

Thedachloa, a new grass genus (Gramineae: Paniceae) from the Northern Kimberley, Western Australia

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Abstract

Jacobs, S.W.L. (Botanic Gardens Trust, Sydney, Mrs Macquaries Road, Sydney, NSW 2000, Australia) 2004. Thedachloa, a new grass genus (Gramineae: Paniceae) from the Northern Kimberley, Western Australia. Telopea 10(2): 635–637. Thedachloa is described as a new genus with the type species T. annua. Thedachloa is distinguished by a zone of stiff hairs or bristles on the upper glume and by the deeply-folded or grooved, almost cylindrical lower lemma.

Introduction

A new grass species was collected in 1996 near Kalumburu, Western Australia. Examination back at NSW indicated that not only was it a new species, but also a new genus. Publication was delayed until further searching allowed a better idea of the distribution and habitat. Further field work in 2002, unfortunately in a very dry year, found no further localities, though it was recollected at the original site. This species so far is only known from c. 200 metres along the bank of a creek north of Kalumburu.

The relationships of *Thedachloa* are not clear. There is a resemblance to *Sacciolepis*, mainly due to the swollen or inflated lower spikelet. The hairs/bristles on the upper glume do not immediately appear similar to the ornamentation of other genera but, when coupled with the folded/grooved lower lemma, may indicate some relationship to the Neurachneae, or perhaps even *Thyridolepis* in particular. It is hoped that DNA sequencing studies may better indicate relationships.

***Thedachloa* S.W.L. Jacobs gen. nov.**

Sacciolepidi aemulans, differt fascia longe hispida in gluma superna, lemmate inferno valde sulcato dorsaliter.

Inflorescence a dense ovoid panicle. Spikelets inflated at base, falling entire and fertile floret also separating. Glumes unequal; lower obtuse, inflated, membranous, faintly 3-nerved, rounded on back; upper glume 7-nerved with the lateral nerves closely-spaced, rounded on back, with a band of stiff hairs or bristles above the middle. Lower lemma male or sterile, as long as the spikelet, inflated, 7-nerved with the lateral nerves closely-spaced, deeply grooved or folded on the back below and almost tubular with the innermost tissue of the fold disintegrating on older dried florets; palea well developed. Upper floret bisexual, noticeably shorter than the spikelet, shortly stipitate; lemma shiny, brown, smooth, glabrous, chartaceous, margins slightly inrolled, germination flap weakly developed; palea exposed, shiny, brown, smooth; stigmas brown; anthers pale cream; caryopsis with embryo c. 45% the length.

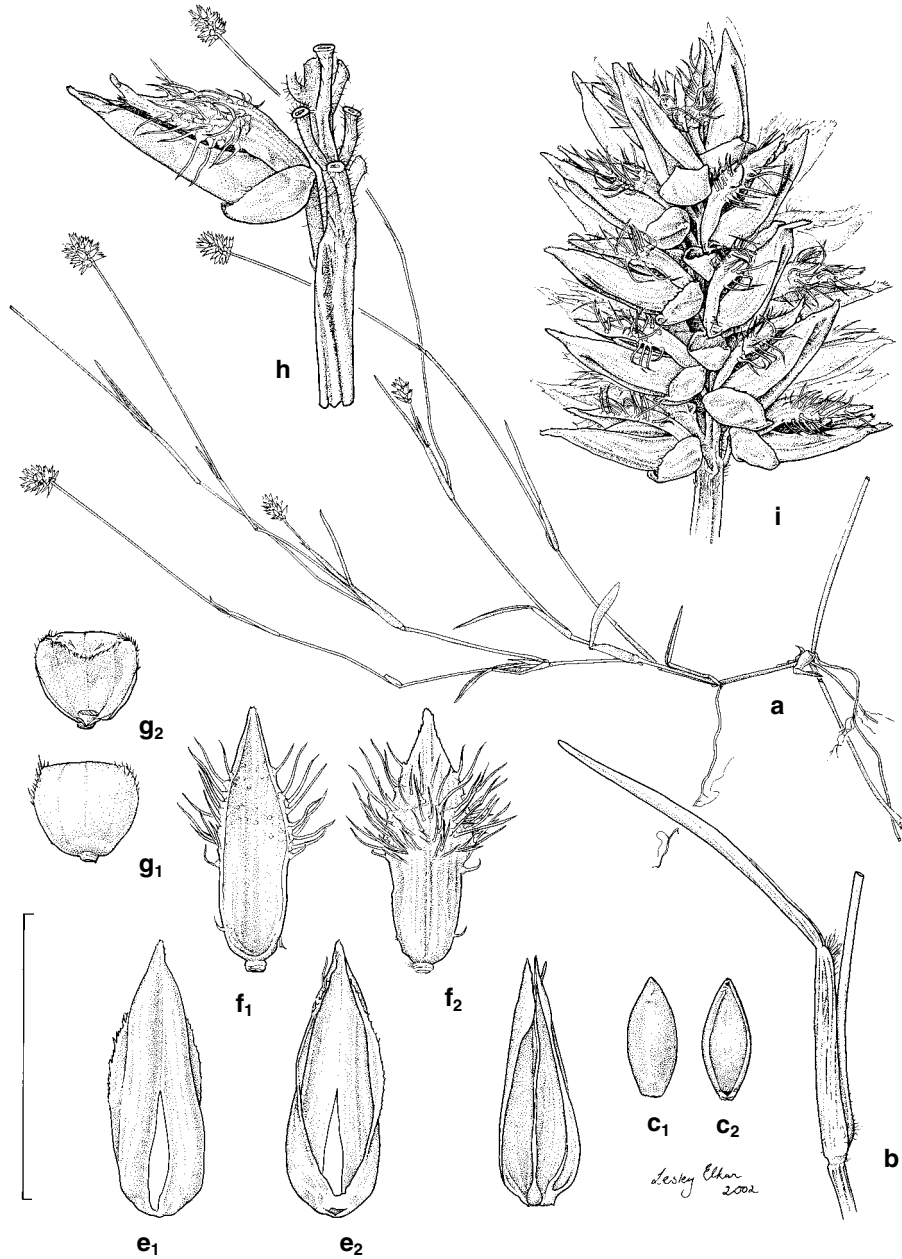


Fig. 1. *Thedachloa annua*. Scale bar 2.5 mm unless indicated otherwise. **a**, habit (scale bar 4 cm); **b**, leaf sheath and blade (scale bar 0.6 cm); **c**₁, upper or fertile lemma; **c**₂, palea of upper lemma; **d**, palea of lower lemma; **e**₁, lower lemma, dorsal view showing groove and gap where tissue has disintegrated; **e**₂, lower lemma, ventral view; **f**₁,

Type species: *Thedachloa annua* S.W.L. Jacobs

Etymology: The name is derived from the grazing lease 'Theda' immediately to the south of Kalumburu, in recognition of the contribution made by co-manager Robin Maher to understanding the biology, geology and anthropology of the region.

***Thedachloa annua* S.W.L. Jacobs sp. nov.**

Gramen annuum; inflorescentia densa, ovoidea, 3–5 mm longa; spiculis c. 2 mm longis; gluma superna in dimidio superiore fascia longe hispida (pilis c. 0.5 mm longis); lemmate inferno valde sulcato dorsaliter.

Holotype: Western Australia: Northern Botanical Province: Central Gardner: c. 2 km N of Kalumburu, Pago road. 14°16.78' S 126° 37.42' E, S. Jacobs 8061, 22 May 1996. Small spreading grass on white sand on bank of ephemeral creek amongst quartzite boulders. (NSW; iso PERTH, US, B).

Stoloniferous scrambling annual; stolons to 20 cm or longer with internodes to 3 cm long, rooting at the nodes, the leaves deciduous from older nodes. Cataphylls absent. Prophyll present in axil, c. 50% sheath length. Culms sometimes branched, glabrous, slender, ridged, compressible; nodes narrower than culm. Leaf sheaths ridged, glabrous except for a few long stiff hairs on upper margins; ligule a fringe of hairs c. 0.5 mm long; blade to 2 cm long, more or less triangular, flat, becoming inrolled on drying, glabrous or sometimes sparsely pubescent near base, veins raised on adaxial surface, smooth on abaxial surface. Inflorescence a dense ovoid panicle 3–5 mm long, c. 4 mm diam. Spikelets 1.7–2.1 mm long, inflated at base, falling entire and fertile floret also separating. Glumes unequal; lower 0.6–0.8 mm long, c. 25% spikelet length, broad, obtuse, inflated, membranous, glabrous except for the ciliate margins, faintly 3-nerved, rounded on back; upper glume 1.6–1.9 mm long, c. 85% spikelet length, slightly inflated at base, 7-nerved with the lateral nerves closely-spaced, rounded on back, with a band of usually tubercle-based stiff hairs or bristles c. 0.5 mm long from about the middle to just below the apex (c. 50–80% of the glume). Lower lemma male or sterile, 1.8–2 mm long, as long as the spikelet, inflated, 7-nerved with the lateral nerves closely-spaced, deeply grooved or folded on the back below and almost tubular with the innermost tissue of the fold absent on older dried florets; palea c. 1.5 mm long. Upper floret bisexual, c. 1 mm long, noticeably shorter than the spikelet, shortly stipitate; lemma shiny, brown, smooth, glabrous, chartaceous, margins slightly inrolled, germination flap present but poorly defined; palea exposed, shiny, brown, smooth; anthers pale cream to pink; stigmas brown; caryopsis c. 0.8 mm long, embryo c. 45% the length. Fig. 1.

Habitat: Sandy alluvium along an ephemeral creek.

Distribution: Only known from the Type locality in the Northern Kimberley, near Kalumburu, Western Australia.

Etymology: Named after its apparently annual habit.

Specimen examined: Western Australia: Central Gardner: c. 2 km N. of Kalumburu, Pago rd. 14° 16.806' S 126° 37.432' E, S. Jacobs 8854, 3 July 2002 (NSW).

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