

PSEUDORAPHIS SPINESCENS (R.Br.) n. comb.,
AND SOME RECORDS OF NEW SOUTH
WALES GRASSES.

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SUMMARY.

A new combination in the Gramineae is proposed; six grasses are reported from New South Wales for the first time.

Pseudoraphis spinescens (R.Br.) n. comb.

Panicum spinescens R.Br. Prodr. 193 (1810).

Chamaeraphis spinescens (R.Br.) Poir. Encycl. Meth., Suppl. 2 : 189 (1811).

Chamaeraphis spinosa Beauv. ex Roem. et Schult. Mant. 2 : 253 (1824), apparently based on *Panicum spinescens* R.Br.

Panicum asperum Koen. in Naturforscher. 23 : 209 (1788); not *Panicum asperum* Lam. (1778).

Chamaeraphis aspera (Koen.) Nees in Wall. Cat. Herb. Ind. No. 8679 (1849).

Pseudoraphis aspera (Koen.) Pilger in Notizbl. Bot. Gart. Berlin 10 : 210 (1928).

Panicum abortivum R.Br. Prodr. 193 (1810). (See also Kunth Enum Pl. 1 : 131 (1833).

Chamaeraphis abortiva (R.Br.) Poir. Encycl. Meth. Suppl. 2 : 189 (1811).

Orthopogon abortivus (R.Br.) Spreng. Syst. Veg. 1 : 306 (1825).

Chamaeraphis spinescens var. *parvispicula* Benth. Fl. Austral. 7 : 499 (1878), based on *Panicum abortivum* R.Br.

Pseudoraphis abortiva (R.Br.) Pilger in Notizbl. Bot. Gart. Berlin 10 : 210 (1928).

In the Herbarium of the Royal Botanic Gardens, Kew, there are two sheets from Robert Brown's collections, No. 6126 named *Panicum spinescens* and No. 6127 named *P. abortivum*. Each sheet bears two specimens, and from the appearance it seems that one piece from each sheet has been transposed. There is no doubt that these sheets bear parts of the type-collections of Robert Brown's two species. On comparison I could find no significant difference between them. There is a slight difference in size of the spikelets, but I have found as great a difference in size of spikelets on the one specimen in various Australian collections. I am therefore disposed to regard them as conspecific.

The species is now referable to the genus *Pseudoraphis* Griffith ex Pilger, and it becomes necessary to select the appropriate specific epithet available for use in this genus. Pilger referred *Panicum spinescens* to *Pseudoraphis aspera*, based on *Panicum asperum* Koen. described in 1788 from an Indian and Malayan grass. But this is a later homonym, being pre-dated by *Panicum asperum* Lam. (1778). The epithet was subsequently used in *Chamaeraphis* by Nees in 1849, and for priority considerations would rank only from that date. It is necessary therefore to select one of the earlier epithets simultaneously used by Robert Brown. Article 56 of the International Rules provides *inter alia* that "If the names or epithets are of the same date, the author who unites the groups has the right of choosing one of them. The author who first adopts one of them, definitely treating another as a synonym or referring it to a subordinate group, must be followed." Bentham (1878) appears to have been the first definitely to select the epithet "spinescens" and refer *Panicum abortivum* to a subordinate group, to *Chamaeraphis spinescens* var. *parvispicula*. Stapf (1906, p. 348) also clearly adopted "spinescens" and relegated "abortivum" to synonymy. The epithet "spinescens" must therefore be adopted also in *Pseudoraphis*.

In describing *Panicum abortivum*, Brown refers to *Andropogon squarrosus* Herb. Linn. He did not refer to *Andropogon squarrosus* Linn. f. Suppl. Pl. 433 (1781). It seems evident therefore that he was identifying a specimen in the Linnean herbarium with his *P. abortivum*, but was deliberately refraining from including *Andropogon squarrosus* Linn. f. in the synonymy. The identity of *Andropogon squarrosus* Linn. f. has puzzled generations of systematic botanists, but only those aspects of the problem which relate to *Panicum abortivum* need concern us here. Certain elements of its description strongly suggest an aquatic member of the Andropogoneae such as a *Vetiveria* sp., e.g. "Flos hermaphroditus sessilis, masculi pedicellati." For this reason it has been held by some to apply to *Vetiveria zizanioides* (L.) Nash (syn.: *Andropogon muricatus* Retz.), although this view was not held by Stapf (1906, p. 346). Moreover, the description of the glumes could apply to *Panicum abortivum* only on the assumption that Linnaeus failed to observe the short lower glume. There seems no doubt that there is a specimen in the Linnean herbarium which agrees with *P. abortivum*; Brown's observations on this specimen were confirmed by Stapf (1906, p. 348). However, the problem remains as to whether this specimen is in fact that from which Linnaeus drew up his description of *Andropogon squarrosus*, and therefore whether it is the type of the species. In view of the confusion which already surrounds this name, it seems undesirable to adopt it in *Pseudoraphis* until the matter has been placed beyond all doubt.

Chase (1925, p. 203) has taken a different view, and adopted the epithet "squammosus" for *Panicum abortivum* and probably *P. spinescens*, treating Brown's reference to Herb. Linn. as indicating definite synonymy. For completeness the synonymy involved by this interpretation of the basonym is given below, but as already indicated this view is not accepted by the present writer, and these synonyms are not held to be applicable to *Pseudoraphis spinescens*.

Andropogon squarrosus L.f. Suppl. Pl. 433 (1781).

Panicum squarrosum (L.f.) Lam. Encycl. Meth. 4: 743 (1798).

Anatherum squarrosum (L.f.) Beauv. Agrost. 128, 150 (1812).

Echinochloa squarrosa (L.f.) Roem. et Schult. Syst. Veg. **2** : 479 (1817).

Orthopogon squarrosus (L.f.) Spreng. Syst. Veg. **1** : 307 (1825).

Chamaeraphis squarrosa (L.f.) Chase in Contrib. U. S. Nat. Herb. **24** : 203 (1925).

Pseudoraphis squarrosa (L.f.) Chase in Journ. Arn. Arb. **20** : 313 (1939).

Pseudoraphis spinescens ranges from India, Ceylon, South China, Borneo, the Philippines and New Guinea to Australia. It is characteristically rooted in mud with the stems rising above shallow water in pools or rivers. It occurs in all Australian States except Tasmania. In New South Wales it is more commonly found along inland rivers and lagoons, though obtained by Robert Brown from the Port Jackson district.

Cleistochloa subjuncea C. E. Hubbard in Hook. Ic. Pl. **33** : t. 3209 (1935).

This species is known from many collections in Queensland, but only recently it was obtained in New South Wales, at Gordon Vale, south of Yelarbon, Queensland, 25-11-1949, *F. Hely* (NSW 13683).

Dimorphochloa rigida S. T. Blake in Univ. Queensl. Papers, Dept. Biol. **1**, No. **19** : 2 (1941).

Originally known only from a somewhat restricted area on sandstone ridges and hills in the Leichhardt, Warrego and Darling Downs districts of Queensland, Blake has informed me that he has since found it at Mt. Maroon, thus extending its range about 200 miles to the south-east. It is now recorded from two localities a little west of the Sydney district in New South Wales, some 600 miles to the south. Here, as in Queensland, it was found on sandstone ridges. N. S. Wales : Bent's Basin, Nepean River, 9-1913, *E. Cheel* and *J. L. Boorman*, (NSW 13688); on ridge above Upper Colo, 29-3-1950, *J. Vickery* (NSW 11006).

Sehima nervosum (Rottl.) Stapf in Prain, Fl. Trop. Afr. **9** : 36 (1917).
(Syn. : *Ischaemum laxum* R.Br.).

This species extends from Tropical Africa and Tropical Asia to Tropical Australia. It was first recorded from New South Wales by F. Turner (1891, 1895), who reported a specimen from Tamworth. It was therefore accepted as a component of the New South Wales indigenous flora by C. Moore (1903, p. 85) and by Maiden and Betche (1916). Turner's collections are apparently no longer extant, and there have been no specimens of *Sehima nervosum* from this State in the New South Wales National Herbarium until recently. Turner's record has now been confirmed by a specimen received from northern New South Wales, some 20 miles north of Warialda at "Freestone," Coolatai, on a stony basalt hill, badly eroded, with very shallow soil between stones, 29-12-1950, *A. Johnson* (NSW 13681).

Brachypodium distachyon (L.) Beauv. Agrost. 101, 155, 156 (1812).

This small annual, a native of the Mediterranean region, has been known in the southern Australian States for many years. As might be expected, it appears to be advancing northwards into New South Wales, where its presence is definitely established by the following record : Howlong to Brocklesby Road, 30-11-1949, *E. J. McBarron* 4189 (NSW 13690).

Phalaris angusta Nees ex Trin. Gram. Icon. 1 : t. 78 (1827).

This native of southern America has been cultivated experimentally by the New South Wales Department of Agriculture. It now appears to have become naturalised in at least one area—Windsor district, 12-1949, *J. N. Whittet* (NSW 10592).

Digitaria orbata Hughes in Kew Bull. 1923 : 312 (1923).

This species was described from Herbert's Creek, Queensland. The type is in the Herbarium of the Royal Botanic Gardens, Kew, and a specimen from Cairns in the New South Wales National Herbarium is an excellent match for it. Some specimens recently collected in northern New South Wales just south of the Queensland border are referred to this species. It differs from the related *D. diminuta* Hughes, a not uncommon species in New South Wales, in the upper glume which is still further reduced to an extremely small scale, the back of the upper (fertile) lemma being almost entirely exposed.

New South Wales : Red Hill, Gordon Vale, south of Yelarbon (Queensl.), 23-11-1949, *F. Hely* (NSW 10732, 10733, 10734).

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