

SPARTINA TOWNSENDII.

A VALUABLE GRASS FOR RECLAMATION OF TIDAL MUD-FLATS.

(Concluded from November, 1929, issue.)

H. H. ALLAN, Systematic Botanist, Plant Research Station, Palmerston North.

2. Experience in New Zealand.

The introduction of *Spartina* into New Zealand was recorded by the writer in the *New Zealand Journal of Science and Technology* for November, 1924, as follows: "In 1913 a number of plants of *Spartina* were obtained by Mr. K. W. Dalrymple from Southampton Water and planted out in small clumps on the Foxton mud-flats in the tidal estuary of the Manawatu River. The clumps were considered to consist of specimens of both *S. stricta* and *S. Townsendii*, but unfortunately it is not certain that the latter has established itself. All the clumps that have flowered have proved to be *S. stricta* (this identification being confirmed by Professor Yapp, and at Kew). It may be, indeed, that no *S. Townsendii* was planted, but a close watch is being kept, and any occurrence of this species will be recorded. The clumps were put in bare mud below high-tide level. One clump has thriven markedly. By 1915 it had formed a dense mat 1.8 m. across. The area was again visited on 11th February, 1923, when the patch was found to measure 12.8 m. by 7.2 m. The sheet was dense and short in the central portion, which was becoming mounded by accumulation of mud, and luxuriant on the margin of the deeper tidal channel. There were a few flowering culms that proved the clump to be *S. stricta*. On the 16th March, 1924, the patch had increased to 14.3 m. by 7.4 m., the longer diameter parallel to the tidal channel. Some slight progress had been made towards crossing the channel, here about 1 m. below high-tide level. This patch and several of the others were then flowering rather freely, especially towards the margins." Additional information has since accrued, and is here recorded.

IDENTITY OF THE SPECIES ESTABLISHED AT FOXTON.

Misled by the short growth of the greater part of the main patch, I had concluded that this was made up of *S. stricta*. The late Professor Yapp examined specimens and agreed with this determination. He forwarded the specimens to Kew and received confirmation of this identification. Later on specimens taken from the more vigorously growing portion were sent to Professor Oliver, who determined them as *S. Townsendii*. Dr. Stapf thoroughly agreed with this view, and also examined the original specimens forwarded, finding them also to be *S. Townsendii*. In the meantime Dr. J. P. Lotsy had visited the area with me on 9th May, 1925. He considered the plants to be definitely not *S. stricta*, but hesitated to pronounce them as *S. Townsendii*, as they lacked the characteristic luxuriance of that species in Great Britain. At the time of his visit the more luxuriant portion was still under water and could not be properly examined. Close examination of all the patches has since shown that the plant