

## Supplementary material

### Translocation and population establishment of *Schoenus scabripes* (Cyperaceae)

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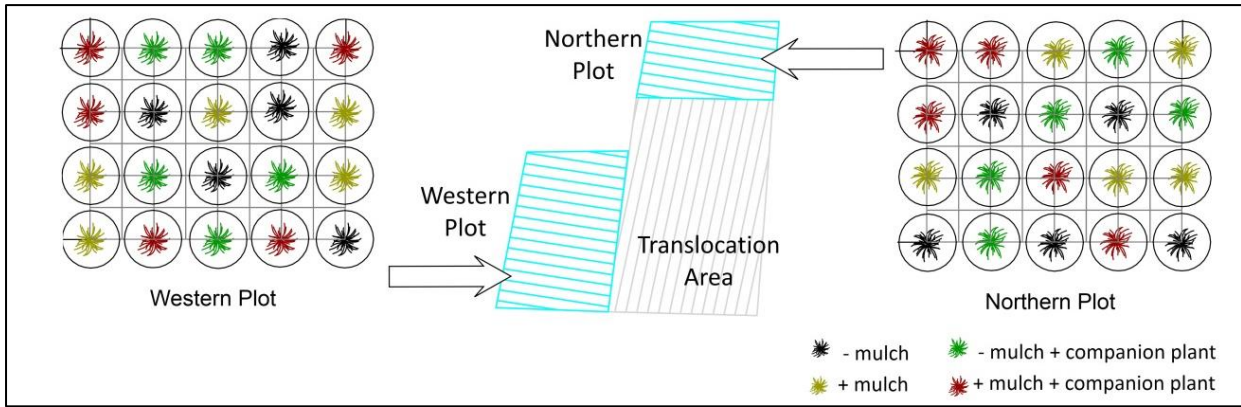
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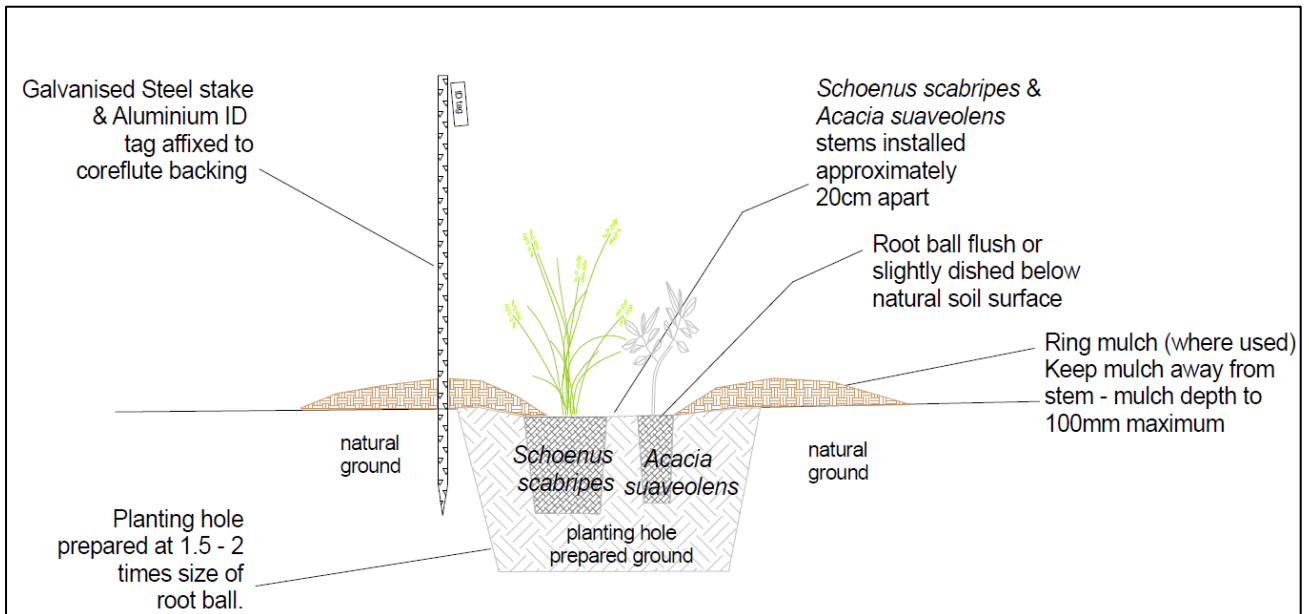
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**Fig. S1.** (a) Translocation machinery used during *Schoenus scabripes* translocation works. (b) Receiving site, showing recently placed turves of coastal heathland containing *Schoenus scabripes* at Caloundra Aerodrome, Australia. Photographs by C. Milne.



**Fig. S2.** Field establishment plots and treatments applied to nursery-grown *Schoenus scabripes* plants established at an offset revegetation site. The legend indicates the different treatments applied to the site, arranged in two groups, the northern plot and the western plot.



**Fig. S3.** Illustration of planting method for *Schoenus scabripes* and *Acacia suaveolens* companion plant, including identification tag and mulch treatments at the offset revegetation site.

**Table S1. Stem and leaf nutrient concentrations (mg kg<sup>-1</sup>) in nursery-propagated or whole translocated *Schoenus scabripes* plants in winter (August 2018, 22 months after establishment) and summer (January 2019, 27 months after establishment)**

Nursery plants had either: no treatment; mulch; or mulch and a companion plant. Means ( $\pm$ s.e.) of nursery-propagated plants for each season with a different lower-case letter are significantly different (ANOVA and Tukey's HSD test for winter,  $P < 0.05$ ,  $n = 3-4$ .  $t$ -test for summer,  $P < 0.05$ ,  $n = 3-4$ ). Means ( $\pm$ s.e.) within each nutrient for translocated plants with a different upper-case letter between winter and summer are significantly different ( $t$ -test,  $P < 0.05$ ,  $n = 21-22$ ) Symbols † and ‡ represent a significantly different result between winter and summer within each treatment for nursery-propagated plants ( $t$ -test,  $P < 0.05$ ,  $n = 3-4$ )

Nutrient	Season	Nursery-propagated plants			Whole translocated plants
		No treatment	Mulch	Mulch and companion plant	
N	Winter	2755 $\pm$ 413 <sup>a</sup>	2874 $\pm$ 175 <sup>a</sup>	2579 $\pm$ 399 <sup>a</sup>	4029 $\pm$ 364 <sup>A</sup>
	Summer	–	3278 $\pm$ 305 <sup>a</sup>	3698 $\pm$ 260 <sup>a</sup>	4186 $\pm$ 509 <sup>A</sup>
P	Winter	81.26 $\pm$ 4.41 <sup>a</sup>	100.32 $\pm$ 6.16 <sup>a</sup>	84.15 $\pm$ 14.95 <sup>a</sup>	93.87 $\pm$ 4.36 <sup>B</sup>
	Summer	–	115.33 $\pm$ 5.86 <sup>a</sup>	111.12 $\pm$ 10.39 <sup>a</sup>	115.58 $\pm$ 5.71 <sup>A</sup>
K	Winter	2878 $\pm$ 460 <sup>b</sup>	5083 $\pm$ 515 <sup>a</sup>	2605 $\pm$ 573 <sup>b</sup>	3946 $\pm$ 303 <sup>A</sup>
	Summer	–	5786 $\pm$ 907 <sup>a</sup>	4865 $\pm$ 634 <sup>a</sup>	3753 $\pm$ 226 <sup>A</sup>
Al	Winter	27.82 $\pm$ 5.68 <sup>a</sup>	21.01 $\pm$ 3.29 <sup>a</sup>	25.46 $\pm$ 5.81 <sup>a</sup>	21.99 $\pm$ 1.22 <sup>A</sup>
	Summer	–	12.73 $\pm$ 0.89 <sup>a</sup>	17.07 $\pm$ 2.47 <sup>a</sup>	26.11 $\pm$ 2.14 <sup>A</sup>
B	Winter	6.64 $\pm$ 0.70 <sup>a</sup>	5.50 $\pm$ 0.28 <sup>a†</sup>	9.28 $\pm$ 2.57 <sup>a</sup>	4.75 $\pm$ 0.14 <sup>B</sup>
	Summer	–	4.03 $\pm$ 0.20 <sup>a†</sup>	4.69 $\pm$ 0.49 <sup>a</sup>	5.45 $\pm$ 0.28 <sup>A</sup>
Ca	Winter	2947 $\pm$ 676 <sup>a</sup>	2453 $\pm$ 321 <sup>a</sup>	2938 $\pm$ 551 <sup>a‡</sup>	1870 $\pm$ 123 <sup>A</sup>
	Summer	–	1633 $\pm$ 130 <sup>a</sup>	1590 $\pm$ 215 <sup>a‡</sup>	1195 $\pm$ 59 <sup>B</sup>
Cu	Winter	0.92 $\pm$ 0.11 <sup>a</sup>	1.21 $\pm$ 0.17 <sup>a</sup>	2.58 $\pm$ 1.30 <sup>a</sup>	0.84 $\pm$ 0.04 <sup>B</sup>
	Summer	–	1.35 $\pm$ 0.09 <sup>a</sup>	1.22 $\pm$ 0.34 <sup>a</sup>	7.02 $\pm$ 2.88 <sup>A</sup>
Fe	Winter	67.74 $\pm$ 12.95 <sup>a</sup>	81.47 $\pm$ 3.50 <sup>a†</sup>	79.96 $\pm$ 13.28 <sup>a</sup>	91.67 $\pm$ 6.24 <sup>B</sup>
	Summer	–	52.88 $\pm$ 0.48 <sup>a†</sup>	52.58 $\pm$ 3.57 <sup>a</sup>	223.25 $\pm$ 32.21 <sup>A</sup>
Mg	Winter	3138 $\pm$ 658 <sup>a</sup>	2878 $\pm$ 112 <sup>a</sup>	2916 $\pm$ 198 <sup>a</sup>	1995 $\pm$ 67 <sup>A</sup>
	Summer	–	2531 $\pm$ 138 <sup>a</sup>	2394 $\pm$ 116 <sup>a</sup>	1966 $\pm$ 25 <sup>A</sup>
Mn	Winter	219.5 $\pm$ 39.3 <sup>a</sup>	237.4 $\pm$ 35.0 <sup>a</sup>	189.1 $\pm$ 47.7 <sup>a</sup>	42.2 $\pm$ 5.3 <sup>A</sup>
	Summer	–	176.7 $\pm$ 22.6 <sup>a</sup>	103.7 $\pm$ 38.4 <sup>a</sup>	35.9 $\pm$ 4.0 <sup>A</sup>
Na	Winter	1054 $\pm$ 395 <sup>a</sup>	1516 $\pm$ 369 <sup>a†</sup>	785 $\pm$ 247 <sup>a‡</sup>	3189 $\pm$ 133 <sup>B</sup>
	Summer	–	3048 $\pm$ 242 <sup>a†</sup>	4408 $\pm$ 661 <sup>a‡</sup>	5507 $\pm$ 246 <sup>A</sup>
S	Winter	768.83 $\pm$ 238.81 <sup>a</sup>	865.39 $\pm$ 146.25 <sup>a</sup>	969.56 $\pm$ 374.24 <sup>a</sup>	759.54 $\pm$ 70.79 <sup>A</sup>
	Summer	–	919.08 $\pm$ 296.18 <sup>a</sup>	609.72 $\pm$ 112.68 <sup>a</sup>	623.3 $\pm$ 56.8 <sup>A</sup>
Zn	Winter	28.3 $\pm$ 10.1 <sup>a</sup>	25.3 $\pm$ 7.6 <sup>a</sup>	30.6 $\pm$ 10.4 <sup>a</sup>	10.5 $\pm$ 0.8 <sup>A</sup>
	Summer	–	16.3 $\pm$ 1.4 <sup>a</sup>	14.2 $\pm$ 3.2 <sup>a</sup>	12.37 $\pm$ 1.10 <sup>A</sup>