

Abrahamia ditimena

Objektyp: **Chapter**

Zeitschrift: **Boissiera : mémoires de botanique systématique**

Band (Jahr): **71 (2017)**

PDF erstellt am: **21.07.2024**

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8. *Abrahamia ditimena* (H. Perrier) Randrian. & Lowry, **comb. nova** (Fig. 7).

≡ *Protorhus ditimena* H. Perrier in Mém. Mus. Natl. Hist. Nat. 18: 263. 1944.

Lectotypus (designated here): **MADAGASCAR. Prov. Mahajanga:** forêt entre Andilamena et Mandritsara, c. 900 m, IX.1922, fl., *Perrier de la Bâthie 15051* (P [P00722640]!); isolecto-: P [P06775371]!. **Syntypi:** **MADAGASCAR. Prov. Toamasina:** Périnet [Analamazaotra], [18°56'S 48°26'E], X.1925, fl., *Louvel 4* (P [P06168986]!); Analamazaotra, [18°56'S 48°26'E], 800 m, XII.1932, fl., *Perrier de la Bâthie 6403* (P [P06775208, P06775370]!), TAN, US-2494672 image seen); *ibid. loco*, [18°56'S 48°26'E], 800 m, s.d., fl., *Perrier de la Bâthie 10180* (P [P06775219, P06775375]!).

= *Protorhus fulva* Engl. in Bot. Jahrb. Syst. 1: 421. 1881. **Typus:** **MADAGASCAR:** *sine loco*, s.d., *Chapelier s.n.* (holo-: P, not found).

= *Protorhus sericea* var. *opaca* Lecomte, Madagascar Bois Analamazaotra: 74. 1922. **Lectotypus** (designated here): **MADAGASCAR. Prov. Toamasina:** forêt d'Analamazaotra, [18°56'S 48°26'E], s.d., fr., *Thouvenot 146* (P [P06169004]!); isolecto-: P [P06169003, P06169005]!, TAN [TAN002001]!).

Description *Trees* 3-30 m tall, 8-35 cm DBH, bark with white milky latex turning pinkish; young twigs glabrous, with lenticels, waxy. *Leaves* subopposite; blades obovate to oblanceolate or narrowly elliptic, 2.5-12 × 1.5-5 cm, coriaceous, apex emarginate or retuse, rarely rounded, margin entire, base acute to cuneate, adaxial surface glabrous, abaxial surface very minutely and sparsely pubescent when young, glabrescent, venation craspedodromous, midvein prominent abaxially, secondary veins 20-33 pairs, 1-3 mm apart, prominent on both surfaces, tertiary veins raised on both surface; petiole (5-)7-20 mm long, canaliculate on adaxial surface, glabrous or very lightly pubescent. *Inflorescence* axillary or terminal, a panicle, 2-10 cm long, axes terete or flattened, tomentose or glabrescent; bracts triangular, deltate or narrowly deltate to narrowly triangular, 1-2.5 × 1-1.5 mm, adaxial surface glabrous, abaxial surface pubescent. *Male and female flowers* 4- or 5-merous; pedicel c. 0.3 -0.4 mm long, scabrous; calyx lobes deltate, c. 1 × 1-1.2 mm, valvate, adaxial surface glabrous, abaxial surface strigose; corolla lobes ovate, 2.5-3 × 1.5-2 mm, imbricate, adaxial surface glabrous, abaxial surface pubescent; stamens 4 or 5. *Male flowers* with filaments 1-2 mm long, glabrous, white, anthers 0.5-0.8 mm long, obloid to slightly ovoid, yellow, glabrous; disk 1-1.2 mm in diam., glabrous; ovary rudimentary. *Female flowers* with vestigial stamens, filaments c. 1 mm long, glabrous, white, anthers 0.2-0.3 mm long, ovoid to sub-globose, sterile, yellow, glabrous; disk c. 1.5 mm in diam., glabrous; ovary widely to very widely ovoid, 1 × 1 mm, pubescent;

style shortly trifid, subapically inserted, 0.2-0.3 mm long, glabrous, stigmas capitate. Fruits 2-3 × 1.4-1.6 cm, usually globose or ellipsoid to obovoid, slightly asymmetrical, surface velutinous, with longitudinal striations.

Vernacular names “Ditimena”, “Hazombarorana”, “Sandramivavy”.

Distribution, ecology and phenology *Abrahamia ditimena* is the most widespread member of the genus (Map 3). It has been found in diverse habitats, from the very humid (eastern rainforests or in the Sambirano region) to dry forests (central forests and part of the western slopes), and on a range of substrates, from sand to laterite or on soils derived from gneiss or granite. It flowers between October and December, and its fruits mature in April and May.

Conservation status With an EOO of 376,143 km², a minimum AOO of 336 km², and more than 100 recorded localities, *A. ditimena* is assigned a preliminary conservation assessment of “Least Concern” [LC] using the IUCN Red List Categories and Criteria (IUCN, 2012).

Notes Among the species of *Abrahamia* with velutinous mature fruits, *A. ditimena* most closely resembles *A. sericea*, but differs strikingly by its very coriaceous (vs subcoriaceous) leaves and smaller number of secondary veins (20-33 vs 40-70).

Among the syntypes of *Protorhus ditimena*, we have selected *Perrier de la Bâthie 15051* as the lectotype because it has more fully developed inflorescences than the three other collections assigned to *Abrahamia ditimena* (viz. *Perrier de la Bâthie 6403* and *10180*, and *Louvel 4*). Two additional syntypes (*Louvel 112* and *Ursch 195*) are referable to *A. thouvenotii*.

The Paris herbarium contains three syntypes of *Protorhus sericea* var. *opaca*, from which we have chosen the sheet bearing the original label as the lectotype.

Additional material examined **MADAGASCAR. Prov. Antananarivo:** Anjozorobe, forêt NNE d’Andranomay (13 km SE d’Anjozorobe), 18°28’38”S 47°57’18”E, 1340-1400 m, 18-20.XII.1996, fl., *Ralimanana et al. 44* (MO, P, TAN); Manjakandriana, Mandraka, [18°53’S 47°55’E], 28.V.1950, fr., *Service Forestier 1897* (P); Ankazobe, Ambohitantely, [18°09’S 47°18’E], 1600 m, VI.1957, fr., *Service Forestier 18012* (P, TEF); forêt relique, PK 169, Maridaza-Ankazobe, [18°19’S 47°06’E], 1475 m, 30.III.1961, fr., *Service Forestier 19881* (G, MO, P, TEF). **Prov. Antsiranana:** Bemanevika, Bandrakorony, 13°45’04”S 47°58’51”E, 99 m, 24.I.2009, fr., *Bernard et al. 1341* (MO, P, TAN); Andapa, descente de l’Anjanaharibe, 1100 m, 26.XII.1950, bud, *Cours 3877* (P, TAN); Anjanaharibe, W d’Andapa, [14°40’S 49°31’E], 1200-1400 m, 10.XII.1950-3.I.1951, bud, *Humbert 24600* (MO, P); Vohémar, Daraina, forêt de Binara, 13°15’S 49°37’E, 1010 m, 28.XI.2006, bud, *Gautier et al. 4936* (G, MO, P, TAN); Sambava, Marojejy NP, 14°26’S 49°45’E, 700-1000 m, 2.X.1994, fr., *Lewis et al. 1248* (G, MO, P, TAN); SW Andapa, SW edge of Anjanaharibe-Sud reserve, 14°48’15”S 49°26’45”E, 950 m, 8.VIII.1997, y. fr., *McPherson 17302* (G, K, MO, NY, P, TAN, WAG); PN Marojejy, 11 km NW Manantenina, 14°16’00”S 49°44’30”E, 1075 m, 28.X.1996,

fr., *Rakotomalaza et al.* 806 (G, MO, P, TAN); Ambanja, Bandrakorony, 13°45'36"S 47°59'58"E, 140 m, 22.I.2009, fr., *Rakotovao et al.* 4263 (MO, P, TAN); SW d'Andapa, Anjanaharibe-Sud RS, Mandritsarakely, 14°43'10"S 49°27'12"E, 1700 m, 14.II.1995, fr., *Ravelonarivo et al.* 625 (MO, P, TAN); Andapa, Anjanaharibe-Sud RS, env. d'Ampiferantany, 14°47'45"S 49°27'54"E, 1161 m, 22.V.1995, fr., *Ravelonarivo et al.* 807 (MO, P, TAN); Doany, Anjialavahely, Ankijandambo, 14°14'58"S 49°26'19"E, 1546 m, 7.III.2006, fl., *Ravelonarivo et al.* 1737 (G, K, MO, P, TAN); Anjialavabe, Ankiakabe, 14°10'47"S 49°22'01"E, 1567 m, 20.II.2007, fr., *Ravelonarivo et al.* 2161 (G, MO, P, TAN); Anjanaharibe-Sud RS, au S du campement à Mandritsarahely, 14°46'S 49°30'E, 985 m, 10.VII.1996, y. fr., *Razafimandimbison et al.* 236 (MO, P, TAN); Ambanja, Ankaraha, canton Marovato, [13°53'S 48°15'E], 24.X.1950, y. fr., *Réserves Naturelles 2134* (P, TAN); Anjanaharibe RS, [14°36'S 49°25'E], 1100 m, 26.XII.1950, fl., *Service Forestier 940* (G, P, TEF). **Prov. Fianarantsoa:** Andringitra RN, camp II, 22°13'40"S 47°00'13"E, 810 m, 22-29.XII.1993, fr., *Lewis et al.* 881 (MO, P, TAN); *ibid. loco*, 22°13'40"S 47°00'13"E, 810 m, 22-29.XII.1993, fl., *Lewis et al.* 912 (G, K, MO, NY, P, TAN); Ranomafana PN, Vatoharanana, 21°16'S 47°26'E, 100-1100 m, 18-31.I.1993, fl., *Malcomber et al.* 2002 (G, K, MO, NY, P, TAN); *ibid. loco*, 21°16'S 47°26'E, 1000-1100 m, 18-31.I.1993, ster., *Malcomber 2051* (MO, P, TAN); Andringitra RN, Ivohibe, de part et d'autre du fleuve Iatara, 22°13'20"S 47°01'29"E, 720 m, 12-14.XII.1994, fl., *Rakotovao 303* (G, MO, P, TAN); Befotaka, Forêt d'Andranomangatsy, Parc National de Befotaka, 23°48'54" 49°59'56"E, 2.VI.2012, ster., *Rapanarivo et al.* 665 (BR, K, MO, P, TAN); Farafangana, Ivongo, [22°07'S 46°49'E], 23.IV.1955, fr., *Réserves Naturelles 7178* (P, TEF); Ampamaherana, [21°29'15"S 47°19'20"E], 15.XII.1949, fl., *Service Forestier 1254* (P, TAN, TEF); *ibid. loco*, [21°29'15"S 47°19'20"E], 5.IV.1949, fr., *Service Forestier 2018* (G, MO, P, TAN); Levotsibe, Ft. Carnot, [21°51'S 47°26'E], 23.V.1952, fr., *Service Forestier 5453* (MO, P); Midongy du Sud, [23°35'S 47°01'E], 30.VII.1955, fr., *Service Forestier 13931* (P, TEF); Ifanadiana, Ranomafana, [21°02'S 47°18'E], 13.VI.1955, y. fr., *Service Forestier 14243* (P, TEF); Ft. Carnot, Andrambovato-Tolongoina, [21°31'S 47°25'E], 1951, ster., *Service Forestier 36B-R-230* (P, TEF). **Prov. Mahajanga:** Befandriana Nord, Antsakabary, Andapanomby, Makira NW, 15°21'17"S 49°06'25"E, 25.IX.2007, fr., *Bernard et al.* 455 (G, K, MO, P, TAN); Mandritsara, Makira, Ambolotsangana, 15°31'S 49°05'E, 1169 m, 26.IV.2007, fr., *Lehavana et al.* 451 (MO, P, TAN); *ibid. loco*, 15°30'S 49°05'E, 1301 m, 28.IV.2007, fr., *Lehavana et al.* 512 (G, MO, P, TAN); Mangindrano, forêt d'Antsahivo, 14°14'54"S 49°00'45"E, 1365 m, 1.XII.2005, fl., *Randrianarivelo et al.* 480 (MO, P, TAN); massif de l'Ambatomirahavavy, E de Mangindrano, [14°28'30"S 48°46'00"E], 1700 m, 4.II.1951, fr., *Service Forestier 977* (MO, P, TEF). **Prov. Toamasina:** Moramanga, Ambatovy, 18°51'40"S 48°19'42"E, 1180 m, 21.XII.2004, fl., *Andriamahefarivo et al.* 89 (MO, P, TAN); *ibid. loco*, 18°49'21"S 48°20'07", fr., *Andriatsiferana et al.* 2528 (G, MO, P, TAN); *ibid. loco*, 18°49'27"S 48°20'13"E, fr., *Andriatsiferana 2551* (MO, TAN); Rantabe, Beanana, 15°43'47"S 49°27'16"E, 175 m, 27.II.2002, fr., *Antilahimena et al.* 949 (MO, P, TAN); Mahavelona, Masoala PN, Ambohitsitondroina, 15°26'14"S

49°57'28"E, 1158 m, 6.X.2003, fr., *Antilahimena* 2121 (G, K, MO, NY, P, TAN); Antsirabe-Sahatany, Anjahely, 15°24'19"S 49°30'38"E, 360 m, 28.VI.2004, fr., *Antilahimena* 2594 (MO, P, TAN); Ambinanitelo, Andampy forest, 15°19'03"S 49°24'06"E, 800 m, 1.IX.2004, fr., *Antilahimena* 2712 (G, MO, P, TAN); Maroantsetra, Maimborondro forest, 15°19'23"S 49°23'52"E, 1106 m, 6.IX.2004, fr., *Antilahimena* 2797 (MO, P, TAN); Andasibe, Ambatovy forest, 18°51'00"S 48°19'16"E, 1097 m, 14.I.2005, y. fr., *Antilahimena et al.* 3145 (G, K, MO, P, TAN); *ibid. loco*, 18°49'19"S 48°20'08"E, 1094 m, 3.II.2005, fr., *Antilahimena et al.* 3300 (MO, P, TAN); *ibid. loco*, 18°51'06"S 48°18'32"E, 1105 m, 4.III.2005, fr., *Antilahimena* 3594 (G, K, MO, P, TAN); *ibid. loco*, 18°52'08"S 48°19'09"E, 1080 m, 9.III.2005, fr., *Antilahimena et al.* 3649 (G, K, MO, P, TAN); *ibid. loco*, 18°50'53"S 48°17'47"E, 1020 m, 10.III.2005, fr., *Antilahimena et al.* 3678 (G, K, MO, P, TAN); *ibid. loco*, 18°52'06"S 48°16'35"E, 1053 m, 11.XI.2005, y. fr., *Antilahimena et al.* 4205 (G, K, MO, P, TAN); *ibid. loco*, 18°51'34"S 48°18'05"E, 1137 m, 1.XII.2005, fl., *Antilahimena & Razafindrabe* 4297 (G, P); *ibid. loco*, 18°50'22"S 48°18'32"E, 1183 m, 19.XII.2005, fl., *Antilahimena* 4485 (G, K, MO, P, TAN); *ibid. loco*, 18°48'29"S 48°20'20"E, 1080 m, 21.XII.2005, fl., *Antilahimena* 4505 (G, K, MO, P, TAN); *ibid. loco*, 18°50'22"S 48°17'52"E, 1136 m, 11.XII.2006, fl., *Antilahimena* 5121 (G, MO, P, TAN); *ibid. loco*, 18°51'40"S 48°18'01"E, 1116 m, 17.V.2008, fr., *Antilahimena* 6180 (G, MO, P, TAN); *ibid. loco*, 18°50'09"S 48°19'24"E, 1106 m, 12.III.2009, fr., *Antilahimena* 7017 (G, K, MO, P, TAN); *ibid. loco*, 18°50'21"S 48°18'15"E, 1090 m, 17.V.2010, fr., *Bernard* 1572 (MO, P, TAN); Ambatondrazaka, Ankaraoaka, N de la route de Nickerville, 1200 m, 29.XII.1944, bud, *Cours* 2114 (P [2 sheets], TAN); sommet de l'Analavorikely, c. 1200 m, 29.XII.1944, bud, *Cours* 2135 [= *Herb. Station Agric. Alaotra* 2135] (MO, P [2 sheets], TAN); Périnet [Analamazaotra], [18°56'S 48°26'E], s.d., fr., *Descoings s.n.* (MO); Masoala PN, E slope of Ambohitsitondroina Mahavelona, 15°26'00"S 49°57'34"E, 1125 m, 24.II.2003, fl., *Lowry et al.* 6166 (G, K, MO, NY, P, TAN); Mantadia, beyond the graphite mine, 18°55'S 48°25'E, 1200 m, 8.XI.1994, fl., *McPherson et al.* 16546 (G, MO, P, TAN); Ambatovy, 18°51'25"S 48°17'50"E, 1050 m, 27.II.1998, fr., *McPherson* 17481 (G, K, MO, NY, P, TAN, WAG); *ibid. loco*, 18°50'59"S 48°18'32"E, 1115 m, s.d., fr., *Miandrimanana* 278 (MO, TAN); Masoala, Ambanizana, 15°41'S 49°58'E, 50-200 m, 21-22.VII.1994, fr., *Rabe* 110 (G, MO, P, TAN); Ambatovy, 18°51'07"S 48°18'47"E, 1100 m, 30.I.1997, fr., *Rakotomalaza et al.* 1033 (MO [2 sheets], P, TAN); *ibid. loco*, 18°51'34"S 48°18'25"E, 3.III.1997, fr., *Rakotomalaza et al.* 1213 (MO, P, TAN); *ibid. loco*, 18°51'S 48°18'E, 1121 m, 7.III.1997, fr., *Rakotomalaza et al.* 1266 (MO, P, TAN); *ibid. loco*, 18°49'47"S 48°18'48"E, 1160 m, 16.V.1997, fr., *Rakotomalaza* 1330 (MO, P, TAN); *ibid. loco*, *Rakotomalaza* 1331 (MO, P, TAN); Zahamena PN, Antanandava, 17°29'30"S 48°44'48"E, 900 m, 13.VII.2000, fr., *Rakotondrajaona et al.* 130 (MO, P, TAN); Zahamena PN, Ambodimangavalo, Moango, 17°33'32"S 48°53'55"E, 800 m, 4.V.2003, fr., *Rakotondrajaona et al.* 276 (CNARP, G, K, MO, P, TEF); Ambohibary, Ampitambe, Ambatovy, 18°51'08"S 48°17'43"E, 1106 m, 15.II.2005, fr., *Rakotovo* *et al.* 1174 (G, MO, P, TAN); Andasibe, Menalamba, Ambatovy, 18°49'33"S



Fig. 7. *Abrahamia ditimena* (H. Perrier) Randrian. & Lowry. **A.** Upper and lower leaf surfaces, young fruits, from side [Plunkett et al. 2387]; **B.** Fruits, from above [Rakotovao et al. 4263].

Photos: A: P. Lowry; B: C. Rakotovao

48°20'03"E, 1065 m, 1.IV.2005, fr., *Rakotovao et al.* 1727 (G, MO, P, TAN); Morarano Gara, forêt de Bevetraka, 18°47'10"S 48°22'09"E, 974 m, 23.IV.2012, fr., *Rakotovao* 5758 (G, MO, P, TAN); Ambohibary, Ambatovy, Behontsa, 18°52'35"S 48°19'54"E, 987 m, 20.XII.2011, fl., *Ramahenina et al.* 71 (G, K, MO, P, TAN); *ibid. loco*, 18°49'15"S 48°20'00"E, 1100 m, 15.V.1999, fr., *Ranaivojaona* 236 (G, MO, P, TAN); Vatomandry, Ambalabe, Ambinanindrano II, 19°10'09"S 48°34'40"E, 598 m, 11.III.2005, fr., *Ranaivojaona et al.* 1157 (G, K, MO, P, TAN); Analamazaotra RS, SE of entry of the Reserve, [18°56'S 48°26'E], 960 m, 15.VII.1996, fr., *A. Randrianasolo* 402 (MO, P, TAN); *ibid. loco*, ster., *A. Randrianasolo* 403 (MO, TAN); *ibid. loco*, *A. Randrianasolo* 409 (MO, TAN); *ibid. loco*, 950 m, 16.VII.1996, fr., *A. Randrianasolo* 410 (MO, P, TAN); *ibid. loco*, *A. Randrianasolo* 417 (MO, P, TAN); *ibid. loco*, 950 m, 18.VII.1996, ster., *A. Randrianasolo* 436 (MO, P, TAN); *ibid. loco*, *A. Randrianasolo* 437 (MO, P, TAN); Malompy, W Analamazaotra RS, 900 m, 28.X.1996, bud, *A. Randrianasolo* 513 (MO, P, TAN); Analamazaotra RS, toward "carrière de sable", 960 m, 28.X.1996, fr., *A. Randrianasolo* 514 (MO, P, TAN); Ambalabe, W of Foara Toby, 19°10'02"S 48°34'24"E, 650 m, 15.III.2005, fr., *A. Randrianasolo et al.* 1017 (G, MO, P, TAN); Zahamena PN, Ambodimangavolo, Ambatoharanana, 17°33'57"S 48°53'58"E, 740 m, 27.X.2000, fr., *Randrianjanaka et al.* 585 (MO, P, TAN); Didy, Antsevabe, forêt de Sahananto, 17°59'18"S 48°35'31"E, 1236 m, 13.XII.2005, bud, *Rasoafaranaivo* 92 (G, MO, P, TAN); Andasibe, Andasifahatelo, Ambatoaranana, 18°47'59"S 48°24'42"E, 1081 m, 25.IV.2012, fr., *Rasoazanany et al.* 128 (G, MO, P, TAN); Ambanizana, Anjahana, 15°38'48"S 49°57'57"E, 230 m, 21-25.V.1999, fr., *Ratovoson* 91 (G, MO, P, TAN, US); Zahamena PN, Ambodimangavolo, 17°39'07"S 48°58'14"E, 11.VIII.2000, fr., *Ratovoson et al.* 268 (MO, P, TAN); *ibid. loco*, 17°30'S 48°44'E, 975 m, 25.IX.2001, fr., *Ratovoson et al.* 514 (G, CNARP, MO, P, TEF); Ambatovy, Analamay, 18°50'50"S 48°18'28"E, 1113 m, 10.II.2005, fr., *Razafindraibe et al.* 94 (G, K, MO, P, TAN); Anosibeana'ala, relique forestière d'Anosibeambo, 19°26'12"S 48°12'15"E, 747 m, 8.IV.2001, fr., *Razafitsalama et al.* 52 (G, MO, P, TAN, TEF, US); Lakato, Ambodigavo, 19°07'50"S 48°24'03"E, 829 m, 31.V.2007, fr., *Razanatsima et al.* 253 (G, K, MO, NY, P, TAN); Sahamaloto, Périnet, [18°56'S 48°22'E], 3.VI.1950, y. fr., *Service Forestier* 1407 (P, TAN, TEF); *ibid. loco*, [18°56'S 48°26'E], 3.IV.1951, fr., *Service Forestier* 3313 (P, TAN, TEF); Andramarolasy, Moramanga, [18°36'S 48°01'E], 30.IV.1952, fr., *Service Forestier* 5069 (G, K, MO, NY, P); massif de l'Ambohitsitondroina de Mahalevona, [15°25'S 49°58'E], 1100 m, 5.XII.1953, fr., *Service Forestier* 8722 (MO, P, TEF); massif de Beajanda, [15°16'S 50°04'E], 1000 m, 31.XII.1953, fr., *Service Forestier* 8832 (MO, P, TEF); *ibid. loco*, 1100 m, 1.I.1954, fl., *Service Forestier* 8837 (P, TEF); Fénérive-Est, Tampolo, [17°17'00"S 49°23'30"E], 22.IV.1954, fr., *Service Forestier* 10302 (P, TEF); *ibid. loco*, 3.I.1955, fl., *Service Forestier* 12496 (P, TEF); Sahavalanina-Antenina, Fénérive, [17°02'S 49°24'E], 25.IV.1955, fr., *Service Forestier* 15635 (G, MO, P, TEF); Amboatavy, Manjakanahiana, [18°47'S 47°47'E], 7.V.1955, fr., *Service Forestier* 15865 (P, TEF); Ambohimiarina, [19°18'S 48°21'E], 18.IV.1957, fr., *Service Forestier* 16955 (P); Analamazaotra, Périnet, [18°56'S 48°26'E], 800 m, 9.IV.1958, fr., *Service*

Forestier 17957 (P); *ibid. loco*, [18°56'S 48°26'E], 15.IV.1958, fr., *Service Forestier 19026* (P, TEF); *ibid. loco*, [18°49'00"S 48°21'30"E], 8.VIII.1962, ster., *Service Forestier 21240* (MO, P); Koubaville, entre Moramanga et Anosibe, [19°16'00"S 48°13'30"E], 23.XII.1965, fl., *Service Forestier 24402* (MO, P, TEF); Analamazaotra, Périnet, [18°56'S 48°26'E], II.1966, fl., *Service Forestier 25718* (P); *ibid. loco*, 25.VI.1966, ster., *Service Forestier 25936* (P); Nangaranana, Canton de Marovoay, [18°47'S 48°15'E], II.1970, ster., *Service Forestier 26944* (P, TEF); Périnet, [18°56'S 48°26'E], V.1971, ster., *Service Forestier 30096* (P, TEF); *ibid. loco*, [18°56'S 48°26'E], 13.II.1951, ster., *Service Forestier 5B-R-172* (P, TEF); *ibid. loco*, 29.IX.1952, ster., *Service Forestier 167B-R-172* (P, TEF); Masoala Peninsula, S of Ambanizana, 15°40'24"S 49°57'51"E, 110-260 m, 18.XII.1994, ster., *Vasey & Behasy 202* (MO); *ibid. loco*, *Vasey & Behasy 228* (MO); 10 km N of Fénérive-Est, Tampolo STF, 17°17'S 49°25'E, 10 m, 12.V.1991, fr., *Zarucchi et al. 7388* (MO, P, TAN). **Prov. Toliara:** Amboasary, entre Andohahela et l'Elakelaka, 600-800 m, I-II.1934, y. fr., *Humbert 14048* (P); Andohahela PN, plot d'Itrotro, N d'Eminiminy, 24°41'S 46°48'E, 400 m, 28.III.1996, ster., *Laha et al. 19* (MO, P, TAN); *ibid. loco*, *Laha et al. 59* (MO, P, TAN); Andohahela PN, Andranomitily, plot permanent n° 2, 24°36'18"S 46°44'25"E, 800 m, 15.V.2001, fr., *Randriampampionona 961* (G, K, MO, NY, P, TAN); Ivorona, ridge above right bank of Andriambe Creek above village, 24°49'11"S 46°55'31"E, 628 m, 9.XII.2009, y. fr., *Plunkett et al. 2387* (K, MO, NY, P, TAN); Andohahela PN, Emalio, Andranolava, 24°41'S 46°45'E, 28.VIII.1996, ster., *Randriampampionona 1319* (MO, P, TAN); Manja, Vondrove, forêt galerie bordant la rivière Mangoky, 21°48'03"S 44°10'43"E, 86 m, 20.IX.2007, ster., *Rasoafaranaivo et al. 282* (MO, P, TAN); Ranomafana Sud, forêt de Tsitongambarika, 24°35'44"S 47°02'43"E, 846 m, 23.XI.2009, fl. & bud, *Razakamalala 4854* (G, K, MO, P, TAN).