

Inclusion of *Platylobium* in *Bossiaea* (Fabaceae tribe Bossiaeeae)

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Abstract

The genus *Platylobium* Sm. (Fabaceae, Faboideae, Bossiaeeae) is formally included in *Bossiaea* Vent. While *Platylobium* was published earlier, *Bossiaea* has been conserved over that name, giving *Bossiaea* priority when the two genera are combined. We here provide new combinations for nine species and one subspecies: *Bossiaea alternifolia* (F.Muell.) R.L.Barrett & P.H.Weston, *B. formosa* (Sm.) R.L.Barrett & P.H.Weston, *B. infecunda* (I.Thomps.) R.L.Barrett & P.H.Weston, *B. montana* (I.Thomps.) R.L.Barrett & P.H.Weston, *B. montana* subsp. *prostrata* (I.Thomps.) R.L.Barrett & P.H.Weston, *B. obtusangula* (Hook.) R.L.Barrett & P.H.Weston, *B. parviflora* (Sm.) R.L.Barrett & P.H.Weston, *B. reflexa* (I.Thomps.) R.L.Barrett & P.H.Weston, *B. rotunda* (I.Thomps.) R.L.Barrett & P.H.Weston, *B. triangularis* (R.Br.) R.L.Barrett & P.H.Weston. We also provide a combined generic description for our enlarged concept of *Bossiaea*.

Introduction

Fabaceae tribe Bossiaeeae currently contains seven genera (*Aenictophyton* A.T.Lee, *Bossiaea* Vent., *Goodia* Salisb., *Muelleranthus* Hutch., *Paragoodia* I.Thomps., *Platylobium* Sm. and *Ptychosema* Benth. and 107 species (Thompson 2011a, 2011b, 2011c, 2012). All genera of Bossiaeeae have been revised relatively recently (Ross 2006; Thompson 2011a, 2011b, 2011c, 2012), with only modest subsequent additions of new species or subspecies to *Bossiaea* (Ross 2008; McDougall 2009; Barrett & Barrett 2015; Keighery 2018; Macfarlane *et al.* 2020; McMaster *et al.* 2024). Circumscription of genera in Tribe Bossiaeeae has largely remained stable since Polhill (1976) proposed the recognition of the tribe at that rank, with the addition of just one new genus (*Paragoodia* I.Thomps.). We note here that data presented by Kates *et al.* (2024) may support a closer relationship between Bossiaeeae and a clade including *Sphaerolobium* Sm. and *Gompholobium* Sm. than previously documented (see Crisp & Weston 1987; Crisp & Cook 2003).

Smith (1793) described *Platylobium* for two new pea species with greatly enlarged upper calyx lobes and flat pods with a conspicuous wing beyond the upper sutural nerve (as noted by Ross 1983, 2005). Additional *Platylobium* taxa that are recognised today were described or recombined by Brown (in Sims 1812), Sieber (in de Candolle 1825), Hooker (1833a), Meisner (in Lehmann 1844), Bentham (1864), Mueller (1883), Wawra von Fernsee & Beck-Mannagetta (1883), Domin (1926), Willis (1967), Lee (1970) and Thompson (2011b). Within Bossiaeeae, *Platylobium* was considered diagnosable by the combination of distichous phyllotaxy, large unifoliate leaves, solitary flowers subtended by several scales, greatly enlarged and rounded upper calyx-lobes, and compressed, thinly winged pods (Thompson 2011b). *Bossiaea* and *Platylobium* differ

Barrett RL, Weston PH (2025)
Inclusion of *Platylobium* in
Bossiaea (Fabaceae tribe
Bossiaeeae). *Telopea* 29: 177–187.
[doi:10.7751/telopea20889](https://doi.org/10.7751/telopea20889)

Received: 17 March 2025
Accepted: 20 May 2025
Published: 5 June 2025

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from the other genera in Bossiaeeae by having 1 to several flowers arising from the leaf axils with a series of brown, papery to scarious bracts below the flowers, and simple, unifoliate leaves (or reduced to exstipulate scales) (Ross 1983, 2006). A reduced chromosome number of $n=8$ in *Platylobium* compared to $n=9$ in *Bossiaea* was also considered to support the separation of the two genera (Ross 2006), along with apparent differences in pollen apertures (Ferguson & Skvaarla 1981). However, even Polhill (1976: 146) recognised that the morphological distinction between *Bossiaea* Vent. and *Platylobium* Sm. was ‘slight’. Ross (1983: 128) noted the similarity of the two genera but did not see any advantage in combining them at that time. Ross (2006:

15–16) later provided a detailed discussion of the two genera, concluding that their separation was probably not justified, but he stopped short of combining them, probably in part because that paper primarily dealt with Western Australian *Bossiaea* species. Although currently recognised *Platylobium* species have never been combined under *Bossiaea*, a broader set of species were first described in *Platylobium*, then transferred to, or synonymised under, *Bossiaea*, indicating a certain degree of historical confusion over generic limits (Table 1). With the advantage of phylogenetic understanding, we can now interpret their distinctive morphology as derived character states within the morphologically diverse genus *Bossiaea*.

Table 1. Species described under *Platylobium* but subsequently transferred to *Bossiaea*.

Original name	Current name	References
<i>Platylobium lanceolatum</i> Andr.	<i>Bossiaea heterophylla</i> Vent.	Ventenant 1800; Andrews 1802
<i>Platylobium microphyllum</i> Sims	<i>Bossiaea obcordata</i> (Vent.) Druce	Sims 1805; Druce 1917
<i>Platylobium obcordatum</i> Vent.	<i>Bossiaea obcordata</i> (Vent.) Druce	Ventenant 1804; Druce 1917
<i>Platylobium ovatum</i> Andr.	<i>Bossiaea heterophylla</i> Vent.	Ventenant 1800; Andrews 1802
<i>Platylobium scolopendrium</i> Andr.	<i>Bossiaea scolopendria</i> (Andr.) Sm.	Andrews 1801; Smith 1808
<i>Platylobium spinosum</i> Turcz.	<i>Bossiaea spinosa</i> (Turcz.) Domin	Turczaninow 1853; Domin 1923

Nine species of *Platylobium* are currently recognised (Figure 1), one with two subspecies, distributed from South Australia to Tasmania, and north to south-east Queensland, with highest diversity found in Victoria, where several species are of conservation concern (Thompson 2011b).

Bossiaea is a distinctive Australian genus, with centres of endemism particularly in south-western and south-eastern Australia. Ventenat (1800) described *Bossiaea* for a single species, which he noted approached *Platylobium* in general morphology. Smith (1808) subsequently proposed characters distinguishing the two genera as they were then understood; however, later authors questioned whether the morphological differences justified separation at generic rank (Polhill 1976, 1981; Ross 1983, 2004, 2006). By this time, molecular phylogenetic analyses by Crisp & Cook (2003) had already resolved *P. formosum* Sm. as closely related to *Bossiaea lenticularis* DC. and *B. linophylla* R.Br. (the only *Bossiaea* species included in that study), but limited sampling prevented determination of whether *Platylobium* was embedded within, or sister to *Bossiaea*. More comprehensive sampling of legumes as part of a study on nitrogen fixation genes, which included 20 *Bossiaea* species, has confirmed that *Platylobium formosum* and *P. obtusangulum* Hook. form a clade sister to *Bossiaea cinerea* R.Br. and *B. kiamensis* Benth. (Kates *et al.* 2024), both of which are part of Group B of Thompson (2012), which also includes *B. cordifolia* Sweet and *B. rosmarinifolia* Lindl. While not aimed at resolving taxonomic issues, this remarkable data set based on both plastid and nuclear data represents an incredible advance in our systematic understanding of legumes. While we advocate for reanalysis of the underlying data for localized taxonomic conclusions, we consider the data developed for that study to be of enormous utility for understanding legume relationships. The tree presented by Kates *et al.* (2024) shows a high degree of congruence with data generated using the Angiosperms353 baits kit (Barrett *et al.* 2024; Zuntini *et al.* 2014), although some potential topological differences have been noted that require further investigation, particularly including assessment of node support.

We present a summary of the morphological similarity between the *Platylobium* and *Bossiaea* species pairs recovered as sisters by Kates *et al.* (2024) in Table 2 as this is indicative of the close relationship between these two *Bossiaea* species and all *Platylobium* species. Phyllotaxy is variable in *B. cinerea*, alternate, opposite, or 3-whorled, even within a single plant, and this may be an ancestral state for the *Platylobium* clade. The four species all share somewhat recurved leaves with acute and sometimes pungent leaf apices, and greatly enlarged, rounded upper calyx lobes. The scales subtending the flowers are highly reduced in *Bossiaea cinerea* and *B. kiamensis* (Figure 2), so this may have been a reason that a close relationship between these species and *Platylobium* has not been suggested in previous literature. Many *Bossiaea* species only have a single pair of small scales, but multiple pairs of scales can be found in taxa allied to *B. scolopendria* (Andrews) Sm., a species that was initially named in *Platylobium* (Thompson 2012). It is interesting to note that a small ridge is present along the suture line of the pods in *B. cinerea* and *B. kiamensis* (Figure 2), and this is likely to be an ancestral state for the *Platylobium* clade. Ross (1983) noted that *Platylobium* differs from *Bossiaea* in the pod valves being very thin and revolute on dehiscence, a character also found in the tropical leafless species *Bossiaea arenitensis* R.L.Barrett, *B. barrettiorum* J.H.Ross, *B. bossiaeoides* (Benth.) Court and *B. zarae* R.L.Barrett (Barrett & Barrett 2015), with pod thickness here interpreted as the key factor. Pollen morphology has only been assessed for single *Bossiaea* and *Platylobium* species (Ferguson & Skvaarla 1981), so it is difficult to determine the significance of observed characteristics based on such limited sampling. A chromosome count is not known for *Bossiaea cinerea*, but sufficient other species were examined by Sands (1975) that $n=9$ is likely, and $n=8$ probably represents a synapomorphy for the *Platylobium* clade. Addition of *Platylobium* species in the key to *Bossiaea* species on PlantNet (<https://plantnet.rbgsyd.nsw.gov.au/>; accessed 17 March 2025) naturally places them near *B. cinerea* and *B. kiamensis*.



Figure 1. Field photographs of former *Platylobium* species here combined in *Bossiaea*. A. *B. alternifolia* (grampianshiker: [206792858](#)). B. *B. formosa* (rolfperoonia: [260772870](#)). C. *B. infecunda* (Ian Rainbow: [240083590](#)). D. *B. montana* (Nick Bradsworth: [250842352](#)). E. *B. obtusangula* (Martin Stokes: [257181652](#)). F. *B. parviflora* (Felix Riegel: [253730065](#)). G. *B. reflexa* (Shirley McLaran: [256747097](#)). H. *B. rotunda* (Mononymous: [189260457](#)). I. *B. triangularis* (Tim Binns: [139411035](#)). All previously posted on [iNaturalist](#) (CC-BY-NC).

It now appears clear that *Platylobium* should be sunk into *Bossiaea*. Some understandable resistance to combining *Platylobium* and *Bossiaea* stemmed from the fact that *Platylobium* was named first, but *Bossiaea* is the larger and better-known genus. To address this concern, Ross (2005) proposed to conserve the name *Bossiaea* against *Platylobium* and this recommendation was subsequently adopted (Barrie 2006). To date, the required combinations have not been made under *Bossiaea*, so we make them here, as part of ongoing efforts to align the classification of Australian legume genera with the results of molecular phylogenetic analyses (e.g. Ohashi *et al.* 2018; Compton *et al.* 2019; Cooper *et al.* 2019; Barrett *et al.*

2021; 2024) and create a monophyletic concept of *Bossiaea*. The inclusion of *Platylobium* in *Bossiaea* increases the diversity of that genus in eastern Australia. *Platylobium* has been reviewed twice in recent decades, by Jim Ross in 1983 and Ian Thompson in 2011. The latest revision is accepted here, and we present new combinations based on Thompson's taxonomic concepts.

A complete chloroplast genome has been developed for *P. obtusangulum*, making it an important phylogenetic reference point for the broader Bossiaeeae–Mirbelieae clade (Orel *et al.* 2019).



Figure 2. Field photographs of two *Bossiaea* species resolved as sister to former *Platylobium* species. A, B. *Bossiaea cinerea* (A. grampianshiker; [246599929](#); B. Shirley McLaran; [254876969](#)). C, D. *B. kiamensis* (C. David Fischer; [92440506](#); D. David Chan; [185886320](#)). All previously posted on [iNaturalist](#) (CC-BY-NC).

Materials and Methods

We take the opportunity to review type specimens, and provide hyperlinks to digitized specimens where available, to assist with future studies. Type specimens were viewed on JSTOR Plants (<https://plants.jstor.org/>; accessed 28 Feb. 2025) and hyperlinks to these images are embedded in the barcode numbers. Specimen details have been confirmed with reference to original protologues and the specimen images. The revised generic description is derived from Ross (2006) and Thomson (2011b, 2012) with reference to characters included by Barrett et al. (2024). Representative images were sourced from iNaturalist (<https://www.inaturalist.org/>; accessed 28 February 2025), with permission from the photographers. Autonyms of synonyms and orthographic variants of names are not listed.

Taxonomy

Bossiaea Vent., *Descr. Pl. Nouv.* 1: 7 (1800), *nom. cons.* Type: *B. heterophylla* Vent.

Platylobium Sm., *Spec. Bot. New Holland* 1(2): 17, t. 6 (1793), *nom. rej.* Type: *P. formosum* Sm.

Scottia R.Br. in W.T.Aiton, *Hortus Kew.* edn 2, 4: 268 (1812). Type: *S. dentata* R.Br.

Lalage Lindl., *Edwards's Bot. Reg.* 20: t. 1722 (1834). Type: *L. ornata* Lindl.

Table 2. Comparison of key morphological characters between sister species of *Bossiaea* and *Platylobium* based on Sands (1975), Ross (2006) and Thompson (2011b, 2012). Additional characters uniting these species are indicated in bold.

Character	<i>B. cinerea</i>	<i>B. kiamensis</i>	<i>P. formosum</i>	<i>P. obtusangulum</i>
Phyllotaxy	alternate, opposite, or 3-whorled	opposite, distichous	opposite, distichous	opposite, distichous
Unifoliolate leaves	yes	yes	yes	yes
Leaf margins	recurved or revolute	almost flat to recurved	recurved to slightly revolute	flat to recurved
Leaf apex	acute, sometimes pungent	acute	acute	acute, pungent
Scales subtending flowers	2, at base of pedicel, 0.2–1 mm long	2, at base of pedicel, 0.4–1 mm long	4–6, in lower half of pedicel, 4–6 mm long	6–14, spread along pedicel, 2–6 mm long
Upper calyx-lobes enlarged	yes	yes	yes	yes
Pod wings	ridge to 0.5 mm high	ridge to 0.5 mm high	wing 3–5.5 mm wide	wing 2–4 mm wide
Pod valves	thick, not revolute	thin, somewhat revolute	thin, strongly revolute	thin, strongly revolute
Chromosomes	unknown	<i>n</i> =9	<i>n</i> =8	<i>n</i> =8

Open to dense, erect, climbing, sprawling or prostrate *subshrubs*, *shrubs* or small *trees* to c. 5 m tall, usually single-stemmed, sometimes leafless as adults, sometimes rhizomatous; branches terete to oval in section, angled, flattened or winged. *Indumentum* commonly developed but variably persistent on branchlets and leaves, sometimes developed on pedicels and ovaries and abaxial surfaces of stipules, scales, bracts, bracteoles and calyces, rarely developed on the apex of keel-petals; margins of structures such as stipules, scales, bracts, bracteoles and calyx-lobes almost always ciliate; hairs simple, mostly straight but occasionally curled or crumpled, white or rarely yellow or coppery. *Branchlets* terete or compressed, sometimes with leaf decurrencies, sometimes broadly winged (and then called cladodes), sometimes with apical spines, sometimes developing epicuticular wax. *Stipules* usually inconspicuous (conspicuous in a few species), usually brown or red-brown, triangular-ovate to triangular-lanceolate, erect, reflexed or sometimes deflexed, herbaceous or scarious, fused to form scales below inflorescences (inflorescence scales) and, in leafless species, at all nodes along cladodes. *Leaves* mostly distichous, alternate or less often opposite, irregularly arranged or apparently absent (more often scale-like) in adult plants, unifoliolate, inserted on prominent branch flanges in some species, but with the articulation sometimes obscure; *petiole* pulvinate; petiole-petiolule articulation conspicuous or indistinct; *petiolule* short, pulvinate; *lamina* linear, lanceolate, triangular, ovate or orbicular, sometimes with acute to obtuse basal, lateral angles or lobes which may be pungent, thin to coriaceous, sometimes with conspicuous reticulate venation, commonly glabrescent but with hair-bases commonly persisting as minute tubercles in some species; base deeply cordate to broad-cuneate, obtuse or acute; apex obtuse to acute, apiculate, with apiculum sometimes pungent. *Inflorescences* mostly appearing axillary but interpreted as terminal on a contracted or very short or rarely more elongate axis bearing 2 or sometimes 4–16 scales, with 1–4 inflorescences per axil; each inflorescence comprising 1 or rarely 2 flowers, or very occasionally with flowers in a raceme-like arrangement; *bract* and *bracteoles* mostly scarious; bract at base of pedicel, slightly shorter than bracteoles; bracteoles commonly paired or variously inserted, persistent or caducous; receptacle obconical, generally distinct. *Calyx* with tube shorter than to longer than

lobes; upper lobes partly fused to almost free, mostly broader (sometimes greatly so) and longer than the triangular lower lobes. *Corolla: petals* clawed; standard and wings yellow (rarely orange, brown or red), commonly with reddish or purple-brown markings; *standard* with limb oblate or occasionally c. circular; standard mostly equal to or slightly longer than wings, but sometimes shorter; *keel* equal to, slightly longer, or occasionally much longer than wings. *Stamens* fused to form an adaxially open sheath; anthers all dorsifixed and \pm uniform in size. *Ovary* 2–20-ovulate; style slender, upcurved; stigma small, sometimes capitate. *Pods* sessile or stipitate; body oblong, elliptic or rhomboidal, strongly compressed to flattened, with valves and margins variously thickened, commonly becoming revolute post-dehiscence, glabrous, hairy on margins or all over, sometimes with spongy tissue partitioning seeds internally; upper margin often slightly to strongly ridged or sometimes with upper suture forming a thin wing. *Seeds* plump, ellipsoid to reniform, brown or black, sometimes mottled, sometimes sculptured, with a conspicuous aril; aril with a lobe arising at one end and arching over the aril-base (like a hooded cap), one-third to one half of length of seed.

Distribution: A genus of c. 95 species, widespread across most of Australia, though largely absent from the arid zone (<250 mm rainfall).

Bossiaea alternifolia (F.Muell.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium alternifolium* F.Muell., *S. Sci. Rec.* 3(4): 99 (1883). Type: Victoria: Mount William, c. 3000 ft, [before 6 June] 1883, *D.Sullivan* 8 (lecto: MEL [569729](#)), designated by J.H.Ross, *Muelleria* 5(2): 129 (1983). Residual syntypes: Victoria: Mt. Disappointment, 1852, [rec. a K Oct. 1884], *F.Mueller s.n.* (K [000622333](#), MEL [569726](#)) [= *B. montana* subsp. *prostrata*]; Mt. Ben Nevis, *C.Green* 6 (MEL [569727](#)) [= *B. rotunda*]; Mt. William, 1882, *D.Sullivan s.n.* (MEL [569728](#)).

Bossiaea formosa (Sm.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium formosum* Sm., *Spec. Bot. New Holland* 1(2): 17–18, t. 6 (1793). *Platylobium formosum* var. *typicum* Domin., *Biblioth. Bot.* 89: 728 (1926), *nom. inval.* Type: New South Wales:

[location unknown, probably Sydney region], 1793, *J.White s.n.* (lecto: LINN [1188.1](#)), designated by J.H.Ross, *Muelleria* 5(2): 136 (1983).

Bossiaea infecunda (I.Thomps.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium infecundum* I.Thomps., *Muelleria* 29(2): 168–169, fig. 2d (2011). Type: Victoria: H.E. Parker Reserve, Heathmont, 4 Oct. 2008, *I.R.Thompson 1104* (holo: MEL [2368215](#)).

Bossiaea montana (I.Thomps.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium montanum* I.Thomps., *Muelleria* 29(2): 164–165, figs 2f, 4a,b (2011). Type: Victoria: Wabonga Plateau State Park, 10 km S of Whitfield, 1 Oct. 1986, *A.D.J.Piesse 370* (holo: MEL [685291](#)).

Autonym: ***Bossiaea montana*** subsp. *montana*

Bossiaea montana subsp. *prostrata* (I.Thomps.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium montanum* subsp. *prostratum* I.Thomps., *Muelleria* 29(2): 166–167, fig. 4c (2011). Type: Victoria: Mount Slide Road between Yarra Glen and Kinglake, N of Greenwood Lane, 4 Oct. 1986, *M.G.Corrick 10212* (holo: MEL [687620](#); iso: CANB [CBG8906700](#)).

Bossiaea obtusangula (Hook.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium obtusangulum* Hook. in W.J.Hooker (ed.), *Curtis's Bot. Mag.* 60: t. 3258 (1833). Type citation: 'the Glasgow Botanic Garden is indebted to Dr. SCOTT, who sent the seeds from Van Diemen's Land.' Type: 'Cult from Van Diemen's Land. *Plat. obtusangulum* Hook. [Illustrated] In Curt. Mag. n. 3248.' (lecto (here designated): K [000848554](#)).

Other original material: *Curtis's Bot. Mag.* 60: t. 3258 (1833) [[BHL](#)]. [Drawn from a cultivated plant grown from seed collected in Tasmania.]

Platylobium macrocalyx Meisn. in J.G.C.Lehmann, *Pl. Preiss.* 1(1): 80–81, adnot. (1844). Type: Victoria: Port Phillip, 1842, *C.Latrobe s.n.* (lecto: NEU 266741, *n.v.*; isolecto: G [00413542](#) [right-hand piece only], G [00413543](#) [right-hand piece only], NY, *n.v.*), designated by J.H.Ross, *Muelleria* 5(2): 134 (1983).

Platylobium obtusangulum var. *spinulosum* J.H.Willis, *Muelleria* 1(3): 126–127 (1967). Type: Victoria: on Aireys Inlet to Wensleydale Road, ± 3.2 km N of Forestry Tower at Peter's Hill, 12 Nov. 1961, *M.Allender s.n.* (holo: MEL [1522466](#) [top right piece]; iso: MEL [1522466](#) [all except top right piece], NSW [830673](#)).

Typification: Ross (1983) included no discussion of type elements for *Platylobium obtusangulum*, indicating only 'Type: Curtis's Bot. Mag. t.3258 (iconotype)' (Hooker 1833a). This is considered to be mere identification that this illustration is original material, not a formal designation as clearly made for other names in the same paper. We here consider K [000848554](#) from Herbarium Hookerianum to be original material for this name. It is labelled 'Cult from Van Diemen's Land. *Plat. obtusangulum* Hook. In Curt. Mag. n. 3248.' and the top right-hand piece is a very good match

for the illustration in the protologue (Figure 3). The citation of the plate as '3248' may simply be a transcription error, or it may imply that this label was written before the plate was published, with '3248' being the draft plate number. As no type was specified by Hooker (1833a), we here designate the herbarium sheet as lectotype of *P. obtusangulum* in accordance with ICN Article 9.4 (Turland et al. 2018).

Ross (1983) and Thompson (2011b) noted only the holotype of *Platylobium obtusangulum* var. *spinulosum* at MEL, but the protologue clearly specifies both holotype and isotype at MEL, and the single sheet is clearly annotated, and each piece notarised, by Willis as to which elements are to be considered the holotype and isotypes. A cited isotype at NSW has also been identified.

There are two sheets at G that include isolectotype material of *Platylobium macrocalyx* mixed with *P. triangulare*.

Bossiaea parviflora (Sm.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium parviflorum* Sm., *Spec. Bot. New Holland* 1(2): 18 (1793). *Platylobium formosum* var. *parviflorum* (Sm.) Benth., *Fl. Austral.* 2: 154 (1864); *Platylobium formosum* subsp. *parviflorum* (Sm.) A.T.Lee, *Contrib. New South Wales Natl. Herb.* 4: 96 (1970). Type: New South Wales: [location unknown, probably Sydney region], 1793, *J.White s.n.* (lecto: LINN [1188.3, no. 1](#)), designated by J.H.Ross, *Muelleria* 5(2): 136 (1983).

Platylobium ovatum Sieber ex DC., *Prodr.* 2: 116 (1825), *nom. illeg. non* Andrews (1802). Type: New South Wales: [Sydney region, June–Dec 1823], *F.Sieber 374* (lecto (here designated): G [00476947](#); isolecto: CANB [CBG7801643](#), HAL 0145940, HBG [520298](#), K [000848548](#), M [0219377](#), M [0219378](#), M [0219380](#), MEL 571654, MEL [571657](#), NSW [564484](#), P [02928880](#), P [02928881](#), P [02928882](#), P [02928916](#), TCD [0014773](#); probable syntype [*Sieber s.n.*]: GZU [000273218](#)).

Typification: As there are a large number of duplicates of *Sieber 374*, we here designate G [00476947](#) as lectotype as it is an ample fertile sheet with an original label bearing the epithet, and was seen by de Candolle.

Bossiaea reflexa (I.Thomps.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium reflexum* I.Thomps., *Muelleria* 29(2): 167–168, fig. 2h (2011). Type: Victoria: Gembrook–Launching Place Road, opposite Swallowfield Road, c. 5 km NNE of Gembrook, 6 Nov. 2008, *I.R.Thompson 1108* (holo: MEL [2368210](#); iso: CANB [815312](#)).

Platylobium formosum var. *cordifolium* Wawra, *Itinera Principum S. Coburgi* 1: 11–12 (1883). Type: Victoria: Dandenong, [1872–73], *Wawra I 587* (holo: W [0056493](#)).

Bossiaea rotunda (I.Thomps.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium rotundum* I.Thomps., *Muelleria* 29(2): 170–171, fig. 5 (2011). Type: Victoria: Swankey Gully Track, 3.7 km W of Malmesbury, 13 Oct. 2009, *I.R.Thompson 1164* (holo: MEL [2368223](#); iso: CANB [815311](#), HO [568632](#)).



Figure 3. A. Illustration of *Platylobium obtusangulum* from Curtis's *Botanical Magazine* 60: t. 3258 (Hooker 1833a). B. Lectotype of *P. obtusangulum* (K 000848554). Specimen image © Royal Botanic Gardens Kew, reproduced with permission.

Bossiaea triangularis (R.Br.) R.L.Barrett & P.H.Weston, *comb. nov.*

Basionym: *Platylobium triangulare* R.Br. in J.Sims, *Bot. Mag.* 37: t. 1508 (1 Nov. 1812) and in W.T.Aiton, *Hortus Kew.* edn 2, 4: 266 (Dec. 1812). Type: Tasmania: King Island, 23 Apr. 1802, R.Brown s.n. [Iter Austral. No. 5073] (lecto: BM 000885988; isolecto: 'Bass's Straights? Sent to Sir Jos Banks from Port Jackson before 1804'

BM 000885987; '[no original label; Iter Austral. 5073] Recd 11/76' K 000848555), designated by J.H.Ross, *Muelleria* 5(2): 131 (1983).

Platylobium murrayanum Hook. in W.J.Hooker (ed.), *Curtis's Bot. Mag.* 60: t. 3259 (1833). Type: 'Hort. Glasg. Hooker 1838' (lecto (here designated): K 000848557 [largest piece only – excluding small fruiting piece and contents of packet]).

Other original material: *Curtis's Bot. Mag.* 60: t. 3259 (1833) [BHL]. [Drawn from a cultivated plant grown in Glasgow from seed collected in Tasmania.]

Typification: Mabberley & Moore (2022) suggest that BM 000885987 is the sheet that Ross (1983) designated as lectotype of *P. triangulare*, but it is clear that only BM 000885988 includes the label data cited by Ross, so that sheet must be the lectotype. It transpires that the lectotype was not present at BM, and was presumably on loan, at the time that David Moore compiled his database of Brown specimens, so BM 000885987 was presumed to be the lectotype at that time (D.J. Mabberley, pers. comm., April 2025).

Ross (1983) included no discussion of type elements for *Platylobium murrayanum*, indicating only 'Type: Curtis's Bot. Mag. t.3259 (iconotype)' (Hooker 1833b). This is considered to

be mere identification that this illustration is original material, not a formal designation as clearly made for other names in the same paper. We here consider the largest piece on the sheet K 000848557 to be original material for this name. The text 'Hort. Glasg. Hooker 1838' may have given previous workers the impression that this material was collected by, or supplied to Hooker in 1838, five years after the name was published, but the sheet is stamped 'Herbarium Benthamianum' and this annotation is in Bentham's hand (J. Wege, pers. comm.). This is therefore interpreted as the year Bentham received the specimen from Hooker. The largest piece on the sheet is an excellent match for the illustration published with the protologue (Figure 4). We note that the smaller piece and packet contents represent mature fruiting material, which was not described in the protologue, so we exclude it from type status.



Figure 4. A. Illustration of *Platylobium murrayanum* from Curtis's Botanical Magazine 60: t. 3259 (Hooker 1833b). B. Lectotype of *Platylobium murrayanum* (K 000848557) with sheet label inset. Specimen image © The Board and Trustees, Royal Botanic Gardens Kew, reproduced with permission.

Notes: While Thompson (2011b) stated that *P. triangulare* was first published in Aiton (1912), Mabberley & Moore (2022) point out that the name was first published in the *Botanical Magazine* at least one month earlier (in Sims 1812). Examination of these texts shows that Sims (1812) cites the full publication details of Aiton (1812), but it is specifically noted there that this work is ‘nondum edito’ [not yet published]. Conversely, this could be taken as evidence of a paginated pre-print of Aiton’s work in advance of Sims’ publication.

Funding

This study was partly supported by a Postdoctoral Fellowship Grant from the Australian Biological Resources Study (ABRS) National Taxonomy Research Grant Program (NTRGP 4-EHP5TK3) to James Clugston and collaborators the Royal Botanic Gardens and Domain Trust, Sydney.

Acknowledgements

Juliet Wege and Mike Crisp are thanked for constructive comments on an earlier draft of this manuscript. Peter Jobson is thanked for discussions on the morphology of *Platylobium* and *Bossiaea*. Tim Binns, Nick Bradsworth, David Chan, David Fischer, Shirley McLaran, Ian Rainbow, Felix Riegel, Martin Stokes, and iNaturalist users grampianshiker, Mononymous and rolpersonia are all thanked for posting images on iNaturalist under a creative commons licence.

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