Agrostis stolonifera L. on Marion Island (sub-Antarctic)

N.J.M. Gremmen* and V.R. Smith

Institute for Environmental Sciences
University of the Orange Free State, Bloemfontein 9301

* Present address: Botanisch Laboratorium, Faculteit der Wiskunde en Natuurwetenschappen, Katholieke Universiteit, Toernooiveld, Nijmegen, The Netherlands.

Agrostis stolonifera *var.* stolonifera *is considered a naturalized alien species on Marion Island. Its distribution on the island and in the sub-Antarctic region as a whole is described.*

Agrostis stolonifera *var.* stolonifera *word as 'n volkome aangepaste uitheemse grassoort op Marion-eiland beskou. Die verspreiding van die plant op die eiland en in die sub-Antarktiese streek as 'n geheel word beskryf.*

Introduction

During a phytosociological survey of Marion Island (46°54'S, 37°45'E) in 1973-75 (Gremmen 1981), a grass species was collected which was not included in the checklist of the vascular flora of the Prince Edward islands provided in Huntley (1971). Huntley collected material of this species in 1965 (B.J. Huntley, coll. no. 2074, PRE) which was

Fig. 1. The present distribution of *Agrostis stolonifera* on Marion Island.

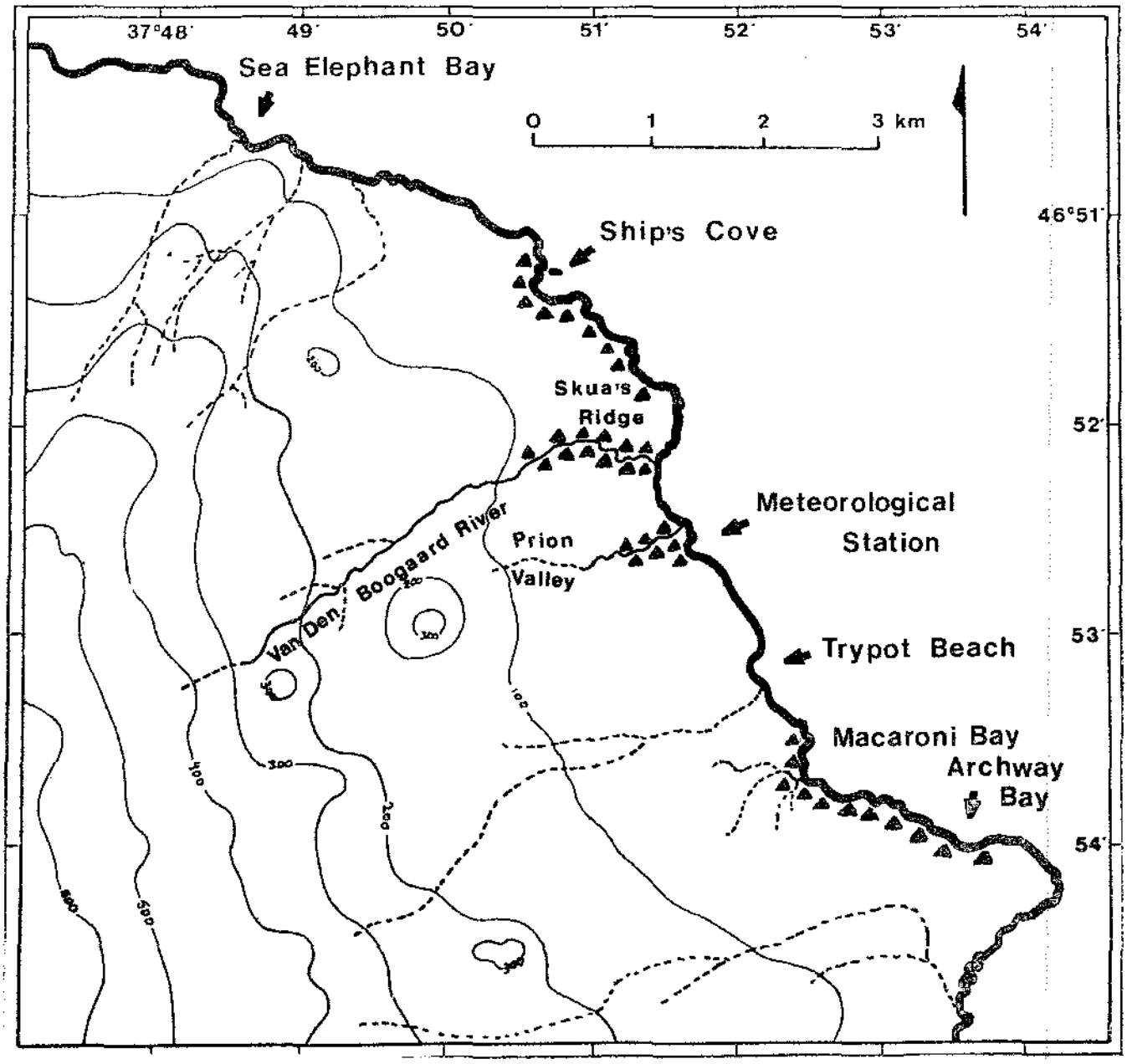

Fig. 2. *Agrostis stolonifera* growing on Marion Island.

erroneously labelled *Agropyron repens* (L.) P. Beauv. In a description of the distribution of the island's alien flora Gremmen (1975) incorrectly referred to this material as *Agrostis bergiana* Trin. Huntley's specimens, as well as later collections (V.R. Smith; VRS 1052, VRS 1053, VRS 1114 – all IVO) from the island, have subsequently been identified as *Agrostis stolonifera* L. subsp. *stolonifera* var. *stolonifera* by Dr C.E. Hubbard (Royal Botanical Gardens, Kew) who stated as follows: "This species has been found on many of the south Atlantic and south Indian Ocean islands and has been given various names, sometimes being described as a distinct species. Recognised by its stoloniferous growth, relatively long, blunt, oblong ligules, panicles becoming contracted after flowering, awnless lemma and palea up to two-thirds the length of the lemma".

Agrostis stolonifera is a species with a Northern Hemisphere distribution. In the Southern Hemisphere (e.g. South Africa, New Zealand, South Australia, Southern Chile, Falkland Islands, Tristan da Cunha, Gough) it is considered an alien species (Hultén 1964, Wace 1961). In the sub-Antarctic zone this species has been introduced to Kerguelen and the Crozet islands (Greene & Walton 1975). On the latter island group it is limited to the area near the scientific station on Ile de la Possession (Walton 1975). The grass has not been recorded from Macquarie Island or South Georgia (Taylor 1955, Greene & Walton 1975, Walton 1975), nor has it been found on Marion's 22 km distant neighbour, Prince Edward Island.

On Marion Island, *Agrostis stolonifera* is locally very abundant on the north-eastern lowland. Its distribution on the island, as known at present, is given in Fig. 1. It is largely restricted to two types of habitat:

(1) drainage lines, notably on grey lava coastal slopes
(2) stream sides

The natural vegetation of these habitats is formed by a community dominated by *Acaena magellanica* and *Brachythecium rutabulum* (Gremmen in prep.). In certain situations, notably on relatively dry, mineral soils, *Agrostis stolonifera* seems to replace a large proportion of the *Acaena magellanica* in this vegetation. The grass forms large mats by its spreading stolons and flowers profusely (Fig. 2). No data are available on the succes of sexual reproduction of this species on the island and seedlings were not recorded.

From its distribution and behaviour on the island, it is thought that *Agrostis stolonifera* has the status of a naturalized alien species with a widespread distribution, following the definition given in Walton & Smith (1973).

Note: Herbarium specimens abbreviated IVO are housed in the Marion and Prince Edward Islands Herbarium at the Institute for Environmental Sciences, University of the O.F.S. PRE indicates that the specimen is housed at the National Herbarium, Pretoria.

Acknowledgements

We thank Dr C.E. Hubbard for identifying the material and Dr R.I. Lewis-Smith (British Antarctic Survey, Cambridge) for sending the material to Kew and communicating the results of the identification. Scientific research on the Prince Edward islands is financially supported by the Antarctic Section of the Department of Transport.

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