

Typification of some names in *Eucalyptus* (Myrtaceae), Part 1

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Abstract

Eleven names in *Eucalyptus* are newly typified, and the typification is clarified for a further four names. The species involved are all indigenous to Queensland or New South Wales. Full discussion of relevant type specimens is provided, and other nomenclatural notes are included. Information provided in recent nomenclatural references for eucalypts is discussed, especially where the conclusions differ from the views expressed here.

Introduction

There remain significant numbers of accepted *Eucalyptus* species names that have never been formally typified. This paper clarifies the typification for 15 names in *Eucalyptus*, including eleven names that are newly typified. Nomenclatural information offered by Brooker et al. (1984), Chippendale (1988), Hill (2002–04) and Slee et al. (2006) are discussed, especially where it is inconsistent or differs from the current view. Some miscellaneous errors from these publications are also brought to notice.

The Articles referred to in this paper e.g. Article 9.5, are all from the latest version of the International Code for Botanical Nomenclature (McNeill et al. 2006).

The species are arranged alphabetically by currently accepted name.

Typification

Eucalyptus argophloia Blakely, Key Eucalypts 256 (1934).

Type: Queensland. 12 miles N of Chinchilla, R.C. Beasley s.n., May 1933 (**lecto** NSW [NSW40185], here designated; **isolecto** BRI [AQ094179]; K [K000347651]).

The protologue says “between 6 and 7 miles north of Chinchilla; 1 mile east of Branch Creek, Burncluith, about 12 miles north of Chinchilla. It is more plentiful in the latter locality (R.C. Beasley, April and May 1933)”.

There are two known gatherings by Beasley that correspond to the citation in the protologue. One has a label saying “12 miles N of Chinchilla, May 1933”. Specimens from this gathering are present at NSW, BRI and K. The sheet at NSW is here chosen

as the lectotype. It has pressed but unmounted branchlets bearing juvenile leaves, adult leaves, mature buds and flowers. There are some mature fruits in a packet.

Specimens from the second gathering are present at BRI and K. They have a Queensland Herbarium label saying “Chinchilla, April 1933, R.C. Beasley” and bear the same range of material.

Eucalyptus bridgesiana R.T.Baker, Proc. Linn. Soc. New South Wales 23: 164 (1898).

Type: New South Wales. Albury, *Andrews s.n.*, 21 June 1897 (**lecto** NSW [NSW314589], here designated).

The protologue states “Hab. - VICTORIA: Gippsland (‘But But,’ ‘Apple- tree,’ ‘Apple- tree Box,’ ‘White Box,’ A. W. Howitt, F.G.S.). N.S.WALES: Colombo (‘Apple-top Box,’ W. Baeuerlen); Albury (‘Apple,’ Dr. Andrews); Gerogery (‘Woolly-butt,’ J. Manns); Rylstone (‘Woolly-butt,’ R.T.B.); Bathurst (‘Bastard Box,’ W. Woolls).”

The Gerogery and Bathurst specimens are apparently no longer extant; the Colombo specimen does not match the protologue and belongs to a different species (*E. angophoroides*); the Rylstone collection is of poor quality with immature fruits and leaves only; one of the Albury sheets (NSW314593) comprises mixed material (this species and *E. goniocalyx*); the Gippsland material is atypical, and was collected from an area where this species and *E. angophoroides* are thought to intergrade (Brooker & Slee 1996).

The sheet chosen here as lectotype (NSW314589) has pressed but unmounted branchlets bearing adult leaves, immature fruits, two mature fruits in a packet and a few mature fruits attached to a twig. All material is in agreement with the protologue. It is consistent with a single gathering, and was collected before the publication of the name.

The identity of “Dr Andrews” is not known. This person does not seem to be any of the four “Andrews” listed in Hall (1978). Baker gave no clarification in the protologue, or in any other publication I have seen. Many New South Wales “Andrews” collections from around the turn of the century are referable to Ernest Clayton Andrews, but he was never referred to as “Doctor” Andrews.

Eucalyptus conica H.Deane & Maiden, Proc. Linn. Soc. New South Wales 24: 612 (1900); *E. baueriana* var. *conica* (H.Deane & Maiden) Maiden, Proc. Linn. Soc. New South Wales 27: 216 (1902).

Type: New South Wales. 2 miles NE of Cowra, *R.H. Cambage s.n.*, 24 July 1899 (**lecto** NSW [NSW320940], here designated).

The protologue does not specifically mention any specimens, but it does say “on the Lachlan [River] it is called ‘Apple Box’ (R.H.C.)”, and this may be considered a citation. “R.H.C.” stands for Richard Hind Cambage, a noted botanical collector of the late 19th and early 20th centuries. The town of Cowra is situated on the Lachlan River. There are five Cambage specimens at NSW collected from near Cowra, apparently associated with three gatherings: two from “2 miles NE of Cowra” with different collection dates, and one from “6 miles SE of Cowra, 200 yards from the Lachlan River”. All are consistent with the protologue, and all were collected before the publication of the name. The sheet NSW320940 is here selected as the lectotype. It has pressed but unmounted

branchlets bearing adult leaves, mature buds and open flowers, and there is an attached packet containing a single fruit.

Hill (2002–04) suggested that *Eucalyptus baueriana* var. *conica* was described as a new taxon, and so he proposed a separate type specimen for the varietal name. However I have taken the view that Maiden (1902) intended “var. *conica*” as a new combination.

Eucalyptus decorticans (F.M.Bailey) Maiden, Crit. revis. Eucalyptus 5: 231 (1921); *E. siderophloia* f. *decorticans* F.M.Bailey, Queensland Agric. J. 26: 127 (1911).

Type citation: “Hab.: Eidsvold, Dr. T.L. Bancroft”. **Type:** Queensland. Eidsvold, *T.L. Bancroft s.n.*, anno 1911 (**lecto** BRI [AQ 099803], here designated (possibly holo)).

Bailey’s description of the basionym in the Queensland Agricultural Journal is very brief, mentioning only the tree and the decortication of bark from the upper branches. He failed to describe the leaves, buds, flowers or fruits. It is nevertheless a valid description. Consideration was given by the present author to the possibility that Maiden’s description of *E. decorticans* in *Crit. revis. Eucalyptus* 5: 231 could be thought of as a *sp. nov.*, rather than a new combination. However, a statement by Maiden therein quashes that possibility, viz. “I have therefore pleasure in bringing Mr. F. M. Bailey’s forma *decorticans* (of *E. siderophloia*) up to specific rank ...”.

Chippendale (1988) cited the type of *E. decorticans* as “Eidsvold, Qld, *T.L. Bancroft s.n.*; holo: BRI; iso: FRI, K.” However, the situation is not so straightforward.

The type folder for *E. decorticans* at BRI currently contains seven sheets of pressed and mounted material. All of that material is consistent with the taxon named by Bailey. That is, it matches other specimens collected of the ironbark species with smooth upper branches occurring in the Eidsvold area.

None of these seven sheets has an original label written by Bailey. Instead, all have a relatively recent type-written label stating “Eidsvold Burnett District. Queensland./ DR. T. L. Bancroft./ (Part of the type gathering of *E. siderophloia* F. V. Muell. var. *decorticans* F. M. Bailey)”.

One sheet in particular casts serious doubt on the status of these specimens as original material. The said sheet has a determinavit slip with the word “Holotype” anonymously written on it. The sheet includes some branchlets bearing juvenile leaves, tied together with some cotton thread. Attached to this cluster of branchlets is a small label, also attached by cotton thread, which reads “Sucker leaves of *E. decorticans*”, in the handwriting of T.L. Bancroft. Because the epithet *decorticans* was in existence when the label was written, it is clear that the material on this sheet is not original. By association, the other six sheets are almost certainly not original material. Furthermore, it seems highly unlikely that all seven sheets are from the same gathering, as they variously include immature buds, mature buds, immature fruits and mature fruits.

I have found only one sheet at BRI (AQ 099803) that has a label with Bailey’s handwriting and has plant material conspecific with other collections of the gum-topped ironbark from the Eidsvold area. This sheet bears two pressed and mounted branchlets with adult leaves, and in a fragment packet there are two mature fruits. The label is old and has faintly stamped on it “Hab Eidsvold/ Dr Bancroft/ 1911”. On this label, F.M. Bailey has written “Eucalyptus ?leucoxydon, FvM/ cannot be sure from the specimen. the only eucalypt specimen shoots bearing fruits in the packet/ FMB.” The date “1911” stamped on the label is worrying, as this is the same year as the publication of the

name. However, the fact that Bailey's *E. ?leucoxydon* identification is written actually on Bancroft's "1911" label supports the idea that the label and hence the specimen were available to Bailey before the publication of *E. siderophloia* f. *decorticans*. Unfortunately there is no surviving correspondence between Bailey and Bancroft that is relevant to this species.

This sheet is accepted as original material, and in view of the lack of other relevant specimens bearing Bailey's hand, it is here designated as lectotype.

Eucalyptus dunnii Maiden, Proc. Linn. Soc. New South Wales 30: 336 (1905).

Type: New South Wales. Acacia Creek, Macpherson Range, *W. Dunn* 88, 1 May 1905 (**holo** NSW (3 sheets) [NSW313318, NSW314312 & NSW313319]).

The protologue says "Acacia Creek, Macpherson Range, New South Wales side" and "(William Dunn, Forest Guard; specimen No. 88)". The name was published in September 1905 (Chapman 1991).

Maiden referred to a single specimen when he specified "W. Dunn 88", and it is clearly the holotype, but due to mistakes by later authors, some clarification is necessary here.

There are two specimens at NSW that were undoubtedly used by Maiden when drawing up his description:

1. a collection made on the 1st May 1905, comprising three sheets of pressed but unmounted material. Two sheets have branchlets bearing adult leaves, mature buds and flowers and an occasional fruit. The third sheet bears branchlets with juvenile leaves. Attached to one of the sheets of flowering specimens is a letter by Dunn prefaced 'No. 88'. The sheet bearing the juvenile leaves also has an original label by Dunn saying "No. 88/Eucalyptus "White Gum"/suckers/W.D.". These three sheets comprise the holotype. No duplicates of it are known.

2. a collection made on the 8th May 1905, comprising a single sheet. It bears mature fruits and immature buds, and there is no indication of a collector number.

Chippendale (1988) cited the type as "Acacia Ck, Macpherson Ra., NSW, 8 May 1905, W. Dunn 88 (holo: NSW; iso: BM, K)". In doing so, he has confused the two gatherings outlined above by associating the collection number "88" with the collection dated "8th May". Furthermore, the specimens at K and BM cited by Chippendale (*loc. cit.*) as isotypes are not original material. They were collected in October 1905, after the publication of the name.

Similarly, Hill (2002-04) cited a specimen at BRI as an isotype. The BRI specimen is also part of Dunn's October 1905 gathering and therefore not original material.

Eucalyptus fibrosa subsp. ***nubilis*** (Maiden & Blakely) L.A.S. Johnson, Contrib. New South Wales Nat. Herb. 3(3): 119 (1962), as *E. fibrosa* subsp. *nubila*; *E. siderophloia* var. *glauca* Maiden, Proc. Linn. Soc. New South Wales 24: 461 (1900); *E. nubilis* Maiden & Blakely, Crit. revis. Eucalyptus 8: 38 (1929).

Type: New South Wales. Dubbo-Coonamble road, *J.L. Boorman s.n.*, November 1897 (**lecto** NSW [NSW129812], *fide* Brooker et al. (1984: 522)).

The protologue says "Dubbo district (H. Deane, Nov., 1892; J.V. de Coque and J.L. Boorman, Nov., 1897)."

Brooker et al. (1984) have lectotypified the name thus: “Types: *E. fibrosa*, near the Brisbane River, Queensland, F. von Mueller; subsp. *nubila*, Dubbo-Coonamble Road, New South Wales, J.L. Boorman (NSW 129812)”.

The lectotype is labelled *Eucalyptus siderophloia* var. *glauca* by Maiden, and it has written on the label “NSW 129812”. This sheet gives the locality as “Dubbo-Coonamble road”, it gives Boorman as collector with the date “Nov 1897”. It comprises pressed but unmounted branchlets bearing juvenile leaves, adult leaves and mature fruits.

At first, it would seem that this specimen may not be one of those cited in the protologue, because the name of De Coque does not appear on the label. However, attached to the sheet is a portion of a letter (probably written by Boorman) that says (in part) “This is the plant that Mr D Coque wished Mr Maiden to make a special note of as he is of an opinion that it is quite distinct from any of the other three ironbarks of the district...”

Maiden, having read this, presumably felt that both Boorman (the specimen collector) and De Coque (who drew Boorman’s attention to it) deserved to be mentioned.

Johnson (1962) changed Maiden & Blakely’s epithet from *nubilis* to *nubila*, claiming that the original spelling was “clearly an unintentional error for *nubila*. Latin *nubilus* means ‘dark or gloomy’, reflected in Blakely’s English name ‘Dusky-leaved Ironbark’, while *nubilis* means ‘marriageable’, inapplicable here”. He further wrote, “Mr H.K. Airy Shaw, of Kew, has expressed the view (in litt.) that ‘*nubilis*’ is an unintentional orthographic error which should be corrected.” Maiden & Blakely did not comment on the etymology of their epithet, but because Blakely (1934) continued to use the same spelling, we can be sure *nubilis* was not an “unintentional error”. Nor is it an orthographic error to be corrected (under Article 60), as *nubilis* is the correct feminine form of the Latin adjective *nubilus* meaning either “marriageable” or, according to Stearn (1992: 453), “ready for pollination”.

The species epithet is not correctable under the Code, and the original spelling is restored here.

Eucalyptus laevopinea R.T.Baker, Proc. Linn. Soc. New South Wales 23: 414 (1898).

Type citation: “Nullo Mountain, Rylstone (J. Dawson); Never Never Mountain, Rylstone (R.T.B.), Gulf Road, Rylstone (R.T.B.)”. **Type:** New South Wales. Nulla [Nulla] Mtn [near Rylstone], *J. Dawson s.n.*, 3 August 1898 (**lecto** BRI [AQ099608], here designated; isolecto: K [K000279885]).

The name was published on 9 December 1898 (Chapman 1991).

Maiden (1920: 329) wrote “Nulla Mountain, Rylstone, and Gulf road, Rylstone (R. T. Baker); the type”. This cannot be considered a lectotypification, as Maiden has cited two of the three syntypes.

The lectotypification made by Brooker et al. (1984) with the words “Type: Nulla mountain, near Rylstone, NSW, R.T.Baker” is not priorable, because the citation in the protologue specified that the Nulla Mountain specimen was collected by J. Dawson.

All of the specimens at NSW from Nulla Mountain have been ascribed to R.T. Baker (hence not matching the cited specimens), although for one specimen (NSW329636), the collector name R.T. Baker has been crossed out and replaced (in L.A.S. Johnson’s handwriting) by “(prob.) Dawson”. No specimens matching the protologue and with the locality “Never Never Mtn” have been located. There is one specimen at NSW from Gulf Road, collected by Baker, but it is of poor quality.

Specimens dated 3/8/98 are present at BRI and K. The labels for these specimens are in R.T. Baker's handwriting and both say "Eucalyptus laevopinea R.T.B./ Myrtaceae/ Nulla Mt/ 3/8/98". The plant materials present on these two specimens match very well, confirming that they are from the same gathering. The sheet at K specifies the collector as "J. Dawson". The BRI specimen does not specify a collector, but as there are no other existing collections with this date, Dawson may be assumed. The BRI sheet is in full agreement with the protologue and is here selected as the lectotype. It has pressed and mounted branchlets bearing adult leaves and young buds, and there are mature fruits in a packet.

Eucalyptus longifolia Link, Enum. Hort. Berol. Alt. 2: 29 (1822).

Type citation: "Hab. in Australia". **Type:** New South Wales. Mt Hercules road, Razorback Range, 11 km SSW of Camden, R.G. Coveny 7541, D.H. Benson & H. Bryant, 17 March 1976 (**neo** NSW [NSW340964], here designated; **isoneo** BRI, CANB, K).

Link (1822) published the name *Eucalyptus longifolia* in an enumeration of plants growing at the Berlin Botanic Gardens. Although Link's description is almost 100 words long and includes measurements of leaves, petioles and peduncles, it is not diagnostic and it could apply to a number of species.

Lindley (1826) also adopted the name *Eucalyptus longifolia*, without making any reference to Link, and it is clear that he was unaware of Link's name. Lindley's publication apparently prompted Link to immediately publish an illustration of his *E. longifolia* (Link & Otto 1826). In the accompanying discussion Link & Otto stated that Lindley's *E. longifolia* was a different species, and that Link's name was published first. This illustration is sufficiently detailed to make the application of the name unambiguous.

Hill (2002–04) stated that a type specimen is present at B, "in herb. B. Auerswald", but the curator at Berlin Herbarium (R. Vogt, pers. comm. April 2008) has assured me that no *E. longifolia* material is present at B.

A flowering specimen at BM from "Herb. B. Auerswald" has been annotated by G.M. Chippendale as "probably an isotype" of *E. longifolia*, on the basis that the label "appears to be in Otto's writing". However, there are serious discrepancies between the protologue and this specimen:

The protologue states that the operculum is conical, but there is no mention of flowers. It also states the leaves to be "6 inches to a foot [15–30 cm] long" and "one inch and eight lines [4.2 cm] wide". In *E. longifolia*, leaves of this size typically occur on young plants less than three metres high at about the stage when they develop their first inflorescences.

The BM specimen bears flowers, but no opercula remain. It has leaves 7–13 cm long and 1.1–2.2 cm wide. In *E. longifolia*, these leaf dimensions are typical of specimens collected from mature trees, where fully developed adult leaves prevail.

The BM specimen differs sufficiently from the protologue to discount it as original material.

No original material could be found at other major European herbaria and so it is necessary to designate a neotype. The specimen selected here as neotype was collected near Sydney. The Sydney area is very likely to be the provenance of the seed collection from which plants were raised and described by Link.

Eucalyptus macarthurii H.Deane & Maiden, Proc. Linn. Soc. New South Wales 24: 448 (1899).

Type: New South Wales. Argyle, *W. Macarthur 142, anno 1854* (**lecto** K [K000279769], *vide* Brooker et al. (1984: 466)).

The protologue states: “Sir William Macarthur collected its timber for the Paris Exhibition of 1855, it bearing the number 142 of the indigenous woods of the southern district...In the year 1864 Miss Atkinson (afterward Mrs. Calvert) collected it...Her original specimens are in the National Herbarium of Victoria,...Probably both Miss Atkinson and Dr. Woolls collected specimens,...” and “...confined to the counties of Camden and Argyle, N.S.W., as far as known at present.”

Brooker et al. (1984) cited the type as follows: “Type: vicinity of Berrima, NSW, 1854, W. Macarthur (No 142)”. In so doing they have lectotypified the name. The only known specimen corresponding to this citation is at K, and it is in accord with the protologue. Chippendale (1988: 357) and Slee et al. (2006) listed a syntype specimen for NSW from Macarthur’s gathering, but neither Hill (2002–04) nor the present author could confirm its presence there.

It is doubtful whether Deane and Maiden ever saw *Macarthur 142*, or used it in drawing up their description of the species, but according to Article 9.2, Note 2, there is no requirement for a specimen to have been seen or used, it just has to be cited.

The label on the lectotype reads “Paris Exhib/ Sydney Woods/ Woolly gum of Argyle/ No 142/ *Eucalyptus viminalis* Lab/ 40–80 feet/ N.S. Wales/ W. Macarthur 1854”.

Maiden (1916) explained that the name “Argyle” used by Macarthur refers to the County of Argyle, which is south-west of Sydney around the towns of Goulburn and Berrima. Brooker et al. (1984) apparently reinterpreted this as “vicinity of Berrima”.

Eucalyptus microcorys F.Muell., Fragm. 2: 50 (1860).

Type: New South Wales. Hastings River, *H. Beckler s.n.*, undated [January-February 1860] (**lecto** MEL [MEL75551], here designated; isolecto K).

Mueller gave the following citation in the protologue: “In silvis ad flumina Hastings et McLeay River. Dr. Beckler. Ad flumen Brisbane. F.M.”. There are two gatherings extant that can be associated with this citation. The first was collected near the Brisbane River by Mueller, and the other at the Hastings River by Beckler. The specimens of both gatherings are in agreement with the protologue. The Beckler gathering from Hastings River is of better quality, and the specimen at MEL is here designated as the lectotype. There is apparently no material collected by Beckler from the McLeay River now extant.

Eucalyptus ochrophloia F.Muell., Fragm. 11: 36 (1878).

Type: ?Paroo River, ?*E. Palmer*, undated (**lecto** MEL [MEL703966], here designated).

No specimens were cited by Mueller in the protologue, but he did mention two locations: “Ad ripas et in planitiebus secus fluvios Warrego et Paroo”. Only two specimens have been located that can be considered original material of this name. The first is a specimen at K with a label bearing the words “Warrego River” in Mueller’s handwriting. Chippendale (1988) listed F. Mueller as the collector of this specimen. That cannot be correct, as Mueller never visited south-western Queensland, but the collector of the specimen remains obscure.

The second is a specimen housed at MEL [MEL703966], bearing the label “*Euc ochrophloia* FvM ‘Yellowjacket’ ” in Mueller’s handwriting. This sheet has no information on the collector, collection date or locality, but mounted on it is a square of paper with a Latin description by Mueller comparing this species with *E. gracilis*. It repeats almost word for word a part of the description given in the protologue. The presence of this Latin description strongly suggests that Mueller used this specimen when compiling his manuscript of *E. ochrophloia*. The specimen mounted on MEL703966 is entirely consistent with the protologue and it is here designated as the lectotype of *E. ochrophloia*.

Another significant specimen of *E. ochrophloia* annotated by Mueller is to be found at MEL [MEL704020]. It is not original material as it was collected in 1884, after the publication of the name. The label for the specimen is written in the handwriting of F.M. Bailey, and states “specimen collected by E. Palmer Esq. M.L.A. on the Bulloo & Paroo”. Mounted beside the specimen is a letter from Bailey to Mueller which says in part “our mutual friend Mr E. Palmer has just given me a few very nice fresh specimens of the gum you will remember I sent to you some years ago, the Paroo Yellow Jacket, and you named it *Eucalyptus ochrophloia*...”. This letter provides strong evidence that Bailey sent at least one of the specimens mentioned above, and gives the only clue that MEL703966 *may* have been collected by Palmer from the Paroo River. It seems that Bailey on both occasions passed the entirety of the *E. ochrophloia* material to Mueller, as there are no specimens at BRI that bear Bailey’s or Palmer’s name, or any early collections without date and collector that could correspond to a Palmer collection.

Eucalyptus oreades R.T.Baker, Proc. Linn. Soc. New South Wales 24: 596 (1900); *E. virgata* var. *altior* H.Deane & Maiden, Proc. Linn. Soc. New South Wales 26: 124 (1901); *E. altior* (H.Deane & Maiden) Maiden, Crit. Revis. Eucalyptus 6: 272 (1922), *nom. illeg.*

Type: “near Lawson, Apr 1899, Baker & Smith”, *vide* Brooker et al. (1984: 314); **lecto:** New South Wales. Adelina Falls, Lawson, *R.T. Baker & H.G. Smith s.n.*, 22 April 1899 (NSW [NSW325376], here designated; isolecto: K [K000279928], NSW [NSW325377, NSW325378 & NSW325379]).

The protologue says “Hab. - Lawson (H.G. Smith and R.T.B.); Mount Victoria and road to Jenolan Caves (R.H. Cambage.)”

Brooker et al. (1984) achieved a first-step lectotypification with the statement “Type: near Lawson, Apr 1899, Baker & Smith”. There is only one known gathering that matches this citation, but there are specimens of it at both K and NSW. NSW 325376 is here designated as the (second-step) lectotype.

G.M. Chippendale annotated four sheets at K as isosyntypes, but only one sheet is indisputably a type. The other sheets have no label indicating their origin or date of collection.

Eucalyptus planchoniana F.Muell., *Fragm.* 11: 43 (1878).

Type: Queensland. Eight Mile Plains, *F.M. Bailey s.n.*, undated (**lecto** MEL (2 sheets) [MEL705638 & MEL703450], here designated; isolecto BRI [AQ024086, sheet 2 & sheet 3]).

Mueller described *E. planchoniana* using material collected by F.M. Bailey. The protologue includes the statement “In collibus aridis subarenosis prope sinum orarium

Moreton-Bay; F. Bailey". Other salient parts of the protologue read "Flores evolutos nondum accepti" and "antherae tantum in junioribus alabastris observatae". These both indicate that Mueller saw only young (immature) buds.

There are three specimens at MEL annotated as "Euc. planchoniana" by Mueller.

The first sheet, MEL1611102, has three leafy branchlets mounted on it, two with mature buds and open flowers, and a third bearing a single fruit. This sheet has a label written by Mueller saying "Moreton Bay, February 1879, F.M. Bailey".

The second sheet, MEL705638, has a single leafy branchlet mounted on it, bearing immature buds and no fruits. The label says "Eucalyptus near eximia Schau/ Hab on poor sandy dry ridges Eight Miles Plains/ FMB" in the handwriting of F.M. Bailey, and then "Euc planchoniana FvM" in the handwriting of Mueller.

The third sheet, MEL 703450, has no mounted material, but there are some mature fruits in a fragment packet, some of which have been dissected. Its label says "Eight Miles Plain" in Mueller's handwriting.

Chippendale (1988) cited the type as "8 Mile Plains, Moreton Bay, 1879, F.M. Bailey s.n.; holo: MEL; iso: BRI, NSW". Chippendale annotated MEL1611102 as "holotype or isotype". However, that sheet is not original material as the date on the label (February 1879) is later than the publication of the name. Furthermore, Mueller stated in the protologue that he saw only immature buds, whereas this specimen bears mature buds and open flowers.

MEL705638 is considered to be original material because the label is in the handwriting of F.M. Bailey, and the habitat information given by Bailey on the label ("on poor sandy dry ridges") is almost literally translated by Mueller in the protologue ("In collibus aridis subarenosis"). The presence of only immature buds is in agreement with the protologue. MEL703450 is also considered to be original material, and part of the same gathering as MEL705638, because Mueller described fruits and seeds, and those are absent from the latter. These two sheets are therefore chosen as lectotype.

At BRI there is material mounted on three sheets that has been annotated as "isotype". One sheet has mounted on it some flowering branchlets, and some fruits in a packet. This is not original material, for the reasons outlined above. The other two sheets bear branchlets with immature buds, consistent in size and appearance to the lectotype. One of these sheets has a label in Bailey's handwriting saying "A stringybark eucalypt from 8m Plains FMB/ E sp new near E. eximia, Schau". These two BRI sheets are considered to be part of the same gathering as the lectotype, and hence they are designated as isolectotype.

The label of the lectotype gives the locality as 'Eight Mile Plains'. This name is still in current use for a suburb of Brisbane, south of the city centre. Bailey almost certainly obtained his specimens from the nearby Toohey Forest - Griffith University area, where *E. planchoniana* is still quite common today.

Eucalyptus propinqua H.Deane & Maiden, Proc. Linn. Soc. New South Wales 10 (2nd series): 541 (1896).

Type: New South Wales. Stroud Rd, A. *Rudder* s.n., 10 February 1893 (**lecto** NSW [NSW 308067], *fide* Chippendale (1988: 203)).

No specimens were cited in the protologue, the only information being “Range. - From the Hawkesbury River northwards at least as far as the Tweed River.”

Maiden (1917) stated: “Type. Dungog-Stroud Road, N.S.W. (A. Rudder)”.

There is a specimen at NSW whose label reads “Stroud Rd, 10 Feb 1893, A. Rudder”. It comprises pressed but unmounted branchlets bearing adult leaves, mature buds and open flowers. There is also a relevant specimen at BRI. Its label has the printed heading “National Herbarium of New South Wales”, and written below, in Maiden’s handwriting, is “Stroud, 1895, A. Rudder”. Both specimens are in accord with the protologue. The citation by Maiden (1917) does not constitute a lectotypification, since it encompasses two different gatherings.

The 1893 specimen at NSW was effectively selected as lectotype by Chippendale (1988) with the statement “T: Dungog-Stroud Road, N.S.W., 10 Feb. 1893, *A. Rudder s.n.*; holo: NSW”. Under Article 9.8, the use of the term “holotype” by Chippendale is correctable to “lectotype”.

Eucalyptus quadrangulata H.Deane & Maiden, Proc. Linn. Soc. New South Wales 24: 451 (1899).

Type: “Hill Top, Box Knob. The type (J.H.M.)”, *vide* Maiden (1915: 77); **lecto:** New South Wales. Hill Top, Box Knob, *J.H. Maiden s.n.*, January 1896 (**lecto** NSW [NSW317818], here designated; **isolecto** NSW [NSW317817, NSW317819 & NSW317820]).

The protologue says “found only in the neighbourhood of Hill Top, about 70 miles south of Sydney”. According to Article 37.3, Note 2, the naming of a locality in the protologue without any reference to a collector does not constitute a specimen citation. Hence Hill (2002-04) was correct in saying “No type was cited”.

Maiden (1915) stated “Hill Top, Box Knob. The type (J.H.M.)” There is only one known gathering from this location that was collected by J.H. Maiden alone, and the specimens at NSW are the only ones known. Therefore this constitutes the first-step in lectotypification. The lectotype chosen here from this gathering comprises pressed but unmounted branchlets bearing adult leaves, almost-mature buds and mature fruits.

The lectotypification by Brooker et al. (1984), i.e. “Type: Hilltop, New South Wales, Sept. 1899, J.H. Maiden and J.L. Boorman” is not valid, as Maiden had previously chosen a different gathering as the type.

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