



## *Lachnagrostis willdenowii* Nees (Poaceae) – the name that never was

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### Introduction

Examination of the presumed type material for *Lachnagrostis willdenowii* Nees. nom. illeg. raised taxonomic and nomenclatural questions concerning the difference between this taxon, treated as a synonym of *Agrostis venusta* Trin. by Hooker (1860) and Vickery (1941), and *L. willdenowii* Trin., nom. illeg., nom. superfl., treated as a synonym of *A. avenacea* J.F.Gmel. by Vickery (1941).

### Methods

Scans of the relevant taxonomic publications and herbarium collections from CGE, K and MEL were examined.

### Results and Discussion

Joseph Dalton Hooker (1860) cited *Lachnagrostis willdenowii* Nees, based on *Gunn 1008*, as a synonym of *Agrostis venusta* Trin., or at least he considered *L. willdenowii*, in the sense of Nees, to be the same taxon as *A. venusta*. Nees von Esenbeck (1843) noted *L. willdenowii* twice in his listing of grass taxa for his "*Gramina Novae Hollandiae*" paper in Sir William Jackson Hooker's, *The London Journal of Botany*. Neither listing notes authorship for the name. However, it could be argued that Nees meant Trinius as author for both, as they follow the first species dealt with under *Lachnagrostis*, being '*Lachnagrostis billardieri*. Tr.', and are separated by *L. aemula* as '*Lachnagrostis aemula*. R. Br.', which in modern

### Abstract

Hooker (1860) recorded *Lochnagrostis willdenowii* Nees nom. illeg. non Trin. as a synonym of *Agrostis venusta* Trin., but *L. willdenowii* Nees is not considered to have been published as it is shown that Nees von Esenbeck (1843) was not raising a new name but referring to *L. willdenowii* Trin. nom. illeg., nom. supfl.

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nomenclature is *L. aemula* (R.Br.) Trin. (based on *Agrostis aemula* R.Br.). Elsewhere in his paper, Nees applied his own name to taxa, where he obviously intended them to be accepted as new (e.g., p. 412: '*Agrostis aequata* N. ab. E.'; p. 413: '*Echinopogon Gunnianus* N. ab. E.'; and p. 414: '*Mühlenbergia mollicoma* N. ab. E.'). In each case, the taxon is accompanied by a reasonably full morphological description. Although Nees provided a short distinguishing description of *L. willdenowii* (Gunn 1008), he does not claim authorship. The name, '*Lachnagrostis willdenowii* Nees' has been written on at least two labels accompanying collections of *A. venusta* Gunn 1008 at Kew (K000607840, K000838272–73) and indicates that this name, even if informally so, was used for the taxon for a time. Regardless of how Hooker interpreted Nees's (1843) listing of *L. willdenowii* (i.e. as *sensu* Nees or Nees nom. nov.), Vickery (1941) obviously treated it as the publication of a homonym, for she lists '*Lachnagrostis Willdenowii* Nees in Hook. Lond. Journ. Bot., ii. (1843) p. 412. non Trin. (1824)' as a synonym of *A. venusta*.

Some 20 years before Nees (1843), Trinius (1824) published *Lachnagrostis willdenowii* Trin. as a new name for his earlier *L. retrofracta* (Willd.) Trin. Which, according to Willdenow (1809), derived from New Holland [Australia] and was cultivated in the Royal Berlin Botanical Gardens. Vickery (1941) and Jacobs and Brown (2009) considered *L. willdenowii* Trin. to be synonymous with *L. filiformis* (G.Forst.) Trin. (based on *Avena filiformis* G.Forst.), along with *Agrostis avenacea* J.F.Gmel. and *Agrostis forsteri* Roem. & Schult. nom. illeg., nom. superfl. However, early treatments, such as Roemer and Schultes (1817), Kunth (1829) (as *Deyeuxia forsteri* (Roem. & Schult.) Kunth.) and Steudel (1840) (as *Calamagrostis forsteri* (Roem. & Schult.) Steud.) considered *L. filiformis*/*A. forsteri* to be confined to New Zealand and Easter Island, and *L. willdenowii*/*L. retrofracta* to be a separate Australian taxon. Edgar (1995) designated the lectotype for *Avena filiformis* to be a specimen from New Zealand.

The collections Nees used in reference to *Lachnagrostis willdenowii* are most likely to be those combined on a sheet at the University of Cambridge herbarium (CGE34005) ex the herbarium of John Lindley (Fig. 1). The sheet contains two Lindley labels with Nees's annotations. The first is associated with a small plant having a single, partially enclosed and

non-spreading inflorescence, collected as part of Major Mitchell's Expedition from the Interior of New Holland. Nees annotated this collection as '*Lachnagrostis aemula willdenowii* var. *gracilis* & *angustifolia* [i.e. thin and narrow-leaved] (*A. aemula* R.Br.)'. In his paper, however, Nees (1843) recorded the Mitchell collection as *L. willdenowii* var. *angustifolia* and *humilis* (rather than *gracilis*, as noted on the CGE specimen) and equated it to Sieber's collection of *A. aemula*, in *Agrosth. n.81*, rather than to *A. aemula* R.Br. which he considered similar to *L. billardierei* (R.Br.) Trin. (i.e. 'Adnot. *Agrostis aemula* Sieb. *Agrosth. n. 81. Ad Lasiagrostin Willdenowii*, neque ad *Agrostin aemulum* R. Br. pertinent, quae *Lasiagrostis Billardieri* simillima est'). Examination of a duplicate of Sieber 81 (MEL 2123333A) shows it to conform to *L. filiformis*.

The second Lindley label on the CGE34005 sheet is an 'Ins. Van Diemen [i.e. Tasmania], R. Gunn' collection annotated by Nees as '1008' and '*Lachnagrostis willdenowii* Tr.'. This collection is a mixture of *Agrostis venusta* and *L. filiformis* but the label is attached to the base of what is largely *L. filiformis* with a fragment of *A. venusta*. There is no additional Lindley/Nees label for the bulk of the collection. Nees (1843) described Gunn 1008 as 'Valvula inferior biseta setulis bipartitis brevibus.' [i.e. lemma with a bisecting awn, short hairs and shortly cleft apex] which cannot relate to *A. venusta* with its glabrous and entire lemma, but does partially describe the lemma of *L. filiformis*. It seems that Nees did not closely examine the *A. venusta* on the sheet but assumed it to be either a variant of *L. filiformis* and not worthy of description, or he simply overlooked it altogether. Hooker (1860) gives no evidence of having consulted Steudel (1855) who included Nees' Latin description of Gunn 1008 and cited Sieber's *A. aemula* as part of *Calamagrostis willdenowii* (Trin.) Steud. In doing so, Steudel (1855) combined Nees two listings of *L. willdenowii* as referring to the same taxon, with Trinius as the sole authority.

Ronald Gunn's 1837 Tasmanian collection of *Agrostis venusta* bore his taxon number of 1008, against which Gunn (ca. 1830–1850), in his journal, wrote the name *L. willdenowii* (without authorship). Burns and Skemp (1961) indicate that Gunn relied on William Hooker, father of Joseph, and for whom he made his collections, to provide botanical names for his specimens. The list



**Figure 1.** CGE34005 displaying a collection of *Lachnagrostis filiformis* (G.Forst.) Trin. (syn. *Agrostis avenacea* J.F.Gmel.) ex Major Mitchell Expedition and a mixed collection of *L. filiformis* and *A. venusta* Trin. – the latter presumably cited by Vickers (1941) as the type of *L. willdenowii* Nees. Image kindly provided by Cambridge University Herbarium

of grass taxon numbers in Gunn (ca. 1830–1850) does not include any from consignments sent to Hooker after 1838, which suggests that, as Trinius (1841) had not yet published *A. venusta* and Nees's (1843) paper was still five years away, the most recent names that William Hooker had available for the taxonomic determination of *Gunn 1008* were either *L. willdenowii* Trin. or *L. aemula* (R.Br.) Trin.

The superficial resemblance of *Agrostis venusta* to *Lachnagrostis filiformis* (syn. *L. willdenowii* Trin.) with its fine leaves, open inflorescence, relatively small spikelets and long-awned lemmas, lends itself to cursory misidentification. The 1837 *Gunn 1008* collection of *A. venusta* at Kew (K000838272–73), ex Hooker's herbarium, has '*Lachnagrostis willdenowii*' overwritten on Gunn's original label, presumably meaning *L. willdenowii* Trin. However, 'Nees' is added to the name in a different pen and, therefore, after 1843. William Hooker could have provided Gunn with the name *L. aemula* (R.Br.) Trin. for *1008*, but he obviously recognised that *Gunn 1006* (K000607849), also sent in Gunn's 1837 consignment, was something different, and better represented *L. aemula* (the name written on Gunn's label and in his journal, against *1006*). By the time Gunn sent his 1840 collection of *A. venusta* (K000607840) to Hooker in his 1846 consignment, Nees (1843) had published his "*Gramina Novae Hollandiae*" and the name '*Lachnagrostis willdenowii* Nees' was subsequently written with the one pen on Gunn's label, in what appears to be Joseph Hooker's handwriting. The name *Agrostis venusta* Trin. has also been written on the sheet in the same hand and, as the ink is of the same intensity, maybe written with the same pen at the same time.

An additional name written on the K000607840 and K000838272–73 sheets is '*Agrostis gunnii* H.f.' which has been crossed out and replaced with '*Agrostis venusta* Tr.'. At Cambridge, an ex-Lindley sheet (CGE34007) has a 593 label with both '*Agrostis (Trichod.) venusta* Trin.' and '*Trichodium gunnii* Hook.Fil.'. The proposed naming of this grass after Gunn was never executed, as the name of *A. venusta* Trin. took precedence.

When Joseph Hooker published his New Zealand and Tasmanian Floras (Hooker 1853, 1860), he did not distinguish *Lachnagrostis filiformis* from *L. aemula*. In the earlier Flora, he synonymised both under *Deyeuxia*

*forsteri*, while in the later Flora, he synonymised both under *Agrostis aemula*. Surprisingly, in neither Flora is *L. retrofracta* (Willd.) Trin. or *L. willdenowii* Trin. listed in synonymy, although '*A. retrofracta* Schrad. in Herb. Hook.' is (in reference to a Schrader herbarium collection: K000838257). Also in synonymy with *A. aemula* R.Br., Hooker (1860) included '*L. aemula*, Nees, in Hook. Lond. Journ. Bot. ii. 412'. This is a reference to Nees's (1843) listing of *L. aemula* R. Br.' (based on George Everett Esq. – CGE34010 and *Gunn 1006* – CGE34011), but again, as for *L. willdenowii*, Hooker gives no credit to Trinius for the combination. In this case, however, unlike for *L. willdenowii* Nees, the name *L. aemula* Nees has not been written on the Kew sheet of *Gunn 1006* (K000607849), nor perpetuated in later treatments, except that Vickery (1941) listed in synonymy for *A. aemula*, "*Lachnagrostis aemula* Trin. *Fund. Agrost.* (1820) p. 138; Nees ex Hook. f., *Handb. New Zeal. Fl.* (1864) p. 329."

On 12.viii.1938, J. Vickery attached three labels to the CGE34005 sheet: an '*Agrostis avenacea* Gmel.' (syn. *L. filiformis*) label to the Mitchell collection, the same to the specimen Nees separated out as *L. willdenowii* Tr. from the *Gunn 1008* collection, and a third, '*Agrostis venusta* Trin.', to the previously unlabelled bulk of the *Gunn 1008* collection. Vickery (1941) designated *Gunn 1008* at C (in reference to Cambridge University Herbarium before CGE became the standard code in 1953) as the type of *L. willdenowii* Nees. As there appears to be no other candidate sheets at CGE, it is presumed that she was referring the type to the bulk of the *Gunn 1008* collection on CGE34005.

This study demonstrates that Nees (1843) did not consider specimens of *Agrostis venusta* (*Gunn 1008* ex parte) in his publication of Australian grasses, but did regard a specimen of *Lachnagrostis filiformis* (*Gunn 1008* ex parte) to be *L. willdenowii* (without author but assumed to be Trinius). Hooker (1860) misinterpreted Nees's account to place *L. willdenowii* sensu Nees in synonymy with *A. venusta* Trin., a mistake that was perpetuated by Vickery (1941), Morris (1994), Quattrocchi (2006) and Jacobs (2009). The confused history of these names demonstrates the need to examine, wherever possible, the original collections and associated publications before uncritically accepting current names and asserted synonyms.

## Taxonomy

To clarify the taxonomic names discussed in this paper, the following partial synonymies are provided.

### *Agrostis venusta* Trin. *Mém. Acad. Imp. Sci. Saint-Petersburg. Sér. 6, Sci. Math., Seconde Pt. Sci. Nat. 6, 340 (1841)*

**Type:** 'Van. Diem. Land'; holotype: V.D.L. (LE-TRIN-1666.01 (& fig.))

### *Lachnagrostis filiformis* (G.Forst.) Trin. *Fund. Agrost. 128 (1820)*

*Avena filiformis* G.Forst. *Fl. Ins. Austr.* 9 (1786); *Agrostis avenacea* J.F.Gmel., *Syst. Nat.* 171 (1791) nom. nov. non *Agrostis filiformis* Vill. (1787); *Agrostis filiformis* (G.Forst.) Spreng., *Mont. Prom. Fl. Hol.* 32 (1807), nom. illeg., non Vill. (1787); *Agrostis forsteri* Roem. & Schult., *Syst. Veg.* 2: 359 (1817), nom. illeg., nom. superfl.; *Lachnagrostis forsteri* (Roem. & Schult.) Trin., *Gram. Unifl. Sesquifl.* 217 (1824), nom. illeg.; *Deyeuxia forsteri* (Roem. & Schult.) Kunth., *Révis. Gramin.* 1, 77 (1829), nom. illeg.; *Calamagrostis forsteri* (Roem. & Schult.) Steud., *Nomencl. Bot.* 2<sup>nd</sup> edn. 1, 250 (1840), nom. illeg.; *Calamagrostis filiformis* (G.Forst.) Cockayne, *Rep. Tongariro Natl. Park* 35 (1908), nom. illeg. non Griseb. (1868); *Deyeuxia filiformis* (G.Forst.) Petrie in C. Chilton (ed.), *Subantarctic Is. New Zealand* 2, 474 (1909), nom. illeg. non (Griseb.) Hook.f.; *Calamagrostis avenacea* (J.F.Gmel.) W.R.B.Oliv., *Trans. & Proc. N. Zealand Inst.* 49, 127 (1917), non *Calamagrostis filiformis* Griseb. (1868); *Lachnagrostis avenacea* (J.F.Gmel.) Veldkamp, *Blumea* 37, 230 (1992), nom. illeg., nom. superfl.

**Type:** 'Habitat in Nova Zeelandia et insula Paschatis'; lecto: *Forster s.n.* ex herb. *Sprengel* (B herb. *Willdenow 02208*) fide E. Edgar, *N. Zealand J. Bot.* 33, 19–20.

*Agrostis retrofracta* Willd., *Enum. Pl.* 94 (1809); *Lachnagrostis retrofracta* (Willd.) Trin., *Fund. Agrost. 128 (1820)*; *Lachnagrostis willdenowii* Trin. *Gram. Unifl. Sesquifl.* 217 (1824), nom. illeg.; *Deyeuxia retrofracta* (Willd.) Kunth, *Révis. Gramin.* 1, 77 (1829); *Calamagrostis retrofracta* (Willd.) Link, *Hort. Berol.* 2, 247 (1833); *Calamagrostis willdenowii* (Trin.) Steud., *Syn. Pl. Glumac.* 1, 192 (1854), nom. illeg.

**Type:** 'Habitat in Nova Hollandia'; holotype: Anon. *s.n.*, Cultivated in hort. Bot. Berol. from material collected in Australia (B herb. *Willdenow 01692*).

### *Lachnagrostis aemula* (R.Br.) Trin. *Fund. Agrost. 128 (1820)*

*Agrostis aemula* R.Br. *Prodr.* 172 (1810); *Deyeuxia aemula* (R.Br.) Kunth, *Révis. Gramin.* 1, 77 (1829); *Calamagrostis aemula* (R.Br.) Steud., *Nomencl. Bot.* 2<sup>nd</sup> edn. 1, 249 (1840).

**Type:** 'Port Jackson and Port Dalrymple'; lecto: *Brown 6219 p.p.* (BM *n.v. fide* J.W. Vickery, *Contr. New South Wales Natl. Herb.* 1, 115 (1941)).

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