

DIGITARIA CILIARIS

Summer Grass

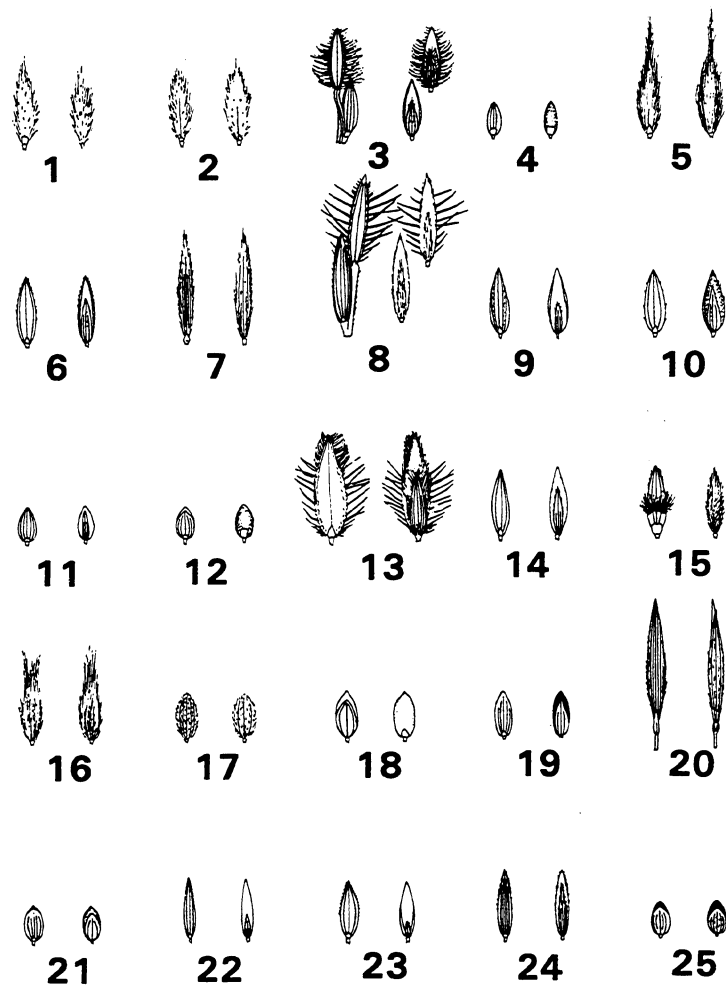
An annual grass of rather variable habit, 15–70 cm tall, green or sometimes purplish in colour. *Culms* either erect from the crown, kneed or extensively prostrate, but eventually becoming erect, rooting freely at the nodes, mostly unbranched from the upper nodes, but freely branching from the lower ones, smooth and hairless, often channelled on one side. *Nodes* hairless. *Leaves* mostly along the culms. *Leaf sheaths* loose, particularly the lower ones, slightly to markedly hairy with scattered long tubercle-based hairs, often denser towards the nodes. *Ligule* membranous, truncate, 1–2 mm long. *Leaf blades* rounded and slightly contracted at the base, becoming flat and tapering to a point, 5–15 cm long, 4–8 mm wide, a few hairs near the base of the blade on the upper surface, the margins rough and slightly thickened.

Inflorescence a panicle of 4–9 racemes arranged subdigitately or more or less singly, but relatively close with the spikelets extending to the base, 3–30 cm long, at first more or less erect, but later spreading, the axis flattened and winged, 1 mm broad. *Spikelets* (S) 3–3.25 mm long, somewhat overlapping, crowded along the raceme in pairs, one shortly pedicellate, the other on a pedicel as long as itself, otherwise similar, each falling entire from its pedicel at maturity. *Florets* 2, the lower one neuter and reduced to a lemma, the upper bisexual. *Glumes* (G_1 , G_2) very unequal; the lower glume (G_1) $\frac{1}{5}$ or less the length of the spikelet, without nerves; the upper (G_2) about $\frac{1}{2}$ to $\frac{3}{4}$ the length of the spikelet and narrower than it, 3-nerved, fringed along the margin with short hairs. *Lemma* (L_1) of the lower sterile floret the length of the spikelet, 7-nerved, the nerves prominent, with the middle ones rather widely spaced, a fringe of short hairs along the upper margin and on the back in a row between the lateral nerves. *Palea* absent. *Lemma* (L_2) of the upper fertile floret somewhat hardened, shining and rather granular in appearance, the margins membranous, 3-nerved, straw-coloured, the same length as L_1 . *Palea* (P_2) similar in appearance to L_2 , 2-nerved, rounded on the back. *Anthers* 3, 1 mm long.

This is a common naturalized summer weed grass, particularly of cultivation, in southern Queensland and is widespread throughout the warm regions of the world. It is ephemeral and has little value as forage. Several of the native species are important forage grasses of native pastures. *D. didactyla* (Queensland blue couch) is commonly cultivated as a turf grass for lawns. The strongly stoloniferous and sterile *D. decumbens* (Pangola grass) is now the most widely used pasture grass of the wet coastal lowlands.

REFERENCES

- Henrard (1950);¹ Vickery (1950b),² pp. 322-29; Gardner (1952),³ pp. 224-30; Vickery (1961),⁴ pp. 83-104; Nestel and Creek (1962);⁵ Commonwealth Bureau of Pastures and Field Crops (1968d);⁶ Barnard (1969),⁷ pp. 31-35; Blake (1969b),⁸ pp. 7-20; Burbidge and Gray (1970),⁹ pp. 63-64; Lazarides (1970),¹⁰ pp. 101-8; Willis (1970),¹¹ pp. 196-98; Beadle *et al.* (1972),¹² pp. 663-64; Blake (1973),¹³ pp. 61-65; Black (1978),¹⁴ pp. 215-18; Jessop (1981),¹⁵ pp. 472-74.



X3.0

Spikelets of *Digitaria* spp. L.H. of each pair — abaxial view (side facing away from axis, showing lower glume (G₁) when present, or, in its absence, lower lemma (L₁)). R.H. — adaxial view (side facing axis, showing upper glume (G₂)). Numbers correspond to those in brackets following species names in the key.

KEY TO SPECIES

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| 1. Racemes all distinctly stalked. | 2 |
| Racemes mostly with spikelets to base. | 5 |
| 2. Spikelets less than 3 mm long (excluding hairs, which may protrude about 1 mm beyond spikelet); upper glume and lemma densely long, silky-hairy (silky umbrella grass) | <i>D. ammophila</i> (1)* ^{1,3,4,8,11,14} |
| Spikelets 3.5–6 mm long, with or without bristles and silky hairs, hairs not exceeding spikelet. | 3 |
| 3. Panicle with obvious secondary branching. | <i>D. porrecta</i> (20) ¹³ |
| Panicle without secondary branching. | 4 |
| 4. Upper glume equal to spikelet length (finger panic grass) | <i>D. coenicola</i> (7) ^{1,3,4,10,13,14,15} |
| Upper glume $\frac{3}{4}$ spikelet length (umbrella grass) | <i>D. divaricatissima</i> (13) ^{1,4,8,11,12,14,15} |
| 5. Lower lemma with a prominent tuft of hairs on either side of central nerve and below mid-point. | <i>D. hubbardii</i> (15) ^{1,4} |
| Lower lemma, hairless or hairy, but without tufts of hairs. | 6 |
| 6. Spikelets densely woolly, hairs much exceeding spikelet. | 7 |
| Spikelets hairless or hairy, hairs not exceeding spikelet. | 8 |
| 7. Lower glume minute to $\frac{1}{2}$ spikelet length, spikelets about 3 mm (exclud. hairs). Racemes 1–7. Fruit not purple-coloured (cotton panic grass) | <i>D. brownii</i> (5) ^{1,3,4,8,9,10,11,12,14,15} |
| Lower glume** absent, spikelets about 2 mm (exclud. hairs). Racemes 1–3 (often only 1). Fruit purple-coloured. | <i>D. leucostachya</i> (16) ^{1,2,4,8} |
| 8. Racemes digitate or subdigitate. | 9 |
| Racemes occurring singly on an elongated axis (where few racemes, this character can appear subdigitate, as in <i>D. diminuta</i>). | 19 |
| 9. Less than 4 racemes (usually 2–3). | 10 |
| 4 racemes or more (in <i>D. violascens</i> , occasionally less, fertile lemma dark purplish-brown). | 13 |
| 10. Spikelets less than 2 mm long; lower glume absent, upper glume** equal to spikelet length. | <i>D. longiflora</i> (17) ^{1,3,4,8,12,15}
(incl. <i>propinqua</i> and <i>eriolepis</i>) |
| Spikelets more than 2 mm long; lower glume present but minute, upper glume $\frac{1}{2}$ to $\frac{3}{4}$ spikelet length. | 11 |
| 11. Stolonerous perennial (Queensland blue couch) | <i>D. didactyla</i> (10) ^{1,4,12} |
| Tufted annuals. | 12 |
| 12. Pedicellate spikelet with stiff tubercle-based bristles on margin (comb fingergrass) | <i>D. ctenantha</i> (8) ^{1,3,10,15} |
| Spikelets without bristles on margin. | <i>D. stenostachya</i> (24) ¹ |
| 13. Pedicellate spikelet edged with stiffly spreading bristles; sessile spikelet with or without such bristles. | <i>D. bicornis</i> (3) ¹ |
| All spikelets alike and without stiffly spreading bristles. | 14 |
| 14. Spikelets 1–2 mm long, leaf sheaths usually without hairs. | 15 |
| Lower glume minute or absent, upper glume slightly shorter and narrower than spikelet. | 16 |
| Spikelets more than 2.7 mm long. | |

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| 15. Spikelets minutely hairy. Common.
Spikelets hairless. Very rare. | <i>D. violascens</i> (25) ^{1,4,12}
<i>D. recta</i> (22) ¹ |
| 16. Stoloniferous, rhizomatous or tufted perennials.
Stoloniferous weedy annuals. | 17
18 |
| 17. Stoloniferous. Spikelets minutely hairy (apparently
hairless). Cultivated, usually in coastal pastures (Pan-
gola grass)
Tufted or shortly rhizomatous. Spikelets obviously hairy.
Rare escape from cultivation (woolly fingergrass) | <i>D. decumbens</i> (9) ^{1,5,6,7}
<i>D. eriantha</i> (4) ^{1,3} |
| 18. Nerves of lower lemma with minute spines (crabgrass or
summer grass)
Nerves of lower lemma smooth (summer grass) | <i>D. sanguinalis</i> (23) ^{1,3,4,9,11,12,14}
<i>D. ciliaris</i> (6) ^{1,3,4,8,9,12,14,15}
(<i>adscendens</i>) |
| 19. Lower glume** present, about 1/5 spikelet length (some-
times minute in <i>D. ramularis</i>).
Lower glume** absent, upper glume minute. | 20
<i>D. orbata</i> (18) ^{1,4} |
| 20. Upper glume equal to spikelet length.
Upper glume 3/4 spikelet length or less. | 21
23 |
| 21. Erect grass.
Weak and scrambling grass. | 22
<i>D. diffusa</i> (11) ^{4,12} |
| 22. Spikelets usually hairless, 1.8-2.2 mm long. Racemes
numerous (smallflower fingergrass)
Spikelets hairy, 2.5 mm long. | <i>D. parviflora</i> (19) ^{1,2,4,12}
<i>D. baileyi</i> (2) ¹ |
| 23. Upper glume 1/2 to 3/4 spikelet length.
Upper glume less than 1/2 spikelet length. Racemes 2-10 cm
long.*** | <i>D. ramularis</i> (21) ^{2,4,8,12}
24 |
| 24. Upper glume 2-3-nerved, lower lemma 7-nerved.
Upper glume nerveless, lower lemma 3-5-nerved. | <i>D. diminuta</i> (12) ^{1,2,4,12}
<i>D. breviglumis</i> (4) ^{1,4} |

* Numbers in parenthesis refer to spikelet illustrations on page 194.

** Note: In *Digitaria*, the upper glume faces towards the axis.

*** An undescribed species from coastal areas has racemes longer than 10 cm.