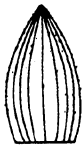
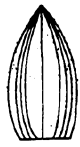


**S<sub>1</sub>**



**G<sub>2</sub>**



**L<sub>1</sub>**



**P<sub>1</sub>**



**L<sub>2</sub>**



**P<sub>2</sub>**



**S<sub>2</sub>**



**G<sub>2</sub>**



**L<sub>1</sub>**



**P<sub>1</sub>**



**L<sub>2</sub>**



**P<sub>2</sub>**

**X3.7**

# THUAREA INVOLUTA

## Tropical Beachgrass

A prostrate, creeping perennial. *Culms* arising from the nodes of creeping stems, up to 12 cm high, smooth. *Nodes* numerous, all giving rise to leafy shoots and rooted into the sand. *Leaves* on the culms green to straw-coloured, few. *Leaf sheaths* loose, overlapping, the basal one on the shoot clasping the node, striate, increasingly covered upwards with very short hairs. *Ligule* a close rim of erect hairs, somewhat denser at the margins. *Leaf blades* slightly rounded, tapering to a point from above the middle, 5–10 mm wide, 2–15 mm long, more or less covered with short, soft hairs, particularly on the back, conspicuously nerved.

*Inflorescence* a single, one-sided raceme fused to a broad, striate leaf or spathe-like structure. This structure is broader in the lower half, where there are situated 1 or 2 bisexual spikelets, narrowing above, where there are up to 5 male spikelets; following anthesis, the male spikelets fall entire, the upper part of the structure folds down over the bisexual spikelets, completely encapsulating them in a watertight false fruit; the stem may then bend down and bury the capsule in the sand or it may be dislodged into the sea, where it can survive immersion in salt water for a considerable period. *Spikelets* ( $S_1$ ,  $S_2$ ) of two types, bisexual ( $S_1$ ) below and male ( $S_2$ ) above, both about 5 mm long. *Florets* 2; in  $S_1$ , the lower male or sterile, the upper female or bisexual; in  $S_2$ , the lower floret male or sterile, the upper male. *Bisexual/female spikelet* ( $S_1$ ) slightly gaping. *Glumes* ( $G_1$ ,  $G_2$ ) very unequal; the lower glume ( $G_1$ ) absent or reduced to a narrow rim; the upper ( $G_2$ ) the length of the spikelet, 7-nerved, rounded on the back and covered with short, stiff hairs, membranous between the nerves. *Lemmas* ( $L_1$ ,  $L_2$ ) very dissimilar;  $L_1$  like  $G_2$ , 7-nerved;  $L_2$  slightly shorter than  $L_1$ , hardened, smooth and shining, 5-nerved, very rounded on the back, slightly hairy near the tip. *Paleas* ( $P_1$ ,  $P_2$ ) very dissimilar, equal in length to  $L_1$  and  $L_2$  respectively;  $P_1$  delicately membranous, shortly bifid and faintly 2-nerved;  $P_2$  hardened, smooth and shining, faintly 2-nerved, slightly concave on the back between the nerves. *Anthers* 3. *Male spikelets* ( $S_2$ ) slightly narrower than  $S_1$ . *Glumes* ( $G_1$ ,  $G_2$ ) as in  $S_1$ , with  $G_1$  absent or reduced to a narrow rim;  $G_2$  4 mm long, 3-nerved, rounded on the back and densely covered with short, stiff hairs, membranous-papery between the nerves. *Lemmas* ( $L_1$ ,  $L_2$ ) very dissimilar;  $L_1$  5 mm long, otherwise very like  $G_2$ , except hairy on the upper half of the back only, 5-nerved;  $L_2$  4 mm long, smooth, shining, papery, 5-nerved, hairy at the tip only, slightly keeled along the lateral nerves. *Paleas* ( $P_1$ ,  $P_2$ ) both membranous, faintly 2-nerved and slightly 2-keeled, shortly bifid at the tip, 4.5 mm long. *Anthers* 3, 2.5 mm long, yellow.

This is a grass of the seashore and coastal sand-dunes in the northern part of the region. The stems creep for considerable distances in all directions over the sand. The grass's flowering and seed-dispersal mechanisms are very curious. It is widespread throughout the tropical Pacific and Indian Ocean basins.

### REFERENCES

Bailey (1902), p. 1844 (as *T. sarmentosa*); Bor (1960), pp. 368–69; Henty (1969), p. 118.

### KEY TO SPECIES

Only one species occurs in the region.