

Nomenclatural notes on Malagasy *Diospyros* L. (Ebenaceae)

George E. SCHATZ

Missouri Botanical Garden,
P.O. Box 299, St. Louis, MO, 63166-0299 (USA)
george.schatz@mobot.org

Porter P. LOWRY II

Missouri Botanical Garden,
P.O. Box 299, St. Louis, MO, 63166-0299 (USA)
pete.lowry@mobot.org
and Muséum national d'Histoire naturelle,
Département Systématique et Évolution, UMR 7205,
case postale 39, 57 rue Cuvier, F-75231 Paris cedex 05 (France)
lowry@mnhn.fr

Schatz G. E. & Lowry II P. P. 2011. — Nomenclatural notes on Malagasy *Diospyros* L. (Ebenaceae). *Adansonia*, sér. 3, 33 (2): 271–281. DOI: 10.5252/a2011n2a12.

ABSTRACT

Generic evaluation of *Diospyros* L. (Ebenaceae) for the *Catalogue of the Vascular Plants of Madagascar* project necessitates the following nomenclatural actions: 12 new combinations are proposed for species originally described in *Maba* J.R.Forst. & G.Forst. or *Tetraclis* Hiern; two new combinations are proposed for species originally described in *Olax* L.; four new combinations are proposed resulting from the elevation of infraspecific taxa to the rank of species; two species are each provided with a new name; and 52 names (some of which are placed into synonymy) are lectotypified.

RÉSUMÉ

Notes sur la nomenclature de Diospyros L. (Ebenaceae) à Madagascar.

Une évaluation du genre *Diospyros* L. (Ebenaceae) pour le projet *Catalogue des plantes vasculaires de Madagascar* nécessite les actes nomenclaturaux suivants: 12 nouvelles combinaisons sont proposées pour des espèces décrites originellement dans les genres *Maba* J.R.Forst. & G.Forst. ou *Tetraclis* Hiern; deux nouvelles combinaisons sont proposées pour des espèces décrites originellement dans le genre *Olax* L.; quatre taxons infraspécifiques sont élevés au rang d'espèce, résultant en de nouvelles combinaisons; deux nouveaux noms sont proposés; et 52 noms (dont certains placés en synonymie) sont lectotypifiés.

KEY WORDS

Ebenaceae,
Diospyros,
Madagascar,
nomenclature,
new names,
new combinations.

MOTS CLÉS

Ebenaceae,
Diospyros,
Madagascar,
nomenclature,
nouveaux noms,
nouvelles combinaisons.

INTRODUCTION

Recent molecular phylogenetic studies have clarified generic delimitation and circumscription within the family Ebenaceae (Duangjai *et al.* 2006, 2009), which contains many valuable timber species (ebonies) and edible fruits (kaki, persimmon). South American *Lissocarpa* Benth., formerly recognized as representing a distinct family, constitutes subfamily Lissocarpoideae (Wallnöfer 2004), and is sister to all other Ebenaceae (Berry *et al.* 2001), which are comprised of three genera: cosmopolitan *Diospyros* L.; *Euclea* L. from Africa and the Comoro Islands; and South African *Royena* L.

In Madagascar, two genera (*Maba* J.R. Forst. & G. Forst. and *Tetraclis* Hiern) formerly recognized by Hiern (1873) and Perrier de la Bâthie (1952a, b) are now considered synonymous with *Diospyros* (Schatz 2001). In conjunction with the generic evaluation of *Diospyros* for the *Catalogue of the Vascular Plants of Madagascar* project (<http://www.efloras.org/madagascar>), 51 of the 86 species accepted for the *Catalogue* are here provided with nomenclatural updates; further taxonomic revisions of well-defined groups that also include an estimated 130 undescribed species of *Diospyros* in Madagascar are currently underway. Twelve new combinations are here proposed for species described in and/or treated as *Maba* or *Tetraclis* in the *Flore de Madagascar* and its precursor (Perrier de la Bâthie 1952a, b), and two new combinations for species described in *Olax* (Baillon 1862). In addition, four Malagasy *Diospyros* originally described as infraspecific taxa are elevated to the rank of species, two species are each provided with a new name, and 52 names (some of which are placed into synonymy) are here lectotypified in accordance with Articles 8.2 and 9.2 of the International Code of Botanical Nomenclature (McNeil *et al.* 2006).

NOMENCATURAL NOTES

1. *Diospyros aculeata* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 119 (1952). — Lectotype (here designated): *Humbert 19110* (P! [P00541739]).

Diospyros aculeata H.Perrier subsp. *meridionalis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 121 (1952), syn. nov. — Lectotype (here designated): *Perrier 16687* (incorrectly cited in protologue as *Perrier 16587*) (P! [P00573535]).

Humbert 19110 is here chosen as the lectotype for *Diospyros aculeata* H.Perrier instead of the other syntype (*Perrier 8802*) because the single specimen at P has separate packets containing male flowers and fruit. Although *Diospyros* species are dioecious, and therefore male flowers and fruit had to have been collected from different plants, Article 8.2 of the International Code of Botanical Nomenclature (McNeil *et al.* 2006) explicitly permits a specimen to consist of “parts of one or several plants”. We choose *Perrier 16687* as the lectotype of *D. aculeata* H.Perrier var. *meridionalis* H.Perrier instead of the other syntypes (*Humbert 2590*, *Humbert 14372bis*) because it is better preserved material.

2. *Diospyros ankifiensis* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 153 (1952). — Lectotype (here designated): *Perrier 18751* (P! [P00541730]; iso-, P! [P00541731]).

Perrier 18751 is here chosen as the lectotype of *Diospyros ankifiensis* H.Perrier instead of the other syntype (*Boivin s.n.*) because it possesses fruit.

3. *Diospyros baroniana* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 138 (1952). — Type: *Baron 6412* (incorrectly cited in protologue as “*Baron 6417*”) (holo-, P! [P00541727]).

Diospyros gracilipes Hiern var. *parvifolia* H.Lecomte, *Les Bois de la Forêt d'Analama*: 17 [129 in continuous pagination], pl. 46 (1922), syn. nov. — *Diospyros gracilipes* Hiern var. *lecomtei* H.Perrier, nom. superfl., *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 139 (1952). — Lectotype (here designated): *Thouvenot s.n.* (P! [P00541748]).

Lecomte (1922) cites two Thouvenot collections as the basis for his description of *Diospyros gracilipes* Hiern var. *parvifolia* H.Lecomte, that name appearing only as a caption for the photograph on plate 46, but not in the

text on page 129, which curiously bears the number 17 in the lower right corner. *Thouvenot s.n.* is chosen as the lectotype of *Diospyros gracilipes* var. *parvifolia* because we consider the other syntype (*Thouvenot 143*) to represent a different, undescribed species.

4. *Diospyros bezofensis* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 134 (1952). — Lectotype (here designated): *Perrier 8797* (P! [P00573709]; iso-, P! [P00573710]).

The sheet of *Perrier 8797* with female material is here chosen as the lectotype. Two other syntypes (*Chapelier s.n.* and *Perrier 2372*) are excluded from *Diospyros bezofensis* as they represent *D. haplostylis* Boivin ex Hiern.

5. *Diospyros boinensis* (H.Perrier) G.E.Schatz & Lowry, comb. & stat. nov.

Diospyros greveana H.Perrier subsp. *boinensis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 125 (1952). — Lectotype (here designated): *Perrier 1750bis* (P! [P00541758]; iso-, P! [P00541756, P00541757]).

Perrier 1750bis is here chosen as the lectotype of *Diospyros greveana* H.Perrier subsp. *boinensis* H.Perrier instead of the other syntypes (*Decary 8165*, *Perrier 1750*, *Perrier 8781*, *Perrier 16880*, *Perrier 17692* [incorrectly cited in protologue as *Perrier 17792*], *Perrier 3783* [not found]) because it possesses the most mature fruit among the original material.

6. *Diospyros boivinii* Hiern

Transactions of the Cambridge Philosophical Society 12: 194 (1873) (as “*boivini*”). — Type: *Boivin s.n.*, 1847-1852 (holo-, P! [P00541719]).

Diospyros boivinii Hiern var. *manongarivensis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 131. 1952, syn. nov. — Lectotype (here designated): *Perrier 8795* (P! [P00541709]).

Diospyros lenticellata Baker, *Journal of the Linnean Society, Botany* 25: 333 (1890), syn. nov. — Type: *Baron 5898* (cited incorrectly in the protologue as “*Baron*, next 5839”) (holo-, K [K000350804]; iso-, P! [P00541799]).

Perrier 8795 is here chosen as the lectotype of *Diospyros boivini* Hiern var. *manongarivensis* H.Perrier instead of the other syntypes (*Decary 1369*, *Perrier 8787*, *Perrier 8790*, *Perrier 8793*, *Perrier 8794*) because it possesses mature fruits still attached to the infructescence.

7. *Diospyros cinnamomoides* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 122 (1952). — Lectotype (here designated): *Perrier 15435* (P! [P00573612]).

Maba montigena H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 109 (1952), syn. nov. — Lectotype (here designated): *Perrier 12364* (P! [P00573610]; iso-, P! [P00573609]).

Perrier 15435 is here chosen as the lectotype of *Diospyros cinnamomoides* H.Perrier instead of the other syntypes (*Perrier 8749*, *Perrier 8792*) because it possesses fruit. Yet two other syntypes (*Perrier 8774* and *Perrier 8784*) are excluded from *D. cinnamomoides* as they are considered to represent *D. conifera* H.Perrier. *Perrier 12364* is here chosen as the lectotype of *Maba montigena* H.Perrier instead of the other syntypes (*d'Alleizette 897*, *Perrier 8747*, *Perrier 8748*, *Perrier 8773*) because it possesses mature fruit.

8. *Diospyros clusiifolia* (Hiern) G.E.Schatz & Lowry, comb. nov.

Tetraclis clusiifolia Hiern (as “*clusiaefolia*”), *Transactions of the Cambridge Philosophical Society* 12: 271 (1873). — Lectotype (here designated): *Richard 388* (P! [P00573668]; iso-, P! [P00573669]).

Of the two sheets of *Richard 388* in the Paris herbarium, we have selected the one with mature fruit as the lectotype of *Tetraclis clusiifolia* Hiern rather than the other specimen with male flowers or the other syntype (*Pervillé 6*).

9. *Diospyros cupulifera* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 146 (1952). — Lectotype (here designated): *Humbert 12356* (P! [P00491893]; iso-, MO!, TEF!).

Humbert 12356 is here chosen as the lectotype of *Diospyros cupulifera* H.Perrier instead of the other syntypes (*Humbert 11543*, *Humbert 11574*, *Humbert 13134*, *Humbert 19930*) because it possesses fruit attached to the stems and has duplicates in two other herbaria.

10. *Diospyros danguyana* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 117 (1952). — Lectotype (here designated): *Humbert 6826* (P! [P00573529]; iso-, BR!, G!, K!, MO!, NY!, P! [P00573530], PRE!, TAN!, TEF!).

Humbert 6826 is here chosen as the lectotype of *Diospyros danguyana* H.Perrier instead of the other syntypes (*Humbert 11635*, *Humbert 12731*, *Perrier 3008*, *Seyrig 799*) because it possesses female flowers and fruit and has widely distributed duplicates.

11. *Diospyros dicorypheoides* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 123 (1952). — Lectotype (here designated): *Perrier 17013* (P! [P00573514]).

Perrier 17013 is here chosen as the lectotype of *Diospyros dicorypheoides* H.Perrier instead of the other syntype (*Perrier 18083*) because it possesses fruit.

12. *Diospyros ebenifera* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Tetraclis ebenifera H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 96 (1952). — Type: *Decary 5239* (holo-, P! [P00413183]; iso-, P! [P00413182, P00573670], TEF!).

13. *Diospyros enervis* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba enervis H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 99 (1952). — Type: *Perrier 3010* (holo-, P! [P00573700]; iso-, P! [P00541720]).

14. *Diospyros erinacea* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba erinacea H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 99 (1952). — Type: *Perrier 18277* (holo-, P! [P00586785]).

15. *Diospyros erythrosperma* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 125 (1952). — Lectotype (here designated): *Perrier 8807* (P! [P00573507]; iso-, P! [P00573508]).

Diospyros vescoi Hiern var. *mandrarensis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 147 (1952), syn. nov. — Lectotype (here designated): *Humbert 13208* (P! [P00573677]; iso-, P! [P00573676]).

Perrier 8807 is here chosen as the lectotype of *Diospyros erythrosperma* H.Perrier instead of the other syntypes (*Humbert 12904*, *Perrier 8751*, *Perrier 8769* [incorrectly cited as *Perrier 8069* in the protologue], *Perrier 16679* [not found]) because it possesses mature fruits. *Humbert 13208* is likewise chosen as the lectotype of *Diospyros vescoi* Hiern var. *mandrarensis* H.Perrier instead of the other syntype (*Humbert 13870*) because it possesses mature fruit.

16. *Diospyros filipes* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 138 (1952). — Lectotype (here designated): *Perrier 2333* (P! [P00573499]; iso-, P! [P00573500]).

Perrier 2333 is here chosen as the lectotype of *Diospyros filipes* H.Perrier instead of the other syntypes (*Decary 5364*, *Decary 5622*, *Decary 5624*, *Decary 5730*, *Decary 5767*) because it possesses mature fruit and male flowers.

17. *Diospyros fuscovelutina* Baker

Journal of the Linnean Society, Botany 21: 422 (1885). — Lectotype (here designated): *Baron* 2361 (K [K000350799]; iso-, K [K000350798], P! [P00541752]).

Tetraclis baronii H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 96 (1952) (as “*baroni*”), syn. nov. — Lectotype (here designated): *Cours* 998 (P! [P00573673]).

Of the two duplicates of *Baron* 2361 at the Kew herbarium, we have chosen the more complete sheet as the lectotype of *Diospyros fuscovelutina* Baker. *Cours* 998 is here chosen as the lectotype of *Tetraclis baronii* H.Perrier instead of the other syntypes (*Baron* 2336, *Baron* 2446, *Baron* 6074, *Lam & Meeuse* 5690) because it possesses mature fruit attached to the stem.

18. *Diospyros geayana* (H.Perrier)

G.E. Schatz & Lowry, comb. et stat. nov.

Diospyros pruinosa Hiern var. *geayana* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 153 (1952). — Lectotype (here designated): *Geay* 7183 (P! [P00573719]).

Geay 7183 is here chosen as the lectotype of *Diospyros pruinosa* Hiern var. *geayana* H.Perrier instead of the other syntype (*Geay* 7182) because it possesses fruit.

19. *Diospyros gracilipes* Hiern

Transactions of the Cambridge Philosophical Society 12: 191 (1873). — Lectotype (here designated): *Chapelier* 82 (P! [P00541754]).

Chapelier 82 is here chosen as the lectotype of *Diospyros gracilipes* Hiern instead of the other syntypes (*Pervillé* 275, *Bojer* s.n. [not found]) because it possesses 3 mature fruits.

20. *Diospyros greveana* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 125 (1952). — Lectotype (here designated): *Grevé* 209 (P! [P00413173]; iso-, P! [P00413171, P00413172]).

As here circumscribed, *Diospyros greveana* H.Perrier excludes *D. greveana* H.Perrier subsp. *boinensis* H. Perrier, which is considered to represent a distinct species, for which the new combination is proposed above. *Grevé* 209 is here chosen as the lectotype of *D. greveana* H.Perrier instead of the other syntype (*Grevé* 43) because it possesses mature fruit.

21. *Diospyros haplostylis* Boivin ex Hiern

Transactions of the Cambridge Philosophical Society 12: 177 (1873). — Lectotype (here designated): *Perville* 439 (P! [P00573572]; iso-, K!, MO!, P! [P00573573, P00701483]).

Diospyros haplostylis Boivin ex Hiern var. *orientalis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 136 (1952), syn. nov. — Lectotype (here designated): *Cours* 884 (P! [P00573564]).

Diospyros onivensis H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 114 (1952), syn. nov. — Lectotype (here designated): *Perrier* 17174 (P! [P00541775]; iso-, P! [P00541776]).

Diospyros rubrolanata H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 131 (1952), syn. nov. — Lectotype (here designated): *Baron* 6493 (P! [P00573730]).

Diospyros viguieriana H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 127 (1952), syn. nov. — Type: *Viguier & Humbert* 836 (holo-, P! [P00573683]).

Diospyros haplostylis Boivin ex Hiern var. *hildebrandtii* (Gürke) H.Perrier is excluded from *D. haplostylis* as it is considered to be a synonym of *D. bernieriana* (Baill.) H.Perrier. *Perville* 439 is here chosen as the lectotype of *D. haplostylis* Boivin ex Hiern instead of the other syntypes (*Bernier* 259, *Boivin* 2108bis, *Perville* 505) because it possesses mature fruit. *Cours* 884 is likewise chosen as the lectotype of *D. haplostylis* Boivin ex Hiern var. *orientalis* H.Perrier instead of the other syntypes (*Baron*, 2461, *Baron* 2963, *Perrier* 8768, *Perrier* 8772) because it possesses mature fruit. The two sheets of *Perrier* 17174 in the Paris herbarium are equivalent, and thus we have simply chosen one of them as the lectotype of *Diospyros onivensis* H.Perrier. *Baron* 6493 is here chosen as the lectotype of *D. rubrolanata* H.Perrier.

instead of the other syntypes (*Perrier* 8752, *Perrier* 11589 [incorrectly cited as *Perrier* 11539 in the protologue]) because it possesses intact fruit.

22. *Diospyros humbertiana* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 122 (1952). — Lectotype (here designated): *Humbert* 12347 (P! [P00573555]; iso-, MO!, P! [P00573556], TEF!).

Humbert 12347 is here chosen as the lectotype of *Diospyros humbertiana* H.Perrier instead of the other syntypes (*Humbert* 19934, *Poisson* 286) because it possesses mature fruit and has duplicates in several herbaria.

23. *Diospyros implexicalyx* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 140 (1952). — Lectotype (here designated): *Perrier* 16551 (P! [P00573552]; iso-, P! [P00573551], P00573553), TEF!).

Perrier 16551 is here chosen as the lectotype of *Diospyros implexicalyx* H.Perrier instead of the other syntype (*Perrier* 17349) because it possesses female flowers at anthesis and is represented by a duplicate at TEF.

24. *Diospyros lanceolata* Poir.

Encyclopédie méthodique botanique 5: 434 (1804). — *Maba lanceolata* (Poir.) Hiern, *Transactions of the Cambridge Philosophical Society* 12: 131 (1873). — Lectotype (here designated): *Commerson* s.n. (P! [P00573591]; iso-, P! [P00573590]).

Maba humbertii H.Perrier (as “*humbertii*”), *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 107, 1952, syn. nov. — Lectotype (here designated): *Decary* 10898 (P! [P00573580]; iso-, K!, MO!, P! [P00573581], TEF!).

Of the two sheets of *Commerson* s.n. in the Paris herbarium, we have selected the one with both mature fruit and the characteristic hairy calyx in flower as the lectotype of *Diospyros lanceolata* Poir. *Decary* 10898 is here chosen as the lectotype of

Maba humbertii H.Perrier instead of the other syntypes (*Decary* 9455, *Humbert* 13797, *Humbert* 14049, *Seyrig* 377) because it possesses fruit and has widely distributed duplicates.

25. *Diospyros lokohensis* (H.Perrier)

G.E.Schatz & Lowry, comb. nov.

Maba lokohensis H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 105 (1952). — Type: *Humbert* 22959 (holo-, P! [P00573487]; iso-, P! [P00573488, P00573540]).

Maba quartzitarum H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 98 (1952), syn. nov. — Type: *Perrier* 8755 (holo-, P! [P00573495]; iso-, P! [P00573596]).

26. *Diospyros louvelii* H. Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 127 (1952) (as “*louvelii*”). — Lectotype (here designated): *Geay* 8083 (P! [P00573542]).

Geay 8083 is here chosen as the lectotype of *Diospyros louvelii* H.Perrier instead of the other syntypes (*Geay* 7838, *Geay* 7839, *Geay* 7854, *Louvel* 132) because it possesses several fruits.

27. *Diospyros mangabensis* Aug.DC.

Bulletin de l'Herbier Boissier, sér. 2, 1 (6): 578 (1901). — Lectotype (here designated): *Mocquerys* 424 (G [G00023980]).

Mocquerys 424 is here chosen as the lectotype of *Diospyros mangabensis* Aug.DC. instead of the other syntype (*Mocquerys* 411) because of the more complete description of the flowers and inflorescences on the label.

28. *Diospyros mangorensis* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 149 (1952). — Lectotype (here designated): *Perrier* 2042 (P! [P00541789]; iso-, P! [P00541787, P00541788]).

Perrier 2042 is here chosen as the lectotype of *Diospyros mangorensis* H.Perrier because the other syntype (*Perrier 18054*) is considered to represent a different as yet undetermined taxon.

29. *Diospyros mcphersonii*
G.E.Schatz & Lowry, nom. nov.

Diospyros crassiflora H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 150 (1952), non *Diospyros crassiflora* Hiern, *Transactions of the Cambridge Philosophical Society* 12: 260 (1873). — Lectotype (here designated): *Perrier 8764* (P! [P00573533]; iso-, P! [P00573534]).

Perrier 8764 is here chosen as the lectotype of *Diospyros mcphersonii* G.E.Schatz & Lowry instead of the other syntype (*Perrier 8762*) because it possesses female flowers.

30. *Diospyros meeusiana* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba meeusiana H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 104 (1952). — Type: *Lam & Meeuse 5676* (holo-, P! [P00573494]).

31. *Diospyros myriophylla* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba myriophylla H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 101 (1952). — Lectotype (here designated): *Humbert 12692* (P! [P00573593]; iso-, BR!, G!, K!, MO!, P! [P00573594, P00573595], PRE!, S!, TAN!, TEF!, WAG!).

Humbert 12692 is here chosen as the lectotype of *Maba myriophylla* H.Perrier instead of the other syntypes (*Decary 7338, Decary 17848, Humbert 5932, Humbert 12354, Humbert 14101, Humbert 14235, Perrier 19191*) because it has widely distributed duplicates. One other syntype (*Humbert 12852*) is excluded from *M. myriophylla* as it represents a collection of *D. myrtifolia* H.Perrier.

32. *Diospyros myrtilloides* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba myrtilloides H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 103 (1952). — Lectotype (here designated): *Perrier 8744* (P! [P00541779]; iso-, P! [P00541778]).

Perrier 8744 is here chosen as the lectotype of *Maba myrtilloides* H.Perrier instead of the other syntypes (*Humbert & Cours 22906, Humbert 18336* [not found]) because it possesses mature fruit.

33. *Diospyros nidiformis*
G.E.Schatz & Lowry, nom. nov.

Diospyros? intricata H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 122 (1952), non *Diospyros intricata* (A.Gray) Standl., *Publications of the Carnegie Institute of Washington* 461 (4): 80 (1935). — Type: *Decary 10683* (holo-, P! [P00573548]; iso-, MO! [6128591], P! [P00573547], TEF).

The proposed new name reflects the short-shoot growth habit of the species, a feature shared with many other shrubs occurring in Madagascar's subarid bushland.

34. *Diospyros obducta* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.

Maba obducta H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 98 (1952). — Lectotype (here designated): *Decary 5123* (incorrectly cited in protologue as *Decary 6123*) (P! [P00541771]; iso-, G!, MO!, P! [P00541772], TEF!).

Decary 5123 is here chosen as the lectotype of *Maba obducta* H.Perrier instead of the other syntype (*Decary 5612*) because it has widely distributed duplicates.

35. *Diospyros occlusa* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 113 (1952). — Type: *Geay s.n.* (holo-, P! [P00541777]).

Maba magnifolia H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 104 (1952), syn. nov. — Lectotype (here designated): *Perrier 8757* (P! [P00573493]; iso-, P! [P00573492]).

Perrier 8757 is here chosen as the lectotype of *Maba magnifolia* H.Perrier instead of the other syntype (*Geay 7978*) because it possesses fruit attached to the stem.

36. *Diospyros olacinaoides* (H.Perrier) G.E.Schatz & Lowry, comb. nov.

Maba olacinaoides H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 101 (1952). — Type: *Perrier 1171* (holo-, P! [P00573489]).

Maba gneissicola H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 101 (1952), syn. nov. — Lectotype (here designated): *Perrier 1171bis* (P! [P00573485]).

Perrier 1171bis is here chosen as the lectotype of *Maba gneissicola* H.Perrier instead of the other syntype (*Perrier 8775*) because it possesses fruit.

37. *Diospyros perrieri* Jumelle

Annales du Musée colonial de Marseille 16: 315 (1907). — Lectotype (here designated): *Perrier 858bis* (P! [P00573737]).

No collections were cited by Jumelle in the protologue of *Diospyros perrieri*, and thus the plate accompanying the text serves as an iconotype. However, among the material available to Jumelle, two *Perrier* collections (858 and 858bis) could equally have served as the model for the plate; the latter is here chosen as the lectotype of *Diospyros perrieri* Jumelle because it is more complete material.

38. *Diospyros pervilleana* (Baill.) G.E.Schatz & Lowry, comb. nov.

Olax pervilleana Baill., *Adansonia* 3: 120 (1862). — *Maba pervilleana* (Baill.) H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 105 (1952). — Type: *Perville 513* (holo-, P! [P00640985]).

In the protologue of *Olax pervilleana*, Baillon (1862) cited the material upon which he based the description as “*In Madagascaria legerunt Bernier et Perville (n. 513) et cum Boivin (herb., n. 2157) communicaverunt, anno 1846*”. The Paris sheet (P00640985) bears a blue handwritten label that indicates the collection as “*Perville n. 513*” in the upper right corner, as well as the number “*2157*” in the lower left corner unassociated with any person’s name, and “*Bernier comm. 1846*” in the lower right corner. The sheet also bears the generic “*Herb. Mus. Paris*” printed label of the “*Madagascar. Voyage de M. Boivin, 1847-1852*” upon which Baillon wrote “*Olax pervilleana* H. Bn.” and “*n. 2157*”. Thus, it would appear that the collection was made solely by Perville (his number 513) and communicated by Bernier in 1846, and that the “2157” was then later associated with Boivin. Perrier (1952) placed *Maba diffusa* Hiern in synonymy under *M. pervilleana* (Baill.) H.Perrier, citing the type of *Olax pervilleana* Baill. as *Perville 493*, a specimen we have not been able to locate in the Paris herbarium. Hiern (1873) cited only *Perville* without a number as the basis for his description of *M. diffusa*. While the description is consistent with *Perville 513* (fruit only) and may have been based on an unnumbered duplicate of the same gathering, until we can be certain of the material examined by Hiern, we shall refrain from placing *M. diffusa* into synonymy under *D. pervilleana*.

39. *Diospyros pruinosa* Hiern

Transactions of the Cambridge Philosophical Society 12: 268 (1873). — Lectotype (here designated): *Boivin 2538* (P! [P00573722]; iso-, P! [P00573721, P00573723]).

As here circumscribed, *Diospyros pruinosa* Hiern excludes *D. pruinosa* Hiern var. *geayana* H.Perrier, which is considered to represent a distinct species for which the new combination is proposed above. *Boivin 2538* is here chosen as the lectotype of *D. pruinosa* Hiern instead of the other syntype (*Vesco s.n.*, 1850 [incorrectly cited as *Vesco 1850* in the protologue]) because it possesses better preserved material with more mature fruit.

**40. *Diospyros quercina* (Baill.)
G.E.Schatz & Lowry, comb. nov.**

Olax quercina Baill. *Adansonia* 3: 120 (1862). — *Maba quercina* (Baill.) H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 99 (1952). — Type: *Pervillé* 683 (holo-, P! [P00650575]).

41. *Diospyros sakalavarum* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 132 (1952). — Lectotype (here designated): *Perrier* 8779 (P! [P00573629]; iso-, P! [P00573628]).

Diospyros sakalavarum H.Perrier var. *mollifolia* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 132 (1952), syn. nov. — Lectotype (here designated): *Perrier* 1408 (incorrectly cited as *Perrier* 3780 in the protologue) (P! [P00573726]; iso-, P! [P00573725, P00573727]).

Diospyros sakalavarum H.Perrier var. *tulearensis* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 132 (1952), syn. nov. — Lectotype (here designated): *Humbert & Swingle* 5279 (P! [P00573637]; iso-, K!, MO!, TEF!).

Perrier 8779 is here chosen as the lectotype of *Diospyros sakalavarum* H.Perrier instead of the other syntypes (*Perrier* 4538, *Perrier* 8780 [incorrectly cited as *Perrier* 3780 in the protologue], *Perrier* 8785, *Perrier* 8800, *Service forestier* [original series] 32, *Service forestier* [original series] 57) because it possesses mature fruit and leaves that are an average size for the species. *Humbert & Swingle* 5279 is here chosen as the lectotype of *D. sakalavarum* H.Perrier var. *tulearensis* H.Perrier instead of the other syntypes (*Grevé* 164, *Humbert & Swingle* 5069, *Perrier* 12774, *Perrier* 16596) because it has widely distributed duplicates.

**42. *Diospyros stenocarpa* (H.Perrier)
G.E.Schatz & Lowry, comb. nov.**

Maba stenocarpa H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 110 (1952). — Type: *Perrier* 8753 (holo-, P! [P00573625]).

**43. *Diospyros subbenervis* (H.Perrier)
G.E.Schatz & Lowry, comb. et stat. nov.**

Diospyros gracilipes Hiern var. *subbenervis* H. Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 139 (1952). — Lectotype (here designated): *Decary* 4230 (P! [P00541740]; iso-, MO!, P! [P00541741], TEF!).

Decary 4230 is here chosen as the lectotype of *Diospyros gracilipes* Hiern var. *subbenervis* instead of the other syntype (*Decary* 10210) because it has more widely distributed duplicates.

44. *Diospyros subfalciformis* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 142 (1952). — Lectotype (here designated): *Perrier* 13865 (P! [P00573620]; iso-, P! [P00573621, P00573622]).

Perrier 13865 is here chosen as the lectotype of *Diospyros subfalciformis* H.Perrier instead of the other syntype (*Pervillé* 659) because it possesses female flowers and fruit.

45. *Diospyros subsessilifolia* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 143 (1952) (as “*sessilifolius*”). — Lectotype (here designated): *Humbert* 6597 (P! [P00573744]; iso-, TEF!).

Humbert 6597 is here chosen as the lectotype of *Diospyros subsessilifolia* H.Perrier because the other three syntypes (*Perrier* 8754, *Perrier* 18099, *Perrier* 18175) are referred to *D. mangabensis* Aug.DC.

46. *Diospyros tetraceros* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 151 (1952). — Lectotype (here designated): *Perrier* 8799 (incorrectly cited as *Perrier* 6799 in the protologue) (P! [P00573652]; iso-, P! [P00573651, P00573653]).

Perrier 8799 is here chosen as the lectotype of *Diospyros tetraceros* H.Perrier instead of the other syntype (*Perrier* 1160) because it possesses mature fruit.

47. *Diospyros torquata* H.Perrier

Mémoires de l'Institut scientifique de Madagascar, sér. B, 4: 112 (1952). — Lectotype (here designated): *Perrier* 1823 (incorrectly cited as *Perrier* 1923 in the protologue) (P! [P00573702]).

Diospyros torquata H.Perrier var. *mabaoides* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 112 (1952), syn. nov. — Lectotype (here designated): *Perrier* 13468 (P! [P00573703]; iso-, P! [P00573704, P00573705]).

Perrier 1823 is here chosen as the lectotype of *Diospyros torquata* H.Perrier instead of the other syntype (*Service forestier* [original series] 55) because it possesses better preserved leaves. *Perrier* 13468 is here chosen as the lectotype of *D. torquata* H.Perrier var. *mabaoides* H.Perrier instead of the other syntype (*Perrier* 8777) because it is better preserved material.

48. *Diospyros toxicaria* Hiern

Transactions of the Cambridge Philosophical Society 12: 175 (1873). — Lectotype (here designated): *Meller* s.n. (K [K000350815]; iso-, K [KK000350814]).

Diospyros caucaneana A.Chev., *Revue de Botanique appliquée* 14: 957 (1934). — Lectotype (here designated): *Perrier* 8756 (P! [P00640947]).

Perrier 8756 is here chosen as the lectotype of *Diospyros caucaneana* A.Chev. instead of the other syntype (*Perrier* 8763) because it possesses fruit. Of the two duplicates of *Meller* s.n. at the Kew herbarium, we have chosen the more complete sheet as the lectotype of *Diospyros toxicaria* Hiern.

49. *Diospyros tropophylla* (H.Perrier)

G.E.Schatz & Lowry, comb. nov.

Maba tropophylla H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 105 (1952). — Lectotype (here designated): *Perrier* 19412 (P! [P00573698]; iso-, G!, K!, MO!, TEF!).

Perrier 19412 is here chosen as the lectotype of *Maba tropophylla* H.Perrier instead of the other syntypes (*Grevé* 191, *Humbert* 11357, *Humbert* 11358bis,

Perrier 1738, *Perrier* 8778, *Perrier* 1374 [incorrectly cited as *Perrier* 13174 in the protologue], *Service forestier* [original series] 33, *Service forestier* [original series] 2 [incorrectly cited as *Service forestier* 52 in the protologue] because it possesses female flowers and fruit, and has widely distributed duplicates. The syntype *Hildebrandt* 3374 is excluded from *M. tropophylla* as it represents a different as yet undetermined species.

50. *Diospyros velutipes* (H.Perrier) G.E.Schatz & Lowry, comb. et stat. nov.

Diospyros gracilipes Hiern var. *velutipes* H.Perrier, *Mémoires de l'Institut scientifique de Madagascar*, sér. B, 4: 139 (1952). — Lectotype (here designated): *Perrier* 2166 (P! [P00541744]; iso-, P! [P00541745]).

51. *Diospyros vescoi* Hiern

Transactions of the Cambridge Philosophical Society 12: 218 (1873). — Lectotype (here designated): *Boivin* 2539b (P! [P00573679]; iso-, P! [P00573680]).

Boivin 2539b is here chosen as the lectotype of *Diospyros vescoi* Hiern instead of the other syntype (*Vesco* s.n., 1850) because it possesses fully mature inflorescences. *Diospyros vescoi* Hiern var. *mandraensis* H.Perrier is here excluded from *Diospyros vescoi* Hiern, placed in synonymy under *Diospyros erythrosperma* H.Perrier, and lectotypified above.

Acknowledgements

We gratefully acknowledge the support of the Andrew W. Mellon Foundation, the U.S. National Science Foundation (DEB-00743355), and the J.R.S. Biodiversity Foundation. We also thank the reviewers for their valuable suggestions.

REFERENCES

- BAILLON H. 1862. — *Conspectus generum, Ordo Loranthacearum. Adansonia* 3: 104-128.
BERRY P., SAVOLAINEN V., SYTSMA K. J., HALL J. C. & CHASE M. W. 2001. — *Lissocarpa* is sister to *Diospyros* (Ebenaceae). *Kew Bulletin* 56: 725-729.

- DUANGJAI S., WALLNÖFER B., SAMUEL R., MUNZINGER J. & CHASE M. W. 2006. — Generic delimitation and relationships in Ebenaceae *sensu lato*: evidence from six plastid DNA regions. *American Journal of Botany* 93: 1808-1827.
- DUANGJAI S., SAMUEL R., MUNZINGER J., FOREST F., WALLNÖFER B., MICHAEL H. J., BARFUSS M. H. J., FISCHER G. & CHASE M. W. 2009. — A multi-locus plastid phylogenetic analysis of the pantropical genus *Diospyros* (Ebenaceae), with an emphasis on the radiation and biogeographic origins of the New Caledonian endemic species. *Molecular Phylogenetics and Evolution* 52: 602-620.
- HIERN W. P. 1873. — A monograph of Ebenaceae. *Transactions of the Cambridge Philosophical Society* 12: 27-300.
- LECOMTE H. 1922. — *Les bois de la forêt d'Analamazaotra*. Augustin Challamel, Paris, 188 p.
- MCNEILL J., BARRIE F. R., BURDET H. M., DEMOULIN V., HAWKSWORTH D. L., MARHOLD K., NICOLSON D. H., PRADO J., SILVA P. C., SKOG J. E., WIERSEMA J. H. & TURLAND N. J. 2006. — *International Code of Botanical Nomenclature (Vienna Code)*. A.R.G. Gantner, Ruggell, Liechtenstein. *Regnum Vegetabile* 146: i-xviii + 1-568 p.
- PERRIER DE LA BÂTHIE H. 1952a. — Révision des Ebénacées de Madagascar et des Comores. *Mémoires de l'Institut scientifique de Madagascar*, série B, Biologie Végétale 4 (1): 93-154.
- PERRIER DE LA BÂTHIE H. 1952b. — Ebénacées. *Flore de Madagascar et des Comores* 165: 1-129.
- SCHATZ G. E. 2001. — *Generic Tree Flora of Madagascar*. Royal Botanical Gardens, Kew, UK & Missouri Botanical Garden, St. Louis, USA, 490 p.
- WALLNÖFER B. 2004. — A revision of *Lissocarpa* Benth. (Ebenaceae subfam. Lissocarpoideae (Gilg in Engler) B. Walln.). *Annalen der Naturhistorisches Museums in Wien*, Serie B, 105: 515-564.

*Submitted on 17 June 2010;
accepted on 17 March 2011.*