



# ROTTBOELLIA EXALTATA

An erect, robust, often coarse and cane-like annual up to 3 m tall. *Culms* erect, often branched from the upper nodes, the lower internodes robust, hollow-cylindrical, often with strongly developed prop roots from the lowest nodes. *Nodes* distinct, with the base of the sheath slightly enlarged. *Leaves* blue-green, mostly on the culms. *Leaf sheaths* more or less smooth, striate, sometimes with stiff, tubercle-based hairs towards the upper part, which rub off when touched and may irritate the skin; shorter than the internodes, especially in the lower part, not loose. *Ligule* a sparse rim of longish, white hairs, denser at the margins. *Leaf blades* flat, 10–30 mm wide and up to 50 cm long, usually rough down the margin, smooth to sparsely hairy on the surface, with stiff, tubercle-based, white hairs, tapering to a point from above the middle.

*Inflorescence* a spike-like, cylindrical raceme (more or less enclosed by the sheath of the terminal leaf), 6–15 cm long, solitary on terminal branches, which may be single or several from the upper nodes. *Spikelets* ( $S_1$ ,  $S_2$ ) in pairs, one sessile and the other pedicellate, but with the pedicel fused with the rhachis and the pair more or less contained within a concavity of the rhachis; equal, 5 mm long, hairless, breaking up and falling entire with the rhachis joint at maturity. *Florets* 2 in  $S_1$ , the lower sterile or male, the upper bisexual; *Floret* 1 in  $S_2$ , male or sterile. *Sessile spikelet* ( $S_1$ ) 5–7 mm long. *Glumes* ( $G_1$ ,  $G_2$ ) rounded on the back, both equal to length of the spikelet; the lower glume ( $G_1$ ) hardened, smooth, 1-nerved, the nerve not prominent on the back; the upper ( $G_2$ ) 15-nerved, broader and less hardened than  $G_1$ , slightly keeled on the back near the tip. *Lemmas* ( $L_1$ ,  $L_2$ ) 4 mm long, delicately membranous;  $L_1$  faintly 3-nerved;  $L_2$  1-nerved, slightly keeled on the back near the tip. *Paleas* ( $P_1$ ,  $P_2$ ) the length of the lemmas;  $P_1$  thickened, 2-nerved and 2-keeled near the margins;  $P_2$  delicately membranous. *Anthers* 3, 1.5 mm long, pale. *Pedicellate spikelet* ( $S_2$ ) standing out from the head when dry or at flowering. *Glumes* ( $G_1$ ,  $G_2$ ) 5 mm long, somewhat dissimilar;  $G_1$  about 18-nerved, the nerves prominent on the back (unlike that of  $S_1$ ), strongly keeled along the margins with the keels distinctly scabrid in the upper part;  $G_2$  5-nerved, more or less membranous, keeled on the lateral nerves. *Lemma* ( $L_1$ ) slightly shorter than  $G_2$ , membranous, 3-nerved and keeled at the lateral nerves. *Palea* absent.

This grass is found in moist places and frequently on clay soils, particularly in the warmer parts of the world's tropics, where it may be a weed of cultivation, for example in sugar-cane plantations (Holm *et al.*, 1977). It sometimes appears to be a contaminant of pasture seeds and so is easily spread.

## REFERENCES

Bentham (1878),<sup>1</sup> pp. 512–14; Gardner (1952),<sup>2</sup> p. 308; Jessop (1981),<sup>3</sup> p. 495.

## KEY TO SPECIES

Delicate annual with mature spikes less than 6 cm long; rhachis segments about 3 mm long with a rim of short hairs at base and apex of rhachis internode.

*R. formosa*<sup>1,2,3</sup>

Robust annual with mature spikes more than 6 cm long; rhachis segments about 5 mm long and without hairs.

*R. exaltata*<sup>1</sup>