

Abrahamia minutifolia

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22. *Abrahamia minutifolia* Randrian. & Lowry, **spec. nova** (Fig. 20-21).

– *Protorhus ditimena* var. *minutifolia* H. Perrier in Mém. Mus. Natl. Hist. Nat. 18: 261. 1944 [nom. inval.].

Typus: MADAGASCAR. **Prov. Toamasina:** Rég. Alaotra-Mangoro, Moramanga, Analamazaotra RS, “carrière de sable”, [18°56'S 48°26'E], 900-950 m, 29.X.1996, fl., A. Randrianasolo 516 (holo-: MO-04895273!; iso-: G!, K!, P [P06169142]!, TAN [TAN002000]!).

Diagnosis *Abrahamia minutifolia* Randrian. & Lowry can be distinguished by having leaves that are smaller ($1-3 \times 0.9-1.8$ cm) than any other member of the genus and fruits that are among the smallest ($1-1.5 \times 0.5-0.8$ cm).

Description *Trees* 3.5-12 m tall, 11.9-40 cm DBH, bark with translucent latex; young twigs waxy, lenticellate, with short, red, appressed indument at the tip. *Leaves* subopposite; blades, obovate, $1.8-4 \times 0.9-1.8$ cm, subcoriaceous to coriaceous, apex emarginate, retuse, or rounded, margin entire, base acute, adaxial surface glabrous, abaxial surface with very sparse appressed reddish indument when young, glabrescent, venation craspedodromous, midvein prominent below, secondary veins 15-20 pairs, 0.5-2 mm apart, prominent on both surfaces, tertiary veins raised on both surfaces; petiole 3-8 mm long, canaliculate on adaxial surface, reddish pubescent when young, later glabrescent. *Inflorescence* axillary or terminal, a thyrse, 1-3 cm long, axes somehow flattened, with ferruginous indument. *Male and female flowers* 4- or 5-merous; pedicel 0.2-0.3 mm long, pubescent; calyx lobes deltate, 1×1 mm, imbricate, glabrous, persistent on fruit; corolla lobes ovate, $2-2.2 \times 1-1.5$ mm, imbricate, adaxial surface glabrous, abaxial surface pubescent; stamens 4 or 5. *Male flowers* with filaments 1-1.5 mm long, glabrous, white, anthers c. 0.8 mm long, obloid to slightly ovoid, yellow, glabrous; disk cupuliform, c. 1 mm in diam., glabrous; ovary rudimentary. *Female flowers* with filaments 0.3-0.5 mm long, glabrous to slightly pubescent, white, anthers c. 0.5 mm long, subglobose to ovoid, sterile, yellow, glabrous; disk c. 1.5 mm in diam., glabrous; ovary widely to very widely ovoid, c. 1.5×1 mm, pubescent, placentation subapical; style shortly trifid, subapically to apically inserted, 0.5 mm long, partly pubescent, stigmas capitate. *Fruits* $1-1.5 \times 0.5-0.8$ cm, ellipsoid, slightly asymmetrical, surface velutinous, with longitudinal striations.

Distribution, ecology and phenology

Abrahamia minutifolia has been collected primarily in premontane forest along Madagascar's eastern escarpment at an elevation of c. 900 m and in central high elevation forest at c. 1500 m, but it also occurs in humid forests in both the eastern and northwestern parts of the island (Map 7). It flowers between September and November, and fruits have been collected from November to April.

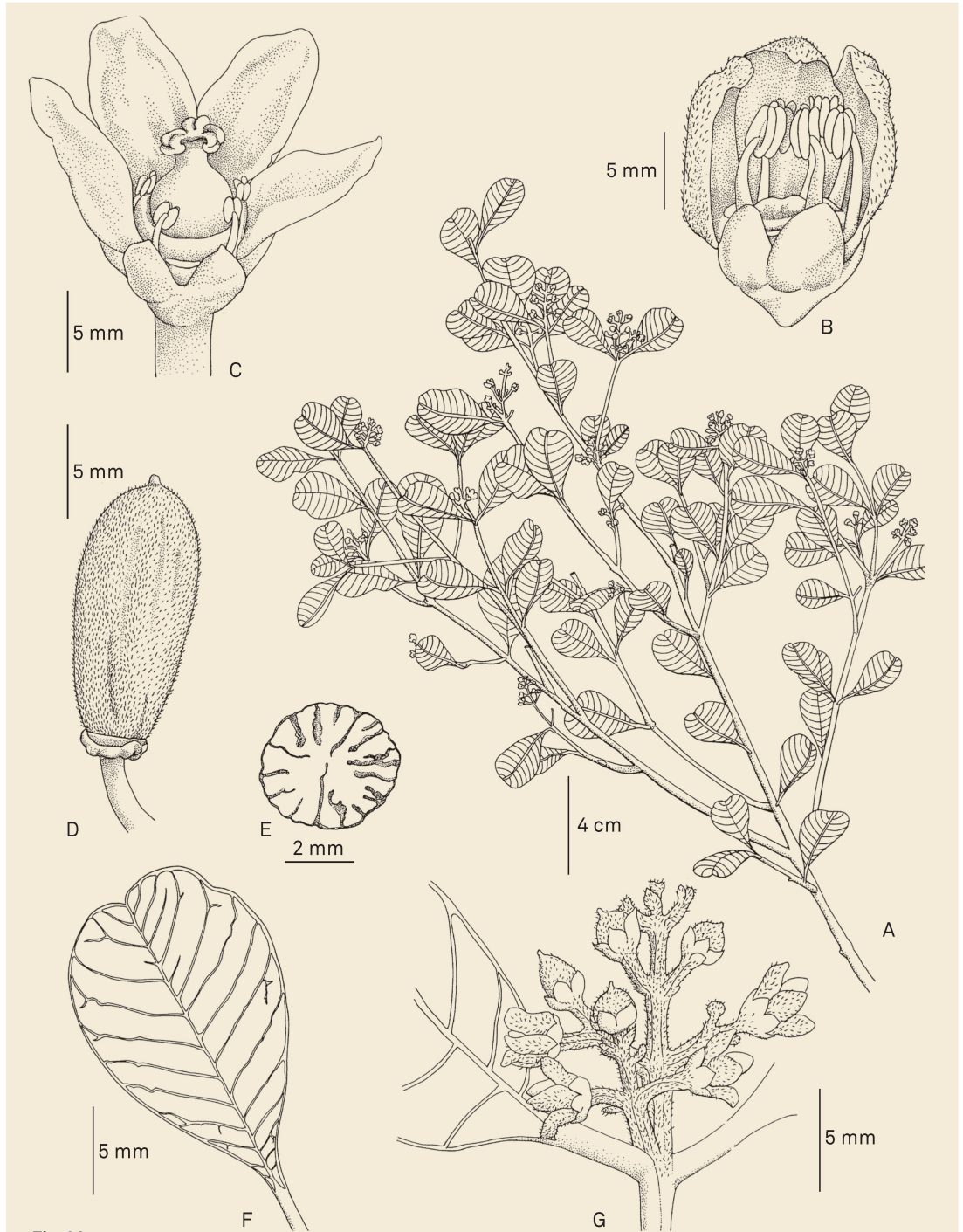


Fig. 20.
Abrahamia minutifolia Randrian. & Lowry.
A. Flowering branch; **B.** Detail of male flower; **C.** Detail of female flower; **D.** Fruit showing indument;
E. Cross section of fruit; **F.** Leaf (abaxial surface); **G.** Young infructescence.

[A, C, F: A. Randrianasolo 516, MO; B: Service Forestier 18400, MO; D-E, G: Service Forestier 7361 and 8417, P] Drawings: B. Alongi

Conservation status With an EOO of 117,262 km², a minimum AOO of 84 km², and 21 known localities, with subpopulations in at least 5 protected areas (Ambohitantely, Kalabenono, Masoala, Manongarivo, and Analamazaotra-Perinet), *A. minutifolia* is assigned a preliminary conservation status of “Least Concern” [LC] using the IUCN Red List Categories and Criteria (IUCN, 2012).

Notes *Abrahamia minutifolia* is part of a group of species, along with *A. delphinensis*, *A. ditimena*, *A. itremoensis*, *A. lenticellata* and *A. sericea*, that has velutinous fruits, but is distinguished by its thyriform (vs paniculate) inflorescence and smaller fruits (1-1.5 × 0.5-0.8 vs 2-3-2.5 × 1.2-1.4 cm in *A. delphinensis*, 2-3 × 1.4-1.6 cm in *A. ditimena*, 1.5-2.3 × 1.2-1.5 cm in *A. itremoensis*, 2-2.6 × 1.3-1.5 cm in *A. lenticellata* and 2-3 × 0.8-1.3 cm in *A. sericea*).

The name *Protorhus ditimena* var. *minutifolia*, published by PERRIER DE LA BATHIE (1944) on the basis of a fragmentary specimen (*Louvel 21*), is invalid because it lacked a Latin diagnosis, as required for all names published between 1 January 1935 and 31 December 2011 under Article 39.1 of the International Code of Nomenclature (MCNEILL et al., 2012). We have chosen to retain Perrier de la Bâthie's epithet, which aptly characterizes this taxon, by formally describing it as a new species.

Paratypes **MADAGASCAR. Prov. Antananarivo:** Ankazobe, Ambohitantely RS, 18°11'S 47°17'E, 1620 m, 14.I.1997, fl., *Randrianaivo et al.* 53 (G, K, MO, NY, P, TAN, WAG); forest E of Anjozorobe, E Antsahabe village, [18°22'S 47°47'E], 1400 m, 22.X.1996, fl., *A. Randrianasolo 508* (MO, P, TAN); Ambohitantely RS, 18°10'42"S 47°17'00"E, 1530 m, 23-24.XI.1993, fl., *Schatz et al.* 3565 (G, K, MO, P, TAN); *ibid. loco*, [18°09'S 47°14'E], V.1953, fr., *Service Forestier 7361* (P, TEF); *ibid. loco*, [18°08'S 47°16'E], 1600 m, IV.1953, fr., *Service Forestier 8417* (P, TEF); *ibid. loco*, 26.VII.1954, ster., *Service Forestier 11-R-282* (P, TEF); Poste forestier Manankazo, Ankazobe, [18°09'S 47°14'E], 22.VI.1955, fr., *Service Forestier 16814* (P, TEF). **Prov. Antsiranana:** Ambanja, Bekolosy, 14°02'S 48°18'E, 1200 m, 28.III.1996, fr., *Gautier & Be 2909* (G, MO, P, TAN, TEF); *ibid. loco*, 14°02'S 48°18'E, 1070 m, 23.IX.1996, fl., *Gautier et al.* 3123 (G, MO, P, TAN, TEF); Ambilobe, forêt de Kalabenono, 13°38'45"S 48°40'45"E, 934 m, 27.XI.2006, fr., *Callmander et al.* 631 (G, MO); Andapa, Doany, forêt d'Andramanalana, 14°23'02"S 49°21'36"E, 1280 m, IV.2006, fr., *Rakotovaio et al.* 3074 (G, MO, P, TAN); Andramilolo, SE Anjanaharibe, 14°19'43"S 49°18'08"E, 1412 m, 12.XI.2006, fl., *Razakamalala et al.* 2939 (G, MO, P, TAN). **Prov. Fianarantsoa:** Tolongoina, Andrambavato, 2 km S Tatamaly, 21°30'S 47°24'E, 1075 m, 13.X.2000, fl., *Randriatafika 142* (G, K, MO, P, TAN). **Prov. Toamasina:** Alaotra-Mangoro, Ambatovy, Analamay, 18°48'28"S 48°20'10"E, 1083 m, 2.XII.2005, fl., *Antilahimena et al.* 4316 (G, MO, P, TAN); *ibid. loco*, fl., *Antilahimena et al.* 4318 (G, MO, P, TAN); Moramanga, Ambatovy/Andranoverly forest, 18°52'09"S 48°18'15"E, 1013 m, 26.X.2007, fl., *Antilahimena 5937* (G, MO, P, TAN); Analamazaotra, IX.1925, bud, *Louvel 21* (P); Maroantsetra, Masoala PN, E slope of Ambohitsitondroinan'Mahalevona summit, 15°25'34"S 49°57'22"E, 1160 m,



Fig. 21.
Abrahamia minutifolia
 Randrian. & Lowry.
A. Branches showing
 inflorescences and
 flower buds
 [Antilahimena 5937];
B. Branch with young
 fruits
 [Callmander et al. 631].

Photos: A: P. Antilahimena;
 B: M. Callmander

25.II.2003, fr., Lowry et al. 6190 (G, K, MO, P, TAN, WAG); along road to Lakato, 18 km S of RN2, 19°04'06"S 48°22'01"E, 1050 m, 17.X.2004, fl., Lowry et al. 6547 (G, MO, P, TAN); Ambatovy, Analamay, 18°49'26"S 48°20'16"E, 1000 m, 26.I.1997, fr., Rakotomalaza et al. 1005 (MO, P, TAN); Analamazaotra, 950 m, 29.X.1996, fl., A. Randrianasolo 515 (G, MO, P, TAN); Mantadia PN, c. 11 km N of village of Andasibe, 18°49'47"S 48°25'56"E, 939 m, 10.I.2003, ster., A. Randrianasolo 781 (MO, P, TEF); Ambatovy, 18°49'28"S 48°19'23"E, 1134 m, 26.XI.2005, bud, Razafindraibe 135 (MO, P, TAN); Analamazaotra-Périnet, [18°56'S 48°26'E], 6.XI.1957, bud, Service Forestier 18400 (G, K, MO, NY, P [2 sheets]); Ankazomanitra, PK 45, route Anosibe-Moramanga, [19°58'S 48°08'E], 6.XI.1968, bud, Service Forestier 26800 (G, MO, NY, P, TEF); W d'Antanandava (PK 45 Moramanga-Anosibe), [19°08'S 48°15'E], XI.1968, fl., Service Forestier 28453 (G, MO, P, TEF); *ibid. loco*, XI.1968, bud & fl., Service Forestier 28454 (G, MO, NY, P, TEF).