Nomenclature and typification in *Geissois* (Cunoniaceae) in the South-West Pacific

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ABSTRACT

KEY WORDS Cunoniaceae. Geissois, New Caledonia, Vanuatu, Solomon Islands, Fiji, new speciés.

The taxonomic history of Geissois Labill. is described. All names validly published in Geissois in New Caledonia, Vanuatu and the Solomon Islands are discussed and lectotypified where necessary, with names from Fiji mentioned briefly; invalid names are listed separately. The names G. lanceolata (Guillaumin) H.C.Hopkins, comb. et stat. nov. and G. velutina Guillaumin ex H.C.Hopkins, sp. nov. from New Caledonia are published. An index accounts for all names effectively published in, or referable to, Geissois s.l. including those from Australia.

RÉSUMÉ

Nomenclature et typification dans le genre Geissois (Cunoniaceae) dans le Pacifique sud-ouest.

MOTS CLÉS Geissois, Fidji,

Cunoniaceae, Nouvelle-Calédonie, Vanuatu, Îles Salomon, espèce nouvelle.

L'histoire taxonomique de Geissois Labill. est récapitulée. Tous les noms valablement publiés sous Geissois en Nouvelle-Calédonie, Vanuatu et les Îles Salomon sont discutés et au besoin lectotypifiés, les noms de Fidji sont brièvement discutés; les noms non valablement publiés sont classés séparément. Les noms G. lanceolata (Guillaumin) H.C.Hopkins, comb. et stat. nov. et G. velutina Guillaumin ex H.C.Hopkins, sp. nov. sont publiés pour la Nouvelle-Calédonie. Un index tient compte de tous les noms publiés effectivement dans, ou qui se réfèrent à, Geissois s.l. y compris ceux d'Australie.

INTRODUCTION

Geissois s.s., from the south-west Pacific, has 4merous, apetalous, red flowers in ornithophilous, bottle-brush inflorescences and comprises about 19 species, with 13 in New Caledonia, four in Fiji (Smith 1952, 1985), one in Vanuatu (Hoogland unpublished notes at P) and one in the Santa Cruz Group of the Solomon Islands. Two species from Australia with 5-6-merous, apetalous, cream flowers, *G. benthamiana* and *G. biagiana*, are currently included in *Geissois* s.l. (Bradford *et al.* 2004), although they differ in numerous small morphological characters (Schimanski & Rozefelds 2002); their relationship with *Geissois* s.s. will be discussed elsewhere.

Although the nomenclature of *Geissois* in New Caledonia is by no means as muddled as for the endemic genera *Codia* (Hopkins 2005) and *Pancheria*, several names require lectotypification prior to completion of an account for the *Flore de la Nouvelle-Calédonie*, and in addition, one requires valid publication and one new combination is needed. A further new species will be published elsewhere (Hopkins in press). Ruurd Dirk Hoogland started a revision of *Geissois* in the Pacific in the 1980s and his unpublished notes and card index at Paris (P) were used in the initial stages of my work. Lectotypes for four names (*G. balansae*, *G. hippocastanifolia*, *G. hirsuta* and *G. polyphylla*) that he had chosen and labelled at P are published here.

The first part of this paper gives an account of the taxonomic history of Geissois. The next section lists all validly published names in Geissois s.s. in alphabetical order by geographical region (New Caledonia, Vanuatu and Solomon Islands, Fiji), with invalid names from New Caledonia given at the end of that section. As in the case of Codia (Hopkins 2005) information from the protologue about the type(s) for each name is given in quotation marks and a lectotype designated where appropriate. The final part is an index to all names published in, or referable to, Geissois, indicating their status and synonymy, and a list of accepted species by region. Since information on Australian names in Geissois was given by Chapman (1991; and see website of the Australian Plant Names Index

[APNI], http://www.anbg.gov.au/apni, consulted 10 August 2005), with full details for *G. benthamiana* and *G. biagiana* discussed by Schimanski & Rozefelds (2002), they are not included except for brief details in the index.

TAXONOMIC HISTORY OF GEISSOIS

Plants belonging to the genus Geissois were first collected and described by Jacques-Julien Houtou de Labillardière, one of the naturalists on the voyage to Australia and the south-west Pacific led by Antoine Raymond Joseph de Bruni d'Entrecasteaux from 1791 to 1793. D'Entrecasteaux went in search of Jean-François de Galaup de La Pérouse, whose illfated expedition had disappeared in 1788 (Duyker & Duyker 2001). D'Entrecasteaux's expedition passed the Isle of Pines and sailed up the west coast of New Caledonia in July 1792 but was unable to penetrate the barrier reef (Duyker & Duyker 2001). However, they returned to New Caledonia in 1793, spending 18 days at Balade in the northeast, from 18 April to 9 May, during which time Labillardière must have collected his material of G. racemosa (Fig. 1). Johann Reinhold Forster and his son Johann Georg Adam Forster had already collected the type of another Cunoniaceae, Codia montana J.R.Forst. & G.Forst., from Balade when James Cook's second expedition stopped there in 1774 (Nicolson & Fosberg 2004).

Labillardière published the protologue of Geissois racemosa in his account of the flora of New Caledonia (1824-1825). The first set of collections on which this work was based was acquired, via the René-Louiche Desfontaines herbarium, by Philip Barker Webb, who also acquired Labillardière's own herbarium, sold after the latter's death to pay death duties (Stafleu & Cowan 1979; Duyker 2003). Webb bequeathed his herbarium to an Italian museum and it is now at Florence (FI), with some duplicates elsewhere. Other Cunoniaceae collected in New Caledonia by Labillardière included Codia montana, the type of Callicoma billardierei D.Don, now Pancheria billardierei (D.Don) Pamp., and the types of three other species and varieties of Pancheria described by Renato Pampanini (1905).



Tiapin dels et divex.

GEISSOIS racemosa.

Fig. 1. – Geissois racemosa Labill. Drawing by Turpin, reproduced from Labillardière (1824-1825).

Also on d'Entrecasteaux's expedition were Félix Delahaye (or de Lahaie), a gardener from the Jardin du Roi in Paris, who collected live plants, seeds and plant specimens, and the naturalist Abbé Louis Ventenat (Duyker & Duyker 2001). Delahaye's specimens, which are preserved at P, included both *Geissois racemosa* and *G. montana*, and Ventenat collected material of *Codia montana*. The latter's specimens are now at Geneva (G), having been part of Herb. Delessert. Both Ventenat and Labillardière also collected *Cunonia capensis* L. from South Africa during this expedition (see Pampanini 1905).

The next collections of *Geissois* from New Caledonia that I have seen were made some 50 years later. A specimen of *G. racemosa* at P is labelled "Védel, 1847, Voyage de Bérard" from New Zealand (*sic*). Védel was an officer on the corvette *Le Rhin* which reached Balade on 27 September 1845 under the command of Auguste Bérard, and left provisions for the missionaries there (Vieillard & Deplanche 1863). In 1850, Charles Moore collected material as stove house plants which John Lindley referred to as *G. racemosa*, but they actually belong to *G. magnifica* (q.v. for details). The same species was also collected by Xavier Montrouzier, probably at about this time, although the sheet at P lacks a date or locality.

The taxonomic history of the remaining species in New Caledonia follows a pattern similar to that for other Cunoniaceae from the island. Adolphe Théodore Brongniart & Jean Antoine Arthur Gris (1862) described several new taxa (G. hirsuta, G. montana, G. pruinosa var. pruinosa, G. pruinosa var. macrantha) based on collections by Benedict ("Benjamin") Balansa, T. Lécard, Jean Armand Isidore Pancher, and especially Eugène Vieillard. Pampanini (1905) added G. intermedia, based on a Vieillard collection, and in 1921, Edmund Gilbert Baker described G. magnifica from a specimen collected by Robert Harold Compton (in Rendle et al. 1921). The major contribution in the 20th century was a series of publications by André Guillaumin between 1911 and 1964, which included synoptical accounts and keys (e.g., Guillaumin 1911a, 1941, 1948) and annotated identification lists for particular collectors or expeditions (e.g., Guillaumin 1911b, 1937, 1964). He validly published the names of six taxa (*G. balansae*, *G. hippocastanifolia*, *G. montana* var. *pubescens*, *G. pruinosa* var. *lanceolata*, *G. polyphylla*, *G. trifoliolata*), with *G. velutina* invalidly published. In his synoptic flora and key (Guillaumin 1941, 1948) he recognised a total of 10 species for New Caledonia.

The first of the Fijian taxa, Geissois ternata, was described by Asa Gray in 1854 from a collection made by the U.S. Exploring Expedition (1838-1842) under the command of Charles Wilkes. Gray himself was originally to have been the expedition's botanist, but following delays, he accepted a position at the University of Michigan and so William Rich took the position (http://www.huh.harvard. edu/libraries/expinv/WILKES.html, consulted 22 September 2005). A recent account of the expedition was published by Philbrick (2003). Other early collections from Fiji were listed by Berthold Carl Seemann (1865-1873). Three more species of Geissois from Fiji, with subspecific taxa in one, were added during the 20th century (G. imthurnii, G. stipularis, G. superba) and revisions published by Albert Charles Smith in 1952 and 1985.

Both species now included in *Geissois* s.l. in Australia were described by Ferdinand Jacob Heinrich von Mueller in 1865 in his *Fragmenta phytographiae Australiae*, published in several volumes between 1858 and 1882. These species have also been given names in *Weinmannia* and *Windmannia*. In addition, species from Australia that are now placed in *Pseudoweinmannia* and *Vesselowskya* have combinations in *Geissois* because, like some species in this latter genus, they have palmately trifoliolate leaves with toothed leaflet margins.

The year 1865 also saw the description of *Geissois denhamii* by Seemann from the New Hebrides, now Vanuatu, based on a collection by John MacGillivray, the naturalist on the voyage of the HMS *Herald* under Henry Mangles Denham (see below). This expedition also collected *Geissois* in Fiji (e.g., *Milne s.n.*, 1858 [*sic*], K! [seedling]; *Milne 231*, Ngau, X.1855, K!, [fl., y.fr.], *G. ternata*). Although a second species from Vanuatu was described by Guillaumin in 1937, Hoogland (unpublished notes at P) did not consider it sufficiently different to be maintained. A single species from the Solomon Islands, *Geissois pentaphylla*, has a very restricted distribution being known only from the island of Vanikoro in the Santa Cruz Group, to the south-east of the larger islands that form the main part of the Solomon Archipelago. It was first collected in 1945 and is known from only a handful of gatherings. Coincidentally, Vanikoro is where La Pérouse's expedition was wrecked in a storm, and although d'Entrecasteaux passed close by, he failed to land and thus did not learn the fate of La Pérouse (Duyker & Duyker 2001).

GENERIC NAME

Geissois Labill.

Sertum Austro Caledonicum 2: 50 (1825).

TYPE. — Geissois racemosa Labill.

Remarks

According to Quattrocchi (2000) the generic name is from the Greek word "geisson" meaning a tile, and refers to the overlapping winged seeds in the dehiscent fruits. Post & Kuntze (1903) gave the name as "Gissois Lab.", but their alteration of the spelling was not adopted and is not included in indices such as *Index Nominum Genericorum* (http:// ravenel.si.edu/notany/ing/ingForm.cfm, consulted 30 March 2006) or *Index Kewensis* (see International Plant Names Index, website http://www.ipni.org, consulted 30 March 2006).

NAMES IN *GEISSOIS* FROM NEW CALEDONIA

Several names in *Geissois* from New Caledonia are based on specimens collected by Vieillard or Lécard. For instance, Vieillard material was cited in the protologues of seven taxa (*G. hirsuta, G. intermedia, G. lanceolata, G. montana, G. polyphylla, G. pruinosa* [var. *pruinosa*] and *G. pruinosa* var. *macrantha*). The problems with Vieillard's collections, where a number has been used to refer to his concept of a species rather than an individual gathering, are well known and have already been described in relation to *Codia* (Hopkins 2005). Sheets previously placed in type folders in various herbaria sometimes have the same number as the specimen cited in the protologue but a different date and/or a different locality. Even with the same date and locality, material sometimes appears to be from more than one gathering and so is not all clearly part of the lectotype. In some cases (frequently at G for instance), a handwritten date refers to when the specimen was distributed from Caen by Sébastien-René Lenormand, to whom Vieillard sent his material, rather than indicating the date of collection.

Specimens collected by Lécard were cited in the protologues of G. balansae, G. hippocastanifolia, G. polyphylla and G. trifoliolata, and he also collected material of G. racemosa. His specimens are sometimes problematical but for reasons different from those concerning Vieillard's. Some Lécard collections have no number or date, and while some indicate a general locality or habitat, such as "forêts de l'intérieur" or "hauts plateaux", the only precise locality for a *Geissois* collection is Uarai or Uaraï. This locality, which is on the west coast near La Foa (McKee 1972; Tirel C., Lescot M., Morat P. & Veillon J.-M., web site: Index géoréférencé des localités de prospection botanique en Nouvelle-Calédonie. Carnets des récoltes de H. S. MacKee, http://phanero.novcal.free.fr, consulted on 4 April 2006), is also sometimes spelled Ouarai or Ourai on specimen labels and has the alternative spellings Houraye and Urai on the map in McKee (1972). As with many of the early localities such as Balade, Wagap, Kanala and Gatope, the name indicates a general area. Because label data are often either lacking or only partial (and then with different or overlapping information on different sheets), it is often difficult to determine which sheets constitute a single gathering.

In addition to the accounts of the expeditions referred to under taxonomic history, information on early plant collectors in New Caledonia has been taken from Guillaumin (1911a) and papers by Hugh Shaw McKee (alternative spelling: MacKee) and his wife Margaret (H. S. McKee 1966; M. E. McKee 1972; McKee & McKee 1981).

VALIDLY PUBLISHED NAMES

1. *Geissois balansae* Brongn. & Gris ex Guillaumin

Bulletin de la Société botanique de France 87: 243 (dated 1940, published 1941); Guillaumin, Annales du Musée colonial de Marseille, sér. 2, 9: 137 (1911a), nom. inval., nom. nud. — Types (as given in protologue): "Sans localité (Pancher, Lecard [sic] 66-71) (3), Uaraï (Lecard [sic]) (1), collines ferrugineuses au-dessus de Téné (Balansa 1076)". — Lectotype (of Hoogland ined.) (here designated): au-dessus de Téné, 17.III.1869, Balansa 1076 (P! [buds and old fl.]).

The other syntypes at P (*Pancher s.n.*, s.loc., s.dat., [buds]; *Lecart* [*sic*] 66-71, s.loc., s.dat., [buds]; *Lécard s.n.*, Ourai, 400 m, 25.IX.1876, [buds]; *Lécard s.n.*, Uarai, 4-600 m, s.dat., [buds]; *Lécard s.n.*, s.loc., s.dat., [buds]) and an isosyntype at K (*Lécard s.n.*, forêts d'Uarai, alt. 400-600 m, s.dat., reçu 20.X.1879 [buds]) are all *G. balansae*.

2. Geissois hippocastanifolia Guillaumin

Bulletin de la Société botanique de France 87: 243 (dated 1940, published 1941) as "hippocastaneifolia". — Types (as given in protologue): "Sud de la Nouvelle-Calédonie : chaîne centrale (*Lecard [sic]*), Uaraï (*Lecard [sic]*)". — Lectotype (of Hoogland ined.) (here designated): Ou(a)rai, forêts de l'intérieur, 800 m, *Lécard s.n.* (P! [buds]; isolecto-, K! [ster.], P! p.p. [s.loc., lvs. and fl., excl. fr.], P! [s.loc., lvs.]).

The other syntype, *Raoul s.n.* (i.e. not *Lécard*) (chaîne centrale, "Mekio", [lvs. and fl.] P!), is conspecific.

Remarks

The original orthography of the epithet "*hippo-castaneifolia*" is corrected to "*hippocastanifolia*" in accordance with Article 60.8 of the *Code* (Greuter *et al.* 2000), which indicates that the connecting vowel *-i* should be used when linking the stem of a noun, such as hippocastanum, with a terminal noun, such as folia.

3. Geissois hirsuta Brongn. & Gris

Bulletin de la Société botanique de France 9: 71 (1862). — Type (as given in protologue): "ad Kanala (*Vieillard*, nº 601)". — Lectotype (of Hoogland ined.) (here designated): Canala, 1855-1860, *Vieillard 601* (P! [buds]; isolecto-, P!).

Remarks

The following additional specimens of *Vieillard 601* at P are conspecific but not considered part of the type: a) two sheets with flowers (s.loc., 1855-1860, labels from Institut botanique de Caen); b) four sheets with flowers and fruits (plus sheet at K) (Canala, 1861-1867); c) one sheet with fruits (Wagap, "1866", labels from Institut botanique de Caen); and d) one sheet with fruits (s.loc., s.dat.).

4. Geissois intermedia Vieill. ex Pamp.

Annali di Botanica (Rome) 2: 57 (1905). — Types (as given in protologue): "1. – 'Secus ripas torrentium (Wagap) [Vieillard, [...] n. 2239]' (D C). 2. – 'Ad montes prope Wagap [Vieillard [...] n. 607(?)]' (B-B, D C)". — Lectotype (here designated): Wagap, s.dat., distributed "Lenormand 1867", *Vieillard 607*? (G! [lvs.]; isolecto-, G! [buds, fl., y.fr.], P! [buds, fl. and y.fr.]).

B-B and D C both refer to collections at Geneva (Pampanini 1905), in the general herbarium. The other syntype (*Vieillard 2239*, ripas torrentium, s.dat., G!; isosyntypes: K!, P!), is conspecific, as is *Vieillard 2239* from Poinbay (col. 1861-1867, [y.fr.], BM!, P!).

5. Geissois lanceolata

(Guillaumin) H.C.Hopkins, comb. et stat. nov.

BASIONYM. — Geissois pruinosa var. lanceolata Guillaumin, Bulletin du Muséum national d'Histoire naturelle, sér. 2, 14: 454 (dated 1942, published 1943). — Type (as given in protologue): "Paulotche [sic] (Vieillard 2649)". — Lectotype (here designated): Montagnes de Pauloitche, 1861-1867, Vieillard 2649 (P! [fl. and fr.]; isolecto-?, P! [y.fr. and fr.]).

Geissois lanceolata Vieill. ex Guillaumin, Bulletin du Muséum national d'Histoire naturelle, sér. 2, 14: 454 (dated 1942, published 1943), nom. inval., pro syn. sub Geissois pruinosa var. lanceolata.

Remarks

The lectotype consists of several fragments on one sheet, including a twig with leaves, a separate leaflet and three short sections of stem with either mature flowers, immature fruits or mature fruits. A second sheet at P with the same label data also has several fragments, including two twigs with leaves which may or may not belong to the same gathering as the lectotype. Both sheets have labels from the Institut botanique de Caen.

The type locality, given by Guillaumin as "Paulotche" but written on the label of the lectotype as "Pauloitche" and on the probable isolectotype apparently as "Panloitche", does not appear on the contemporary map of New Caledonia by Bouquet de La Grye (1862). According to the index of localities in Tirel et al. (Tirel C., Lescot M., Morat P. & Veillon J.-M., web site: Index géoréférencé des localités de prospection botanique en Nouvelle-Calédonie. Carnets des récoltes de H. S. MacKee, http://phanero.novcal.free.fr, consulted on 7 April 2006), "Pauloitche" corresponds to "Pouanlotch", also spelled "Poinlotch", which is the name of a river to the south-east of the Ouanzangou-Taom massif. Several recent collections of this species have been made from Mt Taom and Mt Homédéboa in this area by MacKee.

A sheet at K has two labels, one with "Geissois montana Vieill." handwritten on a printed label that states "New Caledonia. From Mr. (sic) E. Caldwell. Received Dec. 1871" and the second with "Geissois, arbre, Panloitche (sic), 1868" written on it. The material bears a strong resemblance to the lectotype of G. lanceolata and is probably part of the same gathering. A similar case occurs in Codia, where a sheet at K labelled "Codia albicans Vieill., New Caledonia. From Mr. E. Caldwell. Received Dec. 1871" and "Codia albifrons (sic), arbre, mont. de Ouétendé (sic)" bears a strong resemblance to the type of *Codia cinerascens* (Pamp.) H.C.Hopkins (Vieillard 2660, montagnes de Ouatendé, Gatope, 1861-1867) and is probably part of Vieillard's gathering.

According to McKee (1966), Caldwell (no initial given) arrived in New Caledonia in 1868 from Mauritius to obtain indigenous varieties of sugar cane and he sent collections of wild plants to Kew to be studied by Joseph Dalton Hooker. The library catalogue of the Natural History Museum in London gives the author of an illustrated report on sugar cane varieties from New Caledonia from about this date (Moon & Caldwell 1870?) as "J. Caldwell". According to Barnwell & Rae (1941-1997), William James Caldwell (born 1820, died 1887) was a government official in Mauritius for some years, who returned there in 1870 with varieties of sugar cane after a short absence in the south-west Pacific; apparently he was married but his wife's name is not given. Lanjouw & Stafleu (1954) state that the donor of 331 specimens to Kew in 1871 was "Mrs (*sic*) E. Caldwell". Unfortunately no information relevant to the name Caldwell has been found in the archives at K (M. Losse pers. comm. 2005). It seems very likely that at least some of the plants received at Kew in 1871 were duplicates acquired from Vieillard, probably sent by the wife of W. J. Caldwell.

6. Geissois magnifica Baker f.

Journal of the Linnean Society, Botany 45: 300 (1921). — Type (as given in protologue): "Cap Bocage, [...] 1378". — Holotype: Cap Bocage, scrub and shrubby forest, serpentine, 6.VII.1914, *Compton 1378* (BM! barcode no. 000528704 [fl.]).

Geissois racemosa sensu Lindl., Journal of the Horticultural Society of London 6: 272 (1851); Lindley & Paxton, Paxton's Flower Garden 2: 146 (1851-1852); non Labill. (1825).

Remarks

The earliest references in print to this species (Lindley 1851; Lindley & Paxton 1851-1852) placed it under *Geissois racemosa*, the only named species at that time. They described a magnificent stove house plant introduced into cultivation as an ornamental by Moore, which was a small tree, native to bare, exposed places on the east coast of New Caledonia, with racemes 8-12 inches long and large, glaucous, amplexicaul stipules. The morphology and habitat both suggest *G. magnifica* rather than *G. racemosa*.

Moore was director of the botanical garden at Sydney and visited New Zealand, Vanuatu and New Caledonia in 1850 on the British naval vessel *Havannah* (McKee 1966). According to Guillaumin (1911a), he was responsible for the introduction of a number of species into cultivation. A sheet at K labelled "*Geissois* sp.n., New Hebrides, Lindley 1852" consists of two racemes of the unusually large flowers of *G. magnifica*. It almost certainly did not come from Vanuatu but may have been sent to Lindley by Moore or collected by Lindley from one of the stove house plants referred to above.

7. Geissois montana Vieill. ex Brongn. & Gris

Bulletin de la Société botanique de France 9: 71 (1862). — Types (as given in protologue): "prope Balade (*Vieillard*, nº 608, et in herb. expos. colon., nº 638)". — Lectotype (here designated): Balade, 1855-1860, *Vieillard 608* (P!, with labels for "Vieillard, Herb. de la Nouvelle Calédonie" and "Herbier de l'Exposition Coloniale" [buds]; isolecto-, P! p.p. [label for Institut botanique de Caen, fragment A, old fl.]; possible isolecto-, G!, K!, P! [labels for "Vieillard, Herb. de la Nouvelle-Calédonie" and "Herb. Mus. Paris", fragment B, lvs. + separate racemes of old fl.]).

Remarks

The lectotype consists of a shoot system with a raceme of buds and a separate detached raceme of buds. Two other sheets at P are labelled "*Vieillard 608*, Balade, 1855-60". The first of these consists of two twigs with leaves; the upper twig [A] has leaves that match the lectotype and old flowers, while the lower fragment [B] has slightly different leaves and buds and could be from a separate gathering. The final sheet has two detached racemes of old flowers and a twig with leaves of sort B, and so it may perhaps also be an isolectotype but is not certainly one. The sheets at K (ex Herb. Hooker, 1867) and G with the same label data as the lectotype are a good match for fragment [B].

The other syntype (*Vieillard 638*, s.loc., s.dat., Herb. Expos. Colon., [buds], P! \times 2) is conspecific. Material at P and K of *Vieillard 608* from Wagap, distributed by Lenormand in 1866 and 1867, is not part of the type; most of it is *G. montana* but one fragment at K is *G. intermedia*.

8. *Geissois montana* Vieill. ex Brongn. & Gris var. *pubescens* Guillaumin

Mémoires du Muséum national d'Histoire naturelle, sér. B, botanique 15: 37 (1964). — Type as given in protologue: "Mé Aouï, 500 m, forêt hygrophile schiste, 7/II/1951 (Guillaumin et Baumann 10.309)". — Holotype: Guillaumin & Baumann 10309, Mé Aouï, 500 m, 7.II.1951 (P!).

Geissois balansae Brongn. & Gris ex Guillaumin, syn. nov.

Remarks

Guillaumin published this name in 1964 with a description in Latin but without clear designation of a type. However, the name is considered validly published since only one collection was cited, which can be treated as the type (see Greuter *et al.* 2000: Art. 37.3).

9. Geissois polyphylla Lécard ex Guillaumin

Bulletin de la Société botanique de France 87: 244 (dated 1940, published 1941); Lécard in Lemire, La colonisation française en Nouvelle-Calédonie et Dépendances: 346 (1878), nom. inval., nom. nud.; Jeanneney, Nouvelle-Calédonie agricole: 97 (1894), nom. inval., nom. nud.; Guillaumin, Annales du Musée colonial de Marseille, sér. 2, 9: 138 (1911a), nom. inval., nom. nud. — Types (as given in protologue): "Sans localité (Lecard [sic] 61-71 B), hauts plateaux 1.200 m. (Lecard [sic]), Uaraï (Lecard [sic])". — Lectotype (of Hoogland ined.) (here designated): Uaraï, forêts de l'intérieur, 800 m, s.dat., reçu 20.X.1879, Lécard s.n. (P! [fr.]; isolecto-, BO [fide Hoogland, card index]).

The remaining syntypes at P (*Lécard 61-71^B*, s.loc., s.dat., [fr.] and *Lécard s.n.*, hauts plateaux, 1200 m, s.dat., [ster.]) are *G. polyphylla* with the exclusion of the inflorescences on both sheets, which belong to *G. hippocastanifolia*.

Remarks

Guillaumin (1941) published the name as "*G. polyphylla* [Lecard (*sic*)] ex Jeanneney (nomen)" and thus ascribed the name to both Lécard and Jeanneney. He had already used the name himself in 1911 when he ascribed it to "Lecard [*sic*] mss." though he cited the specimen as "*Lecard* [*sic*] 66-71^B", apparently in error; *Lécard* 66-71, without the superscript B, is a separate collection, of *G. balansae*.

10. Geissois pruinosa Brongn. & Gris

Bulletin de la Société botanique de France 9: 70 (1862). — Type (as given in protologue): "Mont d'Or (Vieillard, n° 607)". — Lectotype (here designated): Mont Dore, 1855-1860, Vieillard 607 (P! [with labels for "Vieillard, Herb. de la Nouvelle-Calédonie" and "Herbier de l'Exposition Coloniale", buds]; isolecto-, P! [with labels for "Vieillard, Herb. de la Nouvelle-Calédonie" and "Herb. Mus. Paris", buds]; possible isolecto-, P! [old fl.]). Remarks

Both the lectotype and isolectotype indicate "*Geissois pruinosa* A.D. Br. & A. Gris" in Brongniart's hand. The third sheet at P, which is possibly another isolectotype, has a Vieillard label and one from the Institut botanique de Caen.

11. *Geissois pruinosa* var. *macrantha* Brongn. & Gris

Bulletin de la Société botanique de France 9:70 (1862). — Types (as given in protologue): "in montibus Kanala (*Vieillard*, nº 605; Déplanche [*sic*], nº 381)". — Lectotype (here designated): Kanala, 1855-1860, *Vieillard 605* (P! [fl.]; possible isolecto-, BM!).

Geissois magnifica Baker f., syn. nov.

Remarks

The sheet at BM lacks a date of collection but was received by Henry Fletcher Hance in 1867, and may or may not be part of the type. *Vieillard 605* from Kanala, 1861-1867 (P! \times 3, K! \times 2) is also *G. magnifica* but not part of the type. The second syntype, *Deplanche 381* (s.loc., 1862 [fl.], K!, P!), is *G. pruinosa* [var. *pruinosa*].

12. Geissois racemosa Labill.

Sertum austro-caledonicum 2: 50, tab. 50 (1825). — Type (as given in protologue): none. — Lectotype (here designated): "Herb. Webbianum, ex Herb. Labillardière, Austro-Caledonia", *Labillardière s.n.* (FI [image]!, Herb. Webb no. 060970 [buds, old fl. and y.fr.]; isolecto-, BM! barcode no. 000600408, FI [image]!, Herb. Webb. no. 060971 p.p. [excl. fragment with persistent stipules], K!, P!).

Remarks

The lectotype consists of two fragments, one with leaves, old flowers and young fruit, and the other is a length of twig with racemes of buds; beneath the material are seven or eight pieces of paper containing a handwritten description and notes. A second sheet at FI comprises three fragments with leaves, one of which has racemes attached, plus a detached raceme. Two of the fragments have leaves and/or stipules that correspond reasonably well with *G. racemosa* but the third, which is sterile, has persistent stipules and is probably *G. montana*, and so is excluded from the isolectotype.

The sheet at K does not indicate that it was collected by Labillardière but has "Mr Webb" written next to the stamp for Herb. Hooker, and "*Geissois racemosa* Lab., Austro-Caledonia" on the label. It is a good match with the lectotype, as are the sheets at BM and P. The duplicates at BM, K and P were probably distributed after the original publication of the name as all indicate "*G. racemosa*", suggesting that Labillardière may have had access to several duplicates when he described this plant, and so the first FI sheet is a lectotype, rather than a holotype.

The name *G. racemosa* has occasionally been misapplied, for instance by Lindley to refer to material of *G. magnifica* (q.v.). The species illustrated by Heckel (1912: pl. 13 and probably also pl. 14) under the name *G. racemosa* appears to be *G. pruinosa*, although the text probably includes material of several taxa under this name.

13. Geissois trifoliolata Guillaumin

Bulletin de la Société botanique de France 87: 244 (1941). — Types (as given in protologue): "Sans localité (*Lecard* [*sic*] 44), hauts plateaux 1200 m. (*Lecard* [*sic*]), Uaraï (*Lecard* [*sic*])". — Lectotype (here designated): hauts plateaux, 1200 m, s.dat., reçu 20.X.1879, *Lécard s.n.* (P! [fl.]).

- *Geissois trifoliata* Lécard *in* Lemire, *La colonisation française en Nouvelle-Calédonie et Dépendances*: 344 (1878), nom. inval., nom. nud.; habitat and uses given; refers to collections from Uaraï and mentions this species as no. 44, probably corresponding to the collection labelled *Lécard* 44.
- *Geissois trifolita* Jeanneney, *Nouvelle-Calédonie agricole*: 97 (1894), nom. inval., nom. nud.; name attributed to Pancher; no specimen cited.

Remarks

The lectotype has a twig with two leaves and a detached raceme with flowers, and is the only one of the syntypes that is fertile. The leaves of other syntypes (*Lécard 44*, s.loc., s.dat., P! × 2; *Lécard s.n.*, Ourai, ravins serpentineux, 13.IX.1876, P!) are very similar to one another but not an exact match for those of the lectotype. However, the label of one of these sterile sheets (*Lécard s.n.*, Ourai) indicates that the ovary is hairy, suggesting either that the raceme has been attached to the wrong sheet and in fact belongs with the slightly smaller leaves of the syntypes, or that all the specimens are part of the same gathering. *Geissois trifoliolata* is a poorly known taxon with only a handful of recent collections resembling those of Lécard.

Although the epithet "*trifolita*" was attributed by Jeanneney to Pancher, the author citation of *G. trifoliolata* is "Guillaumin", and not "Pancher ex Guillaumin" since Guillaumin's name is not identical to Pancher's.

14. *Geissois velutina* Guillaumin ex H.C.Hopkins, sp. nov.

Geissois velutina Guillaumin, Mémoires de Muséum national d'Histoire naturelle, sér. B, botanique 15: 38 (1964), nom. inval., no type indicated. Specimens cited: "Mgne des Sources: cote 500, forêt mésophile de hauteur, serpentine, 30/XII/1950 (Hurlimann 557); [...] Mois de mai, forêt hygrophile, serpentine, 14/VIII/1951 (Baumann 15.124)". — Holotype (here designated): New Caledonia, Haute Ni, 1020 m, 9.VI.1993, MacKee 46248 (P! [fr.]; iso-, NOU!, P!).

Remarks

Guillaumin's name is validly published here by the designation of a holotype and reference to his description in Latin, published in 1964. Neither of the collections cited by Guillaumin has been designated as the type because the MacKee specimen is better material, with several duplicates. However, *MacKee 46248*, *Hurlimann 557* and *Baumann 15124* are all conspecific and about 10 other collections are known.

15. Vesselowskya serratifolia Guillaumin

Annales du Musée colonial de Marseille, sér. 2, 9: 60 (1911b); Guillaumin, *ibid.*, 10: 162 (1912); Bulletin de la Société botanique de France 68: 231 (1921); Bulletin de la Société botanique de France 87: 246 (1941); Notulae Systematicae (Paris) 14: 280 (1952); Mémoires du Muséum national d'Histoire naturelle, sér. B, botanique 15: 39 (1964). — Types (as given in protologue): [Pennel (sic) = Peunel] "nº 419" [Bourail] (holo-, not traced); "[...] par Cribs et par Lecard, nº 71ª, à Canala [...]".

Remarks

Guillaumin (1911b) published the name Vesselowskya serratifolia to describe a plant collected by M. Peunel, always cited by Guillaumin as "Pennel", near Bourail. According to Guillaumin, Peunel made a collection of 431 numbers from around Bourail, where he was director of the prison. His specimens were deposited in the Musée colonial de Marseille, which no longer exists. While some Peunel collections are now at P, 419 has not been found among them. According to Vegter (1983), there is material collected by Peunel at the herbarium of the Université de Provence, Centre Saint-Charles, Marseille (MARS), where two specimens are extant, Peunel s.n. (s.loc., s.dat., image!) and Peunel 125 (number in Guillaumin's hand, s.loc., s.dat., image!). Although Guillaumin (1912) indicated that *Peunel 125* came from Bourail, there is nothing on the specimen label to confirm this.

It is possible that there may be further Peunel specimens in Marseille, at the Muséum d'Histoire naturelle, Palais Longchamp (no abbreviation), since their website (http://www.mairie-marseille. fr/vivre/culture/museum_3.htm, consulted 4 April 2006) indicates that part of the herbarium of the Musée colonial is now there, but unfortunately I have been unable to find out whether this includes the type of *V. serratifolia*. Until I have evidence that *Peunel 419* cannot be found in Marseille, I am refraining from designating a lectotype.

In the protologue, Guillaumin (1911b) mentioned two other collections of *V. serratifolia* "par Cribs et par Lecard [*sic*], nº 71ª, à Canala, sur les sommets des montagnes ferrugineuses et dénudées, à 700 mètres d'altitude" which are syntypes. At P, neither *Cribs s.n.* nor *Lécard 71a* gives a locality, but *Lécard s.n.* indicates the locality Canala.

When Guillaumin (1911b) published the name *V. serratifolia*, he obviously considered that the vegetative characters of the sterile material which he had seen were similar to those of "*Geissois rubri-flora*" (*sic*) (= *Vesselowskya rubifolia*) from Australia. However, in 1941 and subsequently, he suggested that the specimens were actually the juvenile form of *Geissois*, though he continued to use the name *Vesselowskya* in publications on Cunoniaceae from New Caledonia (e.g., Guillaumin 1952, 1964).

Guillaumin & Hamel (1964) said that seedlings raised from the seeds of MacKee 7959 were the same thing as Vesselowskya serratifolia, and they identified MacKee 7959 as G. pruinosa though it is in fact G. magnifica. The specimens Cribs s.n., Lécard 71a and s.n., and Peunel 125 and s.n. are indeed all seedlings of Geissois and are all consistent with G. pruinosa or one of its close relatives. However, in many cases it does not appear possible to distinguish the seedlings of different species of Geissois from one another on the basis of their morphology, but only by association with the parent plant. For this reason, even if Peunel 419 were traced, it is unlikely that the synonymy of this name could be clarified. The morphology of *Geissois* seedlings has been described by Guillaumin (1964; under V. serratifolia), ORSTOM (1968; G. racemosa), and Fogliani et al. (unpubl. data; G. pruinosa).

INVALIDLY PUBLISHED NAMES

1. Geissois cartilaginea Vieill. ex Brongn. & Gris

Bulletin de la Société botanique de France 9: 70 (1862), nom. inval., pro syn. sub Geissois pruinosa Brongn. & Gris var. macrantha Brongn. & Gris.

2. Geissois glauca Pancher ex Guillaumin

Annales du Musée colonial de Marseille, sér. 2, 9: 138 (1911a), nom. inval., pro syn. sub G. pruinosa Brongn. & Gris.

Remarks

The name "*Geissois glauca*" is written on *Pancher* 4463 at P, which is *G. pruinosa*.

NAMES IN *GEISSOIS* FROM VANUATU AND THE SOLOMON ISLANDS

1. Geissois denhamii Seem.

Flora vitiensis 3: 109 (1866) as "*Denhami*". — Type (as given in protologue): "in Herb. Mus. Brit.; [...] Aneiteum, New Hebrides (M'Gillivray!) [*sic*]". — Holotype: *MacGillivray s.n.*, Aneiteum, (BM! barcode 000600409 [fl., y.fr.]; possible iso-, K! [Bot. no. 927, XI.1853]).

Remarks

The specific epithet honours Denham, who was captain of the H.M.S. Herald during its voyage of exploration to the south-west Pacific and Australia between 1852 and 1861 (David 1995). During this voyage, MacGillivray was the ship's naturalist until 1855, studying ethnography, animals and plants, and William Grant Milne the assistant naturalist until 1858, mostly involved in collecting plants. Both apparently collected material of Geissois denhamii though the dates and circumstances of the various collections are not entirely clear. Their plant specimens were sent to William Jackson Hooker at Kew, who criticized their labelling, and Milne also accused MacGillivray of passing off some of his (Milne's) duplicate specimens as his own (MacGillivray's) (David 1995).

Naming the species for Denham suggests that the type would have been collected during the voyage of the Herald, which visited Aneiteum from 7 to 29 November 1853 and again briefly from 28 November to 1 December 1854 (David 1995). The holotype at BM has no original label although a handwritten date on the reverse side of the sheet appears to be 1854. A recent typed label on the upper side of the specimen gives the date as 1859, apparently in error. However, after being dismissed from the *Herald* in 1855 for dereliction of duty, MacGillivray made further collections in the New Hebrides and New Caledonia on his own account between 1858 and 1860. Guillaumin (1911a) said that plant specimens from this period were acquired by P, though he may have been referring particularly to specimens from New Caledonia. David (1995) reported that 795 plant specimens were bought from MacGillivray by the British Museum between 1855 and 1863; they must have included some from the voyage of the Herald as they came not only from the islands in the Pacific Ocean but also the South Atlantic. If the date on the underside of the type is indeed 1854, then this specimen was most probably collected during the voyage of the Herald and sold to BM by MacGillivray. Seemann must have known the history of the collections as he had been the botanist on a previous voyage of the Herald, from 1847 to 1851, under the command of Henry Kellett, and he was

unable to accompany Denham because he was still writing up the results of that previous voyage (David 1995).

Material at K from the voyage of the *Herald* under Denham consists of three sheets. *MacGillivray 927* closely resembles the holotype and may perhaps be an isotype. In addition, two sheets are labelled "*Milne 263*, Aneiteum, Nov. 1853" and also consist of very similar material, possibly from the same plant. The MacGillivray specimen and one sheet of Milne's have detailed pencil sketches of flowers and fruits. Milne's second sheet has an envelope labelled "Isle of Pines, *MacGillivray & Milne*" containing flowers. However, they appear to belong to *G. denhamii* and so are unlikely to come from the Isle of Pines at the south end of New Caledonia, although the *Herald* did call there in 1853 before landing at Aneiteum.

2. Geissois parviflora Guillaumin

Bulletin du Muséum national d'Histoire naturelle, sér. 2, 9: 287 (1937). — Type (as given in protologue): "Erromango: [...] versant ouest du massif occupant le Nord de l'île, 390 m [...]". — Lectotype (here designated): [Vanuatu], Erromango, versant W du massif occupant le N de l'île, 390 m, 2^e voyage 1935-1936, 19.II.1936, *M. et Mme Aubert de la Rüe s.n.* (P! [buds]; isolecto-, P! [leaf]).

Geissois denhamii Seem. (*fide* Hoogland, unpublished notes at P), **syn. nov**.

3. Geissois pentaphylla C.T.White

Journal of the Arnold Arboretum 31: 86 (1950); C.T. White ex F.S. Walker, Forests of the British Solomon Islands Protectorate: 110 (1948), nom. inval., description in English. — Type (as given in protologue): "Santa Cruz Group: Vanikoro: near Lamia River, F.S. Walker BSIP 217, Nov. 1945". — Lectotype (here designated): Solomon Islands, Santa Cruz Group, Vanikoro, near Lamia R., Iowland rain forest on fern-covered hillside subject to fire, 30.XI.1945, Walker BSIP 217 (BRI! sheet no. 023150 [fl. and fr.]; isolecto-, BRI! sheet no. 023151, K! × 2; also A [fide Hoogland's card index, but not listed in Harvard University Herbaria Index of Botanical Specimens, http://cms.huh.harvard.edu/databases/specimen_index. html, consulted 11 April 2006]).

Remarks

Material at BRI (seen by me on loan at HO in December 2000) consists of two sheets: the lectotype has broken leaf material, flowers and fruits, and a typed sheet with the description from Walker (1948), and the isolectotype has mostly whole, detached leaflets and two packets. Both sheets have previously been labelled "holotype".

The four sheets of Walker's collection that I have seen all have labels from Queensland Herbarium, and although the collection number indicates "BSIP", this specimen does not belong to the BSIP number series of the herbarium in Honiara (BSIP), which was not founded until 1965 (Holmgren *et al.* 1990). Some later collections of this species, however, are numbered in the Honiara series.

NAMES IN GEISSOIS FROM FIJI

Types for the Fijian taxa were indicated by Smith (1952, 1985) and only very minor problems remain, such as the need to convert to "lectotype" some of the "holotypes" indicated by Smith (for G. imthurnii, G. superba and G. ternata var. serrata) and the need to lectotypify G. ternata. Since Geissois in Fiji was revised recently (Smith 1985) I have not attempted to see all the type material, and these names are included for the sake of completeness. Images of types at US and NY were viewed on the websites of the US National Herbarium Type Specimen Register (http://ravenel. si.edu/botany/type, consulted on 30 March 2006) and the New York Botanical Garden's Virtual Herbarium (http://sciweb.nybg.org/science2/ VirtualHerbarium.asp, consulted on 30 March 2006). Sheet numbers for types at BISH and GH were taken from their on-line databases (http:// www.bishopmuseum.org/research/natsci/botany/ dbandkeys/botanydb.html, and http://cms.huh. harvard.edu/databases/specimen_index.html respectively, both consulted on 30 March 2006). Details of locality and date of collection are given from the protologues and are not repeated when discussing the holotypes or lectotypes for these names as I know of no ambiguities concerning these data.

1. Geissois imthurnii Turrill

Journal of the Linnean Society, Botany 43: 19 (1915). — Type (as given in protologue): "Nandarivatu, in flower March 7th 1906, *im Thurn*, 137". — Lectotype (here designated): *im Thurn* 137 (K! [fl., y.fr.]; isolecto-, BM! barcode no. 000600410, K!).

Remarks

Smith (1952, 1985) indicated that the holotype was at K, where William Bertram Turrill had worked. However, there are two sheets of this number at K and the lectotype has pencil drawings of floral details, presumably by Turrill, attached.

2. Geissois stipularis A.C.Sm.

Journal of the Arnold Arboretum 33: 123 (1952). — Type (as given in protologue): "Fiji: Viti Levu: Naitasiri: Tamavua woods, 7 miles from Suva, alt. 150 m., Aug. 9, 1927, Gillespie 2118 (Bish type, GH, US)". — Holotype: Gillespie 2118 (BISH sheet no. 502489, photo at K! [ster.]; iso-, GH barcode no. 43317, US [image]!, sheet no. 01596263, barcode no. 00097225).

3. Geissois superba Gillespie

Bulletin of the Bernice P. Bishop Museum 83: 9, fig. 9 (1931). — Type (as given in protologue): "Fiji, Viti Levu, Tholo North Province, trail between Nandarivatu and Vatuthere, altitude 900 meters, December 10, 1927, John W. Gillespie. Type no. 4274". — Lectotype (designated by Smith 1952): Gillespie 4274 (BISH sheet no. 502490; isolecto-, BISH × 2 sheet nos. 502488 and 501838, GH barcode no. 43318, K! [fl.], NY [image]! barcode no. 356076 [fl.], US [image]! [fl.], sheet no. 02088552, barcode no. 00097226).

Remark

Smith (1985) referred to the sheet he designated as the type in 1952 as a holotype but this should be treated as a lectotype.

4. Geissois ternata A.Gray

United States Exploring Expedition Phanerogamia: 679 (1854); United States Exploring Expedition, Atlas Phanerogamia: pl. 86 (1856). — Type (as given in protologue): "Feejee Islands; common on the mountains of Muthuata and Ovolau, between the altitudes of 500 and 2,000 feet".

Remarks

According to Smith (1952: 127): "The type material, obtained by the U.S. Exploring Expedition, comes from at least two plants, [...] U.S. Expl. Exped. (GH, K, NY, US 47817 and 47818 Type)" and in Smith (1985: 17) he indicated that: "The two US sheets may be taken together as the holotype; 47817 bears fruits and 47818 flowers. Possibly the whole of the material is from more than two plants". The sheets at GH (now with barcode no. 43319), K and NY (now with barcode no. 356079, [fl.]) were referred to as putative isotypes. Without studying both sheets at US (sheet no. 00047818, barcode no. 00097228 and sheet no. 00047817, barcode no. 00097227) and all the putative isotypes in detail, lectotypification would be premature. A further syntype at P has fruits.

5. Geissois ternata var. glabrior A.C.Sm.

Journal of the Arnold Arboretum 33: 127 (1952). — Type (as given in protologue): "Vanua Levu: Mbua: Upper Ndama River Valley, Apr. 24, 1934, in dense forest at 100-300 m, *Smith 1590* (Bish, GH, K, NY type, US)". — Holotype: *Smith 1590* (NY [image]!, barcode no. 346077 [old fl. and fr.]; iso-, BISH, sheet no. 502506, GH barcode no. 43320, K! [y.fr.], P!, US [image]! [old fl. and fr.], sheet no. 01676258, barcode no. 00097229).

6. Geissois ternata var. minor A.C.Sm.

Journal of the Arnold Arboretum 33: 128 (1952). — Type (as given in protologue): "Vanua Levu: [...] Thakaundrove: Summit of Mt. Mbatini, alt. 1030 m., Nov. 29, 1933, Smith 679 (Bish, GH, K, NY type, US)". — Holotype: Smith 679 (NY [image]!, barcode no. 356078 [old fl. and y.fr.]; iso-, BISH sheet no. 502507, GH barcode no. 43321, K! [buds, fl. and fr.], P!, US [image]! [old fl. and y.fr.], sheet no. 01672909, barcode no. 00097230).

7. Geissois ternata var. serrata A.C.Sm.

Journal of the Arnold Arboretum 33: 127 (1952). — Type (as given in protologue): "Waya, Yasawa Group: North of Yalombi, woods along Olo Creek, alt. 120-240 m, July 19, 1937, *St. John 18128* (Bish type, US)". — Lectotype (designated by Smith 1985): *St John 18128* (BISH sheet no. 502508, photo at K! [fr.]; isolecto-, BISH sheet no. 501890, K! [fr.], P!, US [image]!, sheet no. 01967801, barcode no. 00097231).

Remarks

Smith (1985) indicated that one sheet at BISH was the holotype and another an isotype. However, since this was not made clear in the protologue, it is more appropriate to designate one as a lectotype and the other an isolectotype.

INDEX OF NAMES ASSOCIATED WITH THE GENUS *GEISSOIS* S.L.

New names in bold; <u>names of accepted taxa un-</u><u>derlined</u>; validly published synonyms in normal face; *invalidly published names and spelling variants in italics*.

Dates, literature citations and basionyms are only included for the Australian taxa since these names were not dealt with in the text. For these names, information has been adapted from the website of the Australian Plant Names Index (http://www.anbg.gov.au/apni, consulted 10 August 2005), Chapman (1991) and Schimanski & Rozefelds (2002). For accepted taxa, the geographical distribution is indicated.

- <u>Geissois balansae</u> Brongn. & Gris ex Guillaumin, New Caledonia
- <u>Geissois benthamiana</u> F.Muell., *Fragmenta Phytographiae Australiae* 5: 16 (April 1865), **Australia**
- Geissois benthamii F.Muell., Fragmenta Phytographiae Australiae 5: 180 (1866) as "Benthami", nom. illeg., nom. superfl. = <u>Geissois benthamiana</u>
- <u>Geissois biagiana</u> (F.Muell.) F.Muell., *Fragmenta Phytographiae Australiae* 5: 180 (December 1866) (basionym: Weinmannia biagiana)
- Geissois bradfordii H.C.Hopkins, ined. (see Hopkins in press), New Caledonia
- *Geissois cartilaginea* Vieill. ex Brongn. & Gris, nom. inval., pro syn. sub Geissois pruinosa var. macrantha
- Geissois denhamii Seem., Vanuatu
- *Geissois glauca* Pancher ex Guillaumin, nom. inval., pro syn. sub <u>Geissois pruinosa</u>
- Geissois hippocastanifolia Guillaumin, New Caledonia
- Geissois hirsuta Brongn. & Gris, New Caledonia
- Geissois imthurnii Turrill, Fiji
- Geissois intermedia Vieill. ex Pamp., New Caledonia
- Geissois lachnocarpa (F.Muell.) Maiden, *Forest Flora New South Wales*: 6, tab. 229 (September 1917) (basionym: Weinmannia lachnocarpa F.Muell.) = <u>Pseudoweinmannia lachnocarpa</u> (F.Muell.) Engl., **Australia**
- Geissois lanceolata (Vieill. ex Guillaumin) H.C.Hopkins, comb. et stat. nov., New Caledonia
- Geissois magnifica Baker f., New Caledonia

- <u>Geissois montana</u> Vieill. ex Brongn. & Gris, New Caledonia
- Geissois montana var. pubescens Guillaumin = <u>Geissois</u> <u>balansae</u>, **syn. nov.**
- Geissois parviflora Guillaumin = <u>Geissois denhamii</u>, syn. nov.
- Geissois pentaphylla C.T.White, Solomon Islands
- Geissois polyphylla Lécard ex Guillaumin, New Caledonia
- Geissois pruinosa Brongn. & Gris, New Caledonia
- Geissois pruinosa var. lanceolata Vieill. ex Guillaumin = <u>Geissois lanceolata</u>
- Geissois pruinosa var. macrantha Brongn. & Gris = <u>Geissois magnifica</u>, syn. nov.
- Geissois racemosa Labill., New Caledonia
- Geissois rubifolia F.Muell., *Fragmenta Phytographiae Australiae* 2: 82 (August 1860) = basionym of Weinmannia rubifolia (F.Muell.) Benth., *Windmannia rubifolia* (F. Muell.) Kuntze, and <u>Vesselowskya rubifolia</u> (F.Muell.) Pamp., **Australia**
- *Geissois "rubriflora*", Guillaumin (1911b) = misspelling of Geissois rubifolia
- Geissois stipularis A.C.Sm., Fiji
- <u>Geissois superba</u> Gillespie, Fiji
- Geissois ternata A.Gray, Fiji
- <u>Geissois ternata</u> var. <u>ternata</u> A.Gray, Fiji
- Geissois ternata var. glabrior A.C.Sm., Fiji
- Geissois ternata var. minor A.C.Sm., Fiji
- Geissois ternata var. serrata A.C.Sm., Fiji
- *Geissois trifoliata* Lécard *in* Lemire, nom. nud. = <u>Geissois trifoliolata</u>
- Geissois trifoliolata Guillaumin, New Caledonia
- *Geissois trifolita* Jeanneney, nom. nud. = <u>Geissois tri-</u> <u>foliolata</u>
- Geissois velutina Guillaumin ex H.C.Hopkins, sp. nov., New Caledonia
- Gissois, orthographic variant of Geissois, see Post & Kuntze (1903)
- Vesselowskya serratifolia Guillaumin = Geissois, *fide* Guillaumin (1941) = Geissois pruinosa, *fide* Guillaumin & Hamel (1964) = Geissois sp., *mihi*
- Weinmannia benthamiana F.Muell., Fragmenta Phytographiae Australiae 7: 150 (1871), nom. inval., nom. nud. = <u>Geissois benthamiana</u>
- Weinmannia benthamii (F.Muell.) F.Muell., Fragmenta Phytographiae Australiae 6: 188 (1868) as "Benthami" – nom. illegit., nom. superfl. (basionym: Geissois benthamii)
- Weinmannia benthamii var. microcarpa Domin, Bibliotheca Botanica 22 (89): 708 (January 1926) = <u>Geissois</u> <u>benthamiana</u> fide Schimanski & Rozefelds (2002)
- Weinmannia benthamii var. typica Domin, Bibliotheca Botanica 22 (89): 708 (January 1926), nom. inval. = Geissois benthamiana
- Weinmannia biagiana F.Muell., Fragmenta Phytographiae

Australiae 5: 16 (April 1865), basionym of <u>Geissois</u> biagiana

Windmannia benthamii (F.Muell.) Kuntze, Revisio Generum Plantarum 1: 228 (1891) = <u>Geissois bentha-</u> <u>miana</u> [Windmannia P.Browne is a nom. rejic.]

Windmannia biagiana (F.Muell.) Kuntze, Revisio Generum Plantarum 1: 228 (1891) = <u>Geissois biagiana</u> [Windmannia P.Browne is a nom. rejic.]

LIST OF CURRENTLY ACCEPTED SPECIES BY GEOGRAPHICAL AREA (subspecific taxa not included)

FIJI

Geissois imthurnii Turrill Geissois stipularis A.C.Sm. Geissois superba Gillespie Geissois ternata A.Gray

VANUATU Geissois denhamii Seem.

SANTA CRUZ, SOLOMON ISLANDS Geissois pentaphylla C.T.White

NEW CALEDONIA Geissois balansae Brongn. & Gris ex Guillaumin Geissois bradfordii H.C.Hopkins, ined. Geissois hirsuta Brongn. & Gris Geissois hirsuta Brongn. & Gris Geissois intermedia Vieill. ex Pamp. Geissois lanceolata (Vieill. ex Guillaumin) H.C.Hopkins Geissois magnifica Baker f. Geissois montana Vieill. ex Brongn. & Gris Geissois polyphylla Lécard ex Guillaumin Geissois pruinosa Brongn. & Gris Geissois racemosa Labill. Geissois trifoliolata Guillaumin Geissois velutina Guillaumin

AUSTRALIA Geissois benthamiana F.Muell. Geissois biagiana (F.Muell.) F.Muell.

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CORRECTION

In Hopkins (2005) the page numbers given for the publication of the genus *Codia* J.R.Forst. & G.Forst. and the species *Codia montana* J.R.Forst. & G.Forst. in their *Characteres Generum Plantarum* were wrong. The pages numbers given, p. 59 and p. 60 respectively, are for the second edition, published in 1776. The correct page number for both names in the first edition (n.v.), published in 1775, is p. 30. The figure number (tab. 30) is the same in both editions. I am grateful to Frédéric Tronchet for pointing this out to me. Information on publication dates and publishers has been taken from *Taxonomic Literature 2* (see http://tl2.idcpublishers. info, consulted 10 April 2006).

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