

Typification of some names of Australian species of *Indigofera* (Fabaceae)

Peter G. Wilson

*National Herbarium of New South Wales, Royal Botanic Gardens and Domain Trust,
Mrs Macquaries Road, Sydney, NSW 2000, Australia.
peter.wilson@rbgsyd.nsw.gov.au*

Abstract

Typification of six species names and two varietal names in Australian *Indigofera* is considered. All relevant specimens are discussed and lectotypes designated for seven names, including five that apply to currently accepted species. Typification is clarified for a further species name.

Introduction

Typification of the names of various Australian *Indigofera* species has been resolved in previous papers (Wilson 1987; Wilson and Rowe 2004, 2008, 2010). This paper considers typification of the names of a number of eastern Australian species and one northern Australian species.

Typifications

Indigofera adesmiifolia A.Gray, *U.S. Expl. Exped., Phan.* 1: 405 (1854) as 'adesmiaefolia'

Type citation: 'Hunter's River, New South Wales'

Holotype: New South Wales, *U.S. Exploring Expedition*, [?Dec 1839] (GH00066084).

Notes: The probable collecting location of the type specimen and the variation in rachis width in this species has been discussed briefly by Wilson (1987). Specimens with narrower rachises approach *Indigofera brevidens* in appearance and may be a little difficult to distinguish in sterile material, although there are differences in indumentum, and their geographic distributions overlap only on the North Western Slopes of New South Wales.

Although it is generally thought that US has the first set and the holotypes for the United States Exploring Expedition (Walter Kittredge pers. comm.), no specimen of this taxon can be located in that herbarium (John Boggan pers. comm.). So, unless a further specimen is found, I consider the Gray Herbarium specimen at Harvard University to be the holotype.

Two published varieties of *I. australis*, var. *signata* and var. *platypoda*, were placed in synonymy under *I. adesmiifolia* by Wilson (1987) but were not typified at that time. All specimens cited by Bentham as types of these varieties have since been located and examined. Of these, the specimens at K were all mounted on two sheets and it was

difficult to match specimen to collector with any certainty, while the MEL specimens were mostly marked with the 'B' indicating that they had been seen by Bentham. Therefore, lectotypes were chosen from amongst the specimens at MEL.

Indigofera australis* var. *signata F.Muell. ex Benth., *Fl. Austral.* 2: 200 (1864)

Type citation: 'Between Ovens river and Mayday Hills in Victoria, *F. Mueller*; Port Jackson, *Herb. Mueller*; and Queensland, *Bowman*.'

Lectotype (designated here): Port Jackson [no collector or date indicated] (MEL585826).

Residual syntype: 'on rocky parts of the hills between the Ovens and Maydays hills,' *F. Mueller*, 18 Feb 1853 (MEL585843).

Excluded syntype: Queensland, *Bowman* (MEL585844).

Indigofera signata (F.Muell. ex Benth.) Domin, *Biblioth. Bot.* 89 (3): 192 (1926)

Indigofera signata var. *signata* (Domin 1926: autonym)

Indigofera signata var. *typica* Domin, *Biblioth. Bot.* 89 (3): 192 (1926) *nom. inval.* (Art. 24.3)

Notes. The Mueller collection from Victoria lacked the 'B' and the Bowman specimen has been redetermined as *I. brevidens*, so the 'Port Jackson' collection is here designated lectotype.

Indigofera australis* var. *platypoda Benth., *Fl. Austral.* 2: 200 (1864)

Type citation: 'New England, *C. Stuart*; Arne river, *Beckler*.'

Lectotype (designated here): New England, [*C. Stuart*] (MEL585807; isolectotypes: MEL585806, MEL585822, MEL585830, K000217411, K000217414).

Residual syntype: 'River Arne, Dr. B.' [*Beckler*] (MEL585805).

Indigofera signata var. *platypoda* (Benth.) Domin, *Biblioth. Bot.* 89 (3): 192 (1926)

Notes. The New England specimen chosen as lectotype is one of two sheets (MEL585806 and MEL585807) marked as having been seen by Bentham and has an apparently original field tag on it. The Beckler collection from Arne River does not have the diagnostic broader, flattened leaf rachises particularly well-developed, so much so that it approaches the circumscription of var. *signata*.

Indigofera baileyi F.Muell., *Fragm.* 9: 43 (1875)

Type citation: 'In vicinia fluminis Brisbani; Bailey.'

Lectotype (designated here): Brisbane River, *Bailey* (MEL585846; probable isolectotype: K000217437).

Residual syntypes: [without location] *Bailey* (MEL585845); [without location or collector] (K000217436).

Anila baileyi (F.Muell.) Kuntze, *Revis. gen. pl.* 2: 938 (1891)

Notes. Judging from the syntypes in MEL, Mueller received two collections of this species from F.M. Bailey, one in flower and one with a few fruit. The former of these has been chosen as lectotype. On this specimen, there is a note from Bailey that says 'I have not found much of this *Indigofera* but am on the look out for them [sic] for you'. The species is easily overlooked when not in flower because of its low habit and its preference for woodlands with a grassy understorey. It almost certainly dies back to the underground rootstock in other than favourable growing seasons and is quite easy to overlook when not in flower.

There is also a specimen in the Queensland herbarium marked as 'part of type collection'. The sheet comprises several small specimens that were collected by F.M. Bailey in April 1875. The fascicle of volume 9 of the *Fragmenta* in which the name appears was published in May 1875, so it seems unlikely that Mueller had access to this specimen before the fascicle went to press. Bailey has included on the label a reference to this publication but with the page number missing ('*Fragmenta* vol. IX p. ') suggesting that he knew it was in press. I have therefore excluded this specimen from the syntypes.

Indigofera brevidens Benth. in Mitchell, *J. Exped. Trop. Austral.*: 385 (1848)

Type citation: 'a new species of indigo ... gathered at this season at the camp over St. George's Bridge.'

Lectotype (designated here): Subtrop. N. Holl., Lieut. Col. Mitchell (K000217424).

Residual syntype: Subtropical New Holland, Lieut. Col. Sir T.L. Mitchell (K000217423).

Anila brevidens (Benth.) Kuntze, *Revis. gen. pl.* 2: 939 (1891)

Notes. The type material was collected during Mitchell's expedition to tropical Australia while his party was camped at the 'bridge' (natural rocky ford) on the Balonne River at St George in south-western Queensland in early November, 1846. The sheet at K, marked as 'holotype', consists of four elements that were originally on two sheets. The right-hand sheet, originally in the Herbarium Hookerianum, has been chosen as lectotype.

Indigofera coronillifolia A.Cunn. ex Benth., *Fl. Austral.* 2: 201 (1864) as 'coronillaefolia'

Type citation: 'In the barren rocky country west of Wellington Valley, A. Cunningham; Castlereagh, C. Moore.'

Lectotype (designated here): New South Wales: Barren rocky country W. from Wellington Valley, A. Cunningham (K000217434).

Residual syntypes: 'N.S.Wales', A. Cunningham (K000217432); New Holland, A. Cunningham (K000217433).

Anila coronillifolia (A.Cunn. ex Benth.) Kuntze, *Revis. gen. pl.* 2: 939 (1891)

Notes. The lectotype is one of three sheets of Cunningham collections at K. It is marked as ex Herbarium Hookerianum 1867 and is the only one that definitely has Cunningham's manuscript name written in his own hand as well as the fullest locality information. The specimen collected by Charles Moore from the Castlereagh [River] area, most likely from near Mendooran or Gilgandra, has not been located.

Indigofera pratensis F. Muell., *Essay Plants Fitzalan*: 10 (1860)

Type citation: 'Port Denison. Noticed by the author of this treatise on the Rivers Burdekin, Dawson and Burnett, as well as in the neighbourhood of Moreton Bay.'

Lectotype (designated here): Port Denison, Fitzalan (MEL586229).

Residual syntypes: Port Denison, *Fitzalan* (MEL586232, 586242, 586579, 586581); Burdekin Expedition, [*F. Mueller*] 104, 106 (MEL586260); Upper Burdekin, [*F. Mueller*] (MEL586263); Moreton Bay, [*F. Mueller*] (MEL586261, 586262); 'Burdekin, *Dr M*' (K000217351, K000217345); N.E. Austr., *E. Fitzalan* (MEL586264).

Anila pratensis (F.Muell.) Kuntze, *Revis. gen. pl.* 2: 939 (1891)

Notes. The specimens that are included within the geographic area delineated in the protologue show a great deal of morphological variation, but all fall within the current circumscription of this species. I consider all these specimens to be original material available to Mueller when he wrote the description, and I therefore treat them as syntypes. The lectotype is one of the specimens attributed to Eugene Fitzalan from Port Denison (near Bowen, Queensland), the primary locality cited by Mueller in the protologue. It is in full flower and shows many of the diagnostic character-states: stipules linear-setaceous, stipellae minute and setaceous, inflorescence many-flowered and conspicuously stalked, and corolla large with the standard longer than the wings.

Indigofera saxicola F.Muell. ex Benth., *Fl. Austral.* 2: 199 (1864)

Type citation: 'N. Australia. Port Essington, A. Cunningham; grassy stony plains, Sea Range, F. Mueller.'

Lectotype (designated here): Sea Range, *F. Mueller*, Dec. 1855 (K000217355; isolectotypes: MEL586268, GH00066086, TCD0015644).

Residual syntype: Port Essington, North Coast, New Holland, April 1818, A. Cunningham 278 (K000217354, K000217353, BM000810951)

Anila saxicola (Benth.) Kuntze, *Revis. gen. pl.* 2: 940 (1891)

Notes. Mueller mentioned this species at the end of his description of *Indigofera pratensis* (in his *Essay on the plants collected by Mr Eugene Fitzalan*, published in 1860). Although he did give a few diagnostic features, he referred to the name as being in use only in the herbarium. It was clearly not his intention to publish the name *Indigofera saxicola* in this work and it is accordingly treated as a provisional name (Art. 36.1 b) and, therefore, not validly published until Bentham's *Flora Australiensis*.

Bentham cited two collections of this taxon, a Mueller collection in bud and a Cunningham collection in fruit. I have chosen the lectotype from among the Mueller collections, as these bear his manuscript name, and have selected the duplicate at K in preference to the others since it has the best-developed inflorescences.

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