fl
Fianarantsoa	Vatovavy-Fitovinany	Manarjary	Geay, F.	7851	March-April.1910	P		Fl
Fianarantsoa	Vatovavy-Fitovinany	Manarjary	Geay, F.	7856	March-April.1911	P		Fl
Fianarantsoa	Vatovavy-Fitovinany	Manarjary	Geay, F.	8046	March-April.1912	P		Fr
Fianarantsoa	Vatovavy-Fitovinany	Near Manakara	Beauj, P.	526	1994	P		Fl
Mahajanga	Sofia	Ankaizina	Perrier de la Bathie, H.	2358	01 October 1908	P	1500	Sterile
Toamasina	Alaotra-Mangoro	Anosibe an'Ala Ambatofotsy	Razakamalala, R. <i>et al.</i>	5839	14 October 2010	MO, P, TAN	1193	Sterile
Toamasina	Analanjiroro	Antongil Bay	D' Antongil	s.n.	November 1906	L		Fl
Toamasina	Analanjiroro	Zahamena AP	Ratovoson, F. <i>et al.</i>	270	11 August 2000	CNARP, MO, P, TEF	650	Fr
Toamasina	Analanjiroro	Soanierano Ivongo	Service des Eaux et Forêts	2351	27 December 1949	P	0-50	Fl
Toamasina	Analanjiroro	Soanierano Ivongo	Service des Eaux et Forêts	2455	27 December 1949	P	0-50	Fr
Toamasina	Atsinanana	Ambila-Lemaitso	Keating, R.C. & Miller, J.S.	2250	14 November 1989	K, MO, P, WAG	5	Fl
Toamasina	Atsinanana	Ambila-Lemaitso	Lowry II, P.P.	4537A	26 June 1992	MO	20	Fr

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I would like to thank the curators of BM, K, L, P and WAG for access to their collections. Also, I thank Christopher Davidson and Sherwin Carlquist for permission to use their images and Kanchi Gandhi for his advice on typification. Lastly, I thank two reviewers for their comments.

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Himantandraceae	Menispermaceae	Philesiaceae	Schlegeliaceae
Huaceae	Menyanthaceae	Philydraceae	Schoepfiaceae
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This flora treatment is the most comprehensive account ever produced for the Barbeuiaceae family. The family is endemic to Madagascar and contains one species in one genus. An overview of the family is provided with notes on distribution, classification, wood anatomy and pollen morphology. The sole species in the family is typified, illustrated and comes with a description including data on its habitat, known herbarium specimens at major herbaria, distribution map and additional observations.

