ADDITIONS AND AMENDMENTS TO THE VASCULAR FLORA OF THE FALKLAND ISLANDS

By D. M. Moore*

Abstract. *Ruppia filifolia* (Phil.) Skottsb., which is probably native, is added to the vascular flora of the Falkland Islands, as are the casual aliens *Phalaris canariensis* L. and *P. arundinacea* L. var. *picta*. Chromosome data are given for *Arabis macloviana* (D'Urv.) Hook. f. ($2n = 18$) and *Drapetes muscosus* Banks ex Lam. ($2n = 18$), while two species, *Leuceria suaveolens* (D'Urv.) Skottsb. and *Sisyrinchium filifolium* Gaudich. are not now to be considered endemic to the archipelago. Information is presented on two further early collectors in the Falkland Islands—Dr. Carlos Martin (1884) and Dr. Cristóbal M. Hicken (1903). A number of nomenclatural changes since the publication of the Flora are noted.

During the 5 years since the publication of "The vascular flora of the Falkland Islands" (Moore, 1968) further studies in the Falkland Islands and, particularly, in Tierra del Fuego and southern Patagonia have shown that certain changes are necessary in the information presented in that flora. These changes result from two main sources. First, further collecting has provided new information on species already known from the Falkland Islands or, indeed, has revealed the existence there of species hitherto unknown from the archipelago. Secondly, further taxonomic studies of the species throughout their range have necessitated changes in the status and the nomenclature of taxa occurring in the Falkland Islands. This pattern is, of course, to be expected and it will continue as further work is carried out in the area. This paper presents the new information currently available to me.

Additions to the Flora

Ruppia filifolia (Phil.) Skottsb. (Ruppiaceae)

This species of salt or brackish creeks and, less commonly, fresh water, which was described from the province of Atacama in northern Chile, was discovered near Seno Skyring in the southern part of the province of Magallanes, Chile, by Skottsberg (1916) and near Punta Arenas by Dusén (1900). It has not been reported from east of the Andes (Correa, 1969) but it has probably been overlooked and may be expected in southern east Patagonia since it is now known from several localities in Tierra del Fuego (unpublished data of D. M. Moore and R. N. Goodall). The recent discovery of the species in the Falkland Islands is not, therefore, entirely unexpected.

R. filifolia is a submerged aquatic herb with much-branched filiform stems up to 40 cm. in length and dark green filiform leaves up to 20 cm. long with sheathing bases. It is readily mistaken for an aquatic green alga but is unmistakable when it is in flower since it has a short terminal raceme which may appear somewhat umbellate. The flowers consist only of 2 stamens, with very short filaments, and a superior ovary with 4 or more carpels. The fruit is indehiscent, with a terminal beak, and is borne on a long (10–20 mm.) stalk which is recurved when mature. Collecting details are as follows: West Falkland: Fox Bay East; Sand Pond (TC93), 26.xi.1970. *M. W. Weller* s.n. (LTR).

Phalaris L. (Gramineae—tribe Phalarideae)

Several species of this largely warm-temperate genus are of economic value, particularly for pasture improvement, and consequently they have been introduced into various regions where they are not native. The two species which have been discovered in the Falkland Islands are known only from single occurrences, and therefore they must be treated as no more than casual aliens.

This genus may be distinguished from the other grasses recorded from the Falkland Islands by the compressed, 1-flowered spikelets grouped into dense panicles, the sub-equal, 3-nerved, keeled glumes and by the presence of two small sterile lemmas at the base of the awnless fertile lemma.

* Department of Botany, Plant Science Laboratories, University of Reading, Reading.

P. canariensis L. (Canary Grass) is an annual up to *c.* 40 cm. high, with flat leaves and an obtuse membranous ligule up to *c.* 8 mm. The panicles are *c.* 10–20 × 10–12 mm., ovate to ovate-oblong, and are given their distinctive appearance by the large, ovate, whitish glumes which have a green midrib and a wide wing in the upper half. The fruits are often used as food for cage-birds and it may have entered the Falkland Islands in bird seed. Collecting details are as follows: East Falkland: Port Stanley (VC47); weed in house garden, ii. 1967. *C. D. Young 14* (LTR).

P. arundinacea L. var. *picta* L. (Ribbon Grass, Gardener's Garters). This distinctive variant of the "Reed Canary Grass" is sometimes cultivated as a garden ornamental because of the decorative leaf-lamina, which is striped green and cream. It has a longer, lanceolate to oblong panicle with lanceolate glumes lacking the distinctive coloration and wings present in *P. canariensis*. Collecting details are as follows: East Falkland: Port Stanley (VC47); waste ground behind Printing Office, i. 1967. *C. D. Young 8* (LTR).

Additional Chromosome Numbers

Arabis macloviana (D'Urv.) Hook. f. (Cruciferae) $2n = 9$ II

Counted in progeny (Moore 69030) grown from seed collected in East Falkland: Two Sisters. *S. W. Greene* s.n. (voucher LTR).

The basic number of $x = 9$ is hitherto unknown within this genus and this cytological evidence raises again the question of the generic status of this species. It is possible that it belongs to one of the genera in the Brassiceae to which it has been assigned by some earlier workers and a critical revision of more material is indicated.

Drapetes muscosus Banks ex Lam. (Thymelaeaceae) $2n = 9$ II

Mitotic preparations from root-tips of material from the Falkland Islands (Moore, 1967) gave an apparent count of $2n = 20$ but, in view of the prevailing basic number of $x = 9$ known in other species and elsewhere in the family, it was noted that there may have been some confusion with satellites in the few rather unclear cells available for examination. More recently (unpublished data of D. M. Moore), meiosis has been studied in pollen mother cells of material of this species from Fuegia and 9 bivalents were clearly visible. It seems likely, therefore, that the same number is applicable to Falkland Islands material.

Botanical Exploration

Since summarizing the contributions of the 60 botanists who worked in the Falkland Islands between 1789 and 1965 (Moore, 1968), I have obtained evidence on two more early collectors in the archipelago.

Dr. Carlos Martin. Few personal details are available concerning this man, but he is known to have collected in the southern Chilean provinces of Llanquihue and Chiloé during the last 30 years of the nineteenth century. He was apparently in close contact with the eminent Chilean botanist Rudolfo A. Philippi, to whom he sent material. He visited the Falkland Islands in December 1884 and collected *Cardamine ciliata* Phil. (now known as *C. glacialis* (Forst. P.) DC.) near Port Stanley (Muñoz, 1960). In discussing the southern South American *Armeria* species, Philippi (1893) noted that he was able to examine a specimen of *A. macloviana* collected in the Falkland Islands by Dr. Martin, presumably on the same occasion and probably from the same area.

Dr. Cristóbal M. Hicken. This famous founder of the Instituto Darwinión, one of the most important botanical centres in Argentina, travelled widely throughout the country during the first 30 years of this century to augment his extensive private herbarium. Parodi (1961, p. 38) noted that his travels took him to the Falkland Islands but no further details were provided. However, a number of specimens from the archipelago were located in the collections at the Instituto Darwinión, San Isidro. In each case, the locality is Port Stanley

and the date is given as December 1903. Consequently, he must be added to the list of people who made a short summer trip to the Falkland Islands and collected plants in the vicinity of the capital.

Species to be Removed from List of Falkland Islands Endemics

Leuceria suaveolens (D'Urv.) Skottsb. This species is now known to occur outside the Falkland Islands (Cabrera, 1971). A single collection made by A. Hochstetter in 1882 at Puerto Bueno, Canal Smyth, prov. Magallanes, Chile, is in the herbarium of the Museo de la Plata (LP).

Sisyrinchium filifolium Gaudich. is not now considered to be specifically distinct from the widespread Patagonian *S. junceum* (see below) and consequently can only be considered a Falkland Islands endemic at the subspecific level.

Nomenclatural Changes

Spergularia marina (L.) Griseb. (Caryophyllaceae). Material from the Falkland Islands was erroneously ascribed by Moore (1967, 1968) to *S. media* (L.) Presl. However, further investigation of this material and new collections from Tierra del Fuego shows that its slender habit, reduced staminal number and small petals more correctly place it within *S. marina*, with which the chromosome number (Moore, 1967) is in agreement.

Taraxacum gilliesii Hook. & Arn. (Compositae). This name should be used for the native Dandelion. It was published in 1835, 20 years before *T. magellanicum* Comm. ex Sch. Bip., the name used by Moore (1968), over which it consequently has priority (Cabrera, 1971).

Luzuriaga marginata (Banks & Sol. ex Gaertn.) Benth. & Hook. (Liliaceae). The "Almond Flower" was incorrectly referred to the genus *Enargea* by Moore (1968), who overlooked the conservation of the generic name *Luzuriaga* Ruiz & Pav. by the International Committee on Botanical Nomenclature.

Sisyrinchium junceum E. Meyer ex Presl ssp. *filifolium* (Gaudich.) Ravenna (Iridaceae). As noted earlier, Ravenna (1968) considered the common "Pale Maiden" of the Falkland Islands to be conspecific with the very variable *S. junceum*, which is widely distributed in temperate South America. The subspecies is endemic to the archipelago and distinguished only by its larger flowers, wider perianth-segments and the shape of the staminal column.

Alopecurus magellanicus Lam. (Gramineae). It has been pointed out to me by Dr. C. E. Hubbard that this name, published in March 1791, must take priority over *A. antarcticus* Vahl, which appeared in print at least 4 months afterwards.

Gavilea littoralis (Phil.) Correa (Orchidaceae). As briefly noted by Moore (1968), Correa showed this to be the correct name for the Falkland Islands and Fuegian orchid formerly called *G. macroptera* (Kraenzlin) Correa. The combination was published by Correa (1969).

Acknowledgements

This paper has arisen out of studies on the flora of Tierra del Fuego under a programme supported by the Natural Environment Research Council, to whom I am indebted. I am extremely grateful to friends and colleagues who have generously provided the material and information on which these notes are based: Professor M. W. Weller, Iowa State University, collected the *Ruppia* in connection with his studies on the food resources of ducks; Dr. J. Ratter, Royal Botanic Garden, Edinburgh, freely gave his expert advice on *Spergularia*; Dr. C. E. Hubbard, Royal Botanic Gardens, Kew, kindly provided the data on *Alopecurus* and assisted with *Phalaris*, while Mr. C. D. Young, Agricultural Officer in the Falkland Islands, took a particular interest in collecting grasses for me.

MS. received 9 September 1972

REFERENCES

CABRERA, A. L. 1971. Compositae. (*In* CORREA, M. N., *ed. Flora Patagonica, Parte VII.* Buenos Aires, I.N.T.A.)

CORREA, M. N., *ed.* 1969. *Flora Patagonica, Parte II.* Buenos Aires, I.N.T.A.

DUSÉN, P. 1900. Die Gefässpflanzen der Magellansländer. *Wiss. Ergebn. schwed. Exped. Magellansländ*, **3**, Lief. 5, 77–266.

MOORE, D. M. 1967. Chromosome numbers of Falkland Islands angiosperms. *British Antarctic Survey Bulletin*, No. 14, 69–82.

———. 1968. The vascular flora of the Falkland Islands. *British Antarctic Survey Scientific Reports*, No. 60, 202 pp.

MUÑOZ PIZARRO, C. 1960. *Las especies de plantas descritas por R. A. Philippi en el siglo XIX.* Santiago, Universidad de Chile.

PARODI, L. R. 1961. Ciento cincuenta años de botánica en la Republica Argentina. *Boln Soc. argent. Bot.*, **9**, 1–68.

PHILIPPI, R. A. 1893. Plantas nuevas chilenas. *An. Univ. Chile*, **91**, 243–75.

RAVENNA, P. F. 1968. Notas sobre Iridaceae III. *Bonplandia*, **2**, No. 16, 273–91.

SKOTTSBERG, C. J. F. 1916. Die Vegetationsverhältnisse längs der Cordillera de los Andes S. von 41° S. *K. svenska VetenskAkad. Handl.*, **56**, No. 5, 1–366.