



# Falkland Islands Pasture Plant Guide

Jim McAdam and Rodrigo Olave

The United Kingdom Falkland Islands Trust  
organised the production of this guide.  
Publication was funded by the  
Department of Agriculture (DoA),  
Falkland Islands and the  
Agri-Food and Biosciences Institute (AFBI),  
Northern Ireland, UK.

---

## Introduction

In the Falkland Islands, pasture improvement either by introduction of bred and improved varieties of grasses, legumes and other potential forage plants or by better, sustainable utilisation of indigenous pastures is key to improving farm outputs.

General pasture management on the farm and the Pasture Improvement Programme both require knowledge of the basic resource – the pasture species themselves. This knowledge needs to be based on the best and most reliable information available and presented in a form that you, the pasture manager, can readily use and find helpful to improve the output and quality from your pastures.

This pasture guide describes some native and introduced species which can commonly be found in pastures in the Falkland Islands. Identification of some of these, particularly grasses, may not be easy, especially when they are in their earlier growth stages and when accurate identification would help appropriate pasture management i.e. maximising the sustainable contribution of productive grasses and the seasonal contribution they make to livestock nutrition.

This guide will also give a better understanding of the appearance, ecology and agricultural features of useful species. The information contained will help to enhance sustainable production from native grass camps and hence improve livestock production and profitability.

---

## Grasses

Grasses are usually easiest to identify when flowering, but their general appearance (growth habit) and their vegetative characteristics (leaf structure etc.) can also be important to tell different species apart.

Some species of grass grow in clumps or tussocks, while others have a more open, lawn-forming growth habit. Many grasses have underground, creeping stems known as rhizomes which can produce above-ground shoots up to some distance from the original plant. Other species have above-ground, leafy, creeping stems called stolons which behave in a similar manner to rhizomes (see Diagrams 1 & 2).

Diagram 1: Growth habits of grass  
(a) Tussock, (b) Stolons, (c) Rhizomes.

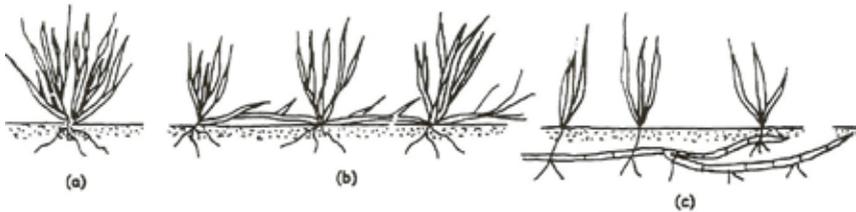
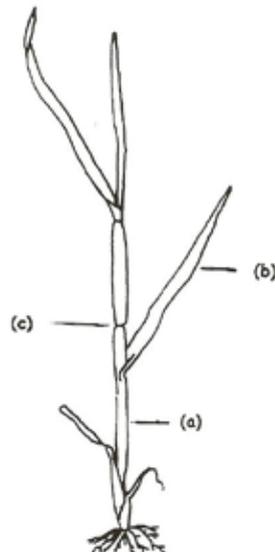


Diagram 2:  
Elongating grass shoot:  
(a) Leaf sheath, (b) Leaf blade,  
(c) Node.



At the junction of their leaf blade with the grass stem (i.e. where the grass leaf “bends”) there are two structures that are often very useful in identifying grasses- the auricles and ligules. These are referred to in the text in some places and are shown in Diagram 3.

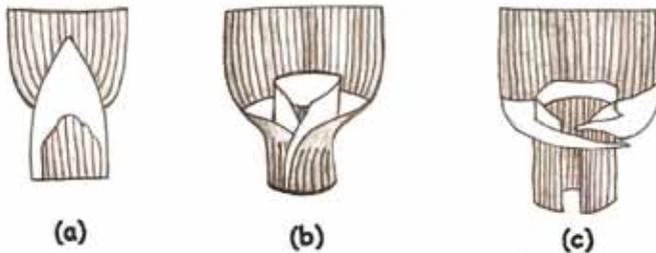


Diagram 3: *Ligules* (a) long as in e.g. Cocksfoot (b) short as in e.g. Common bent. *Auricles* as (c) clasping as in e.g. Perennial ryegrass.

## Rushes

Rushes are a group of slender, mostly perennial, grass-like plants. They can be told apart from grasses by their very simple flower structure.

The flowers (or florets) of rushes are normally greenish or brown and are grouped in loose clusters or tight heads. They are found either at the end of the stem or sometimes appear to be on the side of the stem because the stem continues as a leaf-like structure beyond the flower head.

After a flower has been pollinated, a capsule is formed containing seeds for release after ripening.

Some rushes mainly consist of just stems, with the leaves reduced to scales at the base, others have flat, hairless, grass-like leaves, others have cylindrical stem-like leaves and the wood-rushes have flat leaves with very noticeable long hairs on them. Cylindrical stems and leaves in rushes sometimes contain internal horizontal partitioning walls which can be seen when the stem or leaf is held up to the light.

## Forage legumes

Legumes generally have 3-lobed, rounded leaves and a pea-like flower. Most have straggling stems (stolons) and can have a fairly prostrate growth habit. As well as having higher protein levels in their foliage than grasses, they also have the capacity to “fix” atmospheric nitrogen into a form usable by plants. This depends on an association with a bacteria (Rhizobium) which is not always present in Falkland Islands soils.

## Other forage species

Species included are native plants which are often found in pasture and grazed- Christmas bush, Diddle dee, Native rush, Tall rush, Native woodrush, Brown rush, Mountain berry & Fachine and introduced plants- Plantain & Chicory.

---

# GRASSES



## INTRODUCED

## COMMON BENT

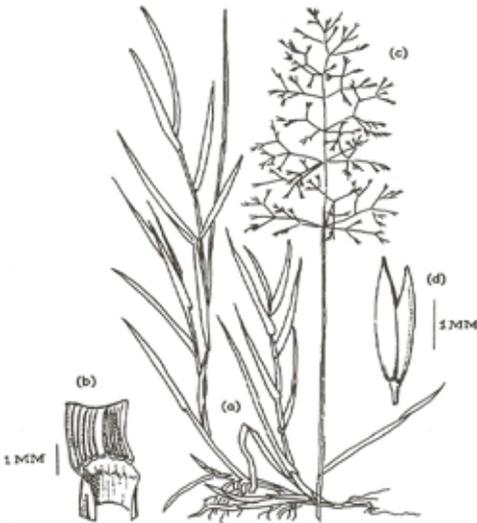
*Agrostis capillaris*

This is a tufted grass with short rhizomes and sometimes stolons. Flowers from January to March and leaves are green and hairless. Fairly common on waste ground, greens and improved pastures around settlements and as a garden escape

## Agronomy

Resistant to summer heat and to winter cold and is compatible with many other non-competitive forage species. Well adapted grass to extensive husbandry systems. A useful pasture grass on poor soil and also used for lawns, golf greens and soil restoration.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Tufted with short rhizomes
Forage Value	Low

## INTRODUCED

## MAGELLANIC BENT

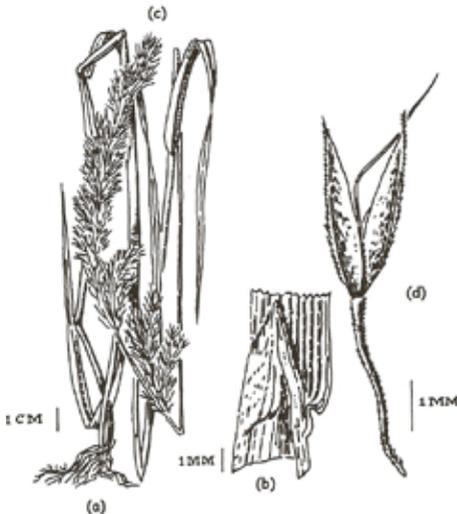
*Agrostis magellanica*

A loosely tufted grass. The short, visible awns tell it apart from other Bent grasses. Flowering occurs from December to February and leaves are normally smooth, green or sometimes purplish. Fairly common on wet or marshy ground; often seen with Cinnamon grass.

## Agronomy

Although its nutritive value, palatability and productivity are low, it might be a useful pasture grass on poor and wet ground.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Stoloniferous
Forage Value	Low

## INTRODUCED

## CREEPING BENT

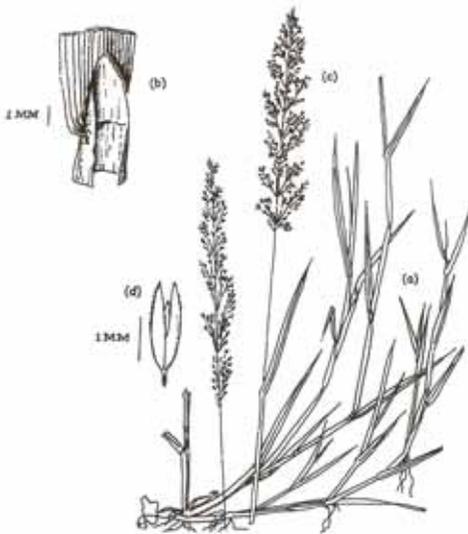
*Agrostis stolonifera*

A tufted grass that flowers from January to March with green, greyish or bluish-green and hairless leaves. Common on waste ground, moist greens and along the coast near settlements.

## Agronomy

Mostly adapted to wet climates. Tolerates cold and shade but not drought. Poorly competitive, except in optimum growth conditions. Reasonable yield in permanent grassland on fertile, cool soils. Possibly useful as a pasture grass on poor ground and for stabilising soil erosion on peaty ground.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Leafy stolons
Forage Value	Low

## INTRODUCED

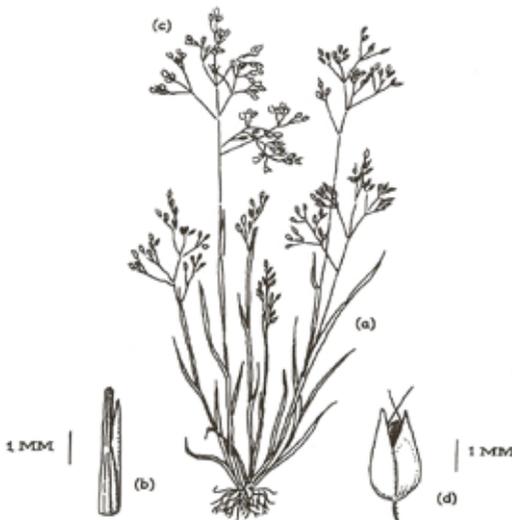
**SILVERY HAIR-GRASS***Aira caryophyllea*

A small, delicate grass that flowers from December to January. Leaves are greyish-green, hairless and slightly rough. Silvery Hair-grass has small spikelets and short awns. Common and widespread in Lafonia and also found in improved pasture and waste ground near settlements.

**Agronomy**

Agricultural value not known.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.

**Agricultural Features**

Longevity	Annual
Palatability	Poor
Growth Habit	Tufted, bunchgrass
Forage Value	Probably low

## INTRODUCED

## EARLY HAIR-GRASS

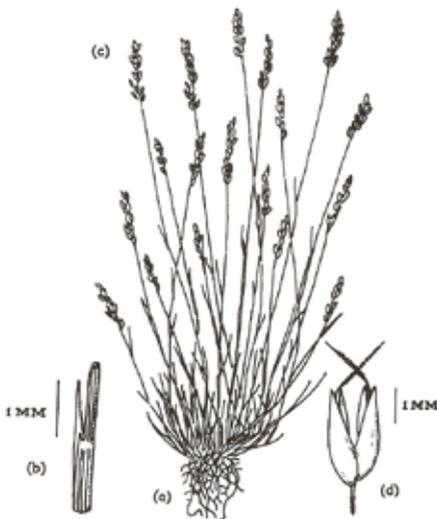
*Aira praecox*

Also called "Goose grass". A small and delicate grass (5-25cm) usually tufted. Flowers from November to February and is one of the earliest flowering grasses in spring. Leaves are in-rolled, green and hairless. Very common on disturbed and waste ground, greens, valley and coastal slopes near settlements, Whitegrass camp and Diddle-dee ground.

## Agronomy

Probably of little agricultural value.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Annual
Palatability	Poor
Growth Habit	Tufted
Forage Value	Low

## INTRODUCED

## MARRAM GRASS

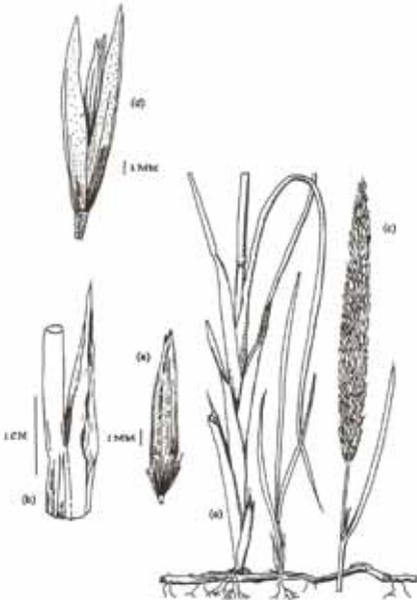
*Ammophila arenaria*

A tall grass with long, creeping rhizomes. Flowers from December to February, leaves are greyish-green and rigid. It could be confused with both Tussock grass (p.27) and Lyme grass (which are also large grasses found by the coast) but can be told apart from these by its very long and firm ligule. Found on coastal and inland sand dunes

## Agronomy

Grazed by cattle and sheep early in the season when its leaves are young and tender. An important grass for stabilising drifting sand in coastal areas.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted, connected by rhizomes
Forage Value	Low

## INTRODUCED

## SWEET VERNAL-GRASS

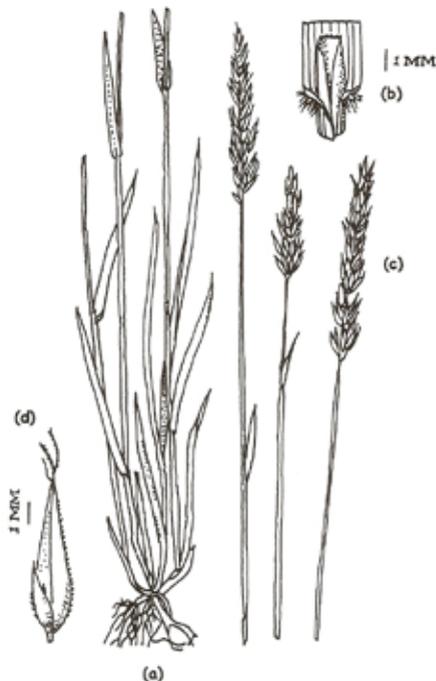
*Anthoxanthum odoratum*

Smallish, tufted, hairy and fragrant grass. Flowers from November to January and leaves are flat, pointed and slightly hairy. Ligule has a tuft of hair at it's base. Found on waste ground around settlements.

## Agronomy

Good resistance to drought and very resistant to cold and heat. Poorly competitive with poor early season growth, but produces better quality and quantity of herbage later in the season.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Tufted
Forage Value	Low

NATIVE

# WHITEGRASS

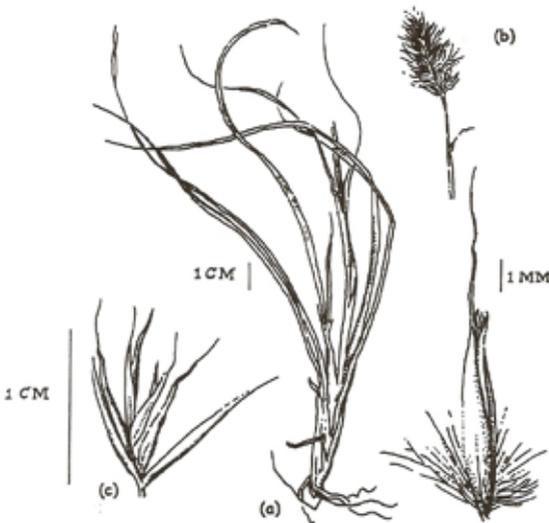
## *Cortaderia pilosa*

Can be both tussock-forming or have a more lax, or lawn-like, growth habit. Flowers from December to January. The slightly fluffy looking flower head and yellowing leaf tips make Whitegrass easy to identify. Abundant in most places except on very swampy ground or dry, shallow soils.

### Agronomy

Highly seasonal growth, most production occurring during midsummer months. A tough, wiry grass with a high proportion of dead matter in the herbage and of relatively poor value as a source of feed for grazing stock, but is selectively grazed.

(a) plant, (b) flower head, (c) spikelet, (d) floret.



### Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Densely tufted
Forage Value	Low

## INTRODUCED

## COCKSFOOT

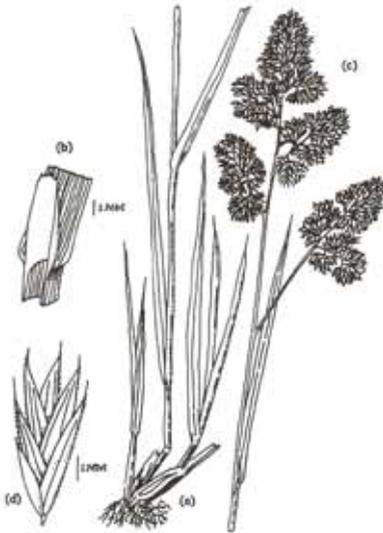
*Dactylis glomerata*

A large and densely tufted grass which flowers from December to March. Leaves are green or greyish-green and rough-feeling. It can be identified from the very rough texture of the folded leaves and the flattened appearance of the leaf sheaths. Common on waste ground and improved grassland near settlements.

**Agronomy**

Frost, heat, drought and cold resistant and tolerates shade very well. A productive pasture grass, particularly in drier areas as it can be deep rooting. Used in seeds mixtures for re-seeding pastures. Needs high fertilisation for intensive use and is highly susceptible to disease.

(a) plant, (b) ligule, (c) flower head, (d) spikelet.

**Agricultural Features**

Longevity	Perennial
Palatability	Good
Growth Habit	Tufted with short rhizomes
Forage Value	High

NATIVE

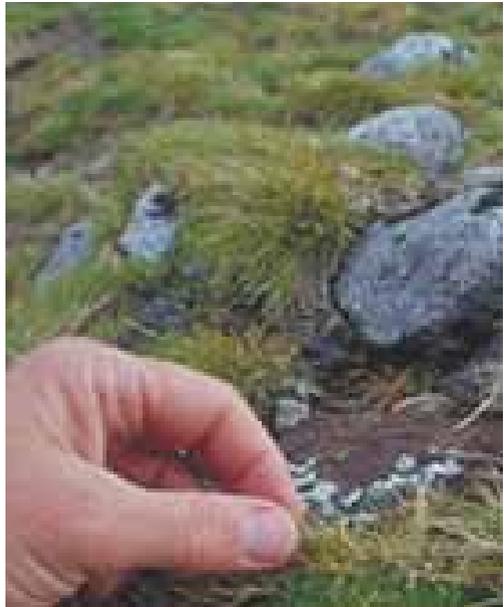
**ANTARCTIC HAIR-GRASS***Deschampsia antarctica*

A delicate looking grass with hairless, smooth leaves. Flowers in January to February. It has shorter flowering stems and a more green coloured flower head than Wavy hair-grass, while its straighter awns tell it apart from Dwarf hair-grass. Occurs in damp sand or clay soil near the sea, or freshwater ponds, and coastal greens

**Agronomy**

Competitive and might be incompatible with more productive forage species. Low production though its' tolerance of saline soils may make it a valuable resource in coastal and other salty areas.

(a) Plant, (b) flower head, (c) spikelet,  
(d) floret.

**Agricultural Features**

Longevity	Perennial
Palatability	Fair
Growth Habit	Tufted & mat forming
Forage Value	Low

## INTRODUCED

## WAVY HAIR-GRASS

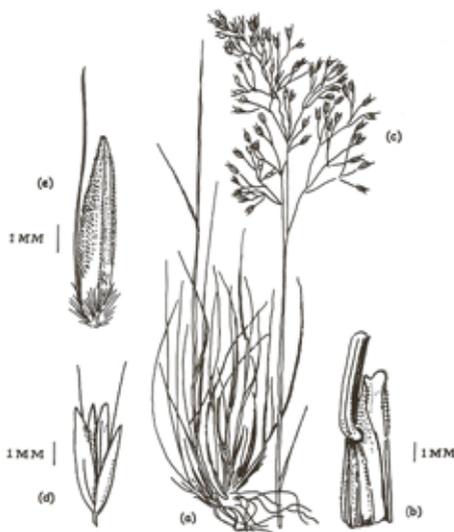
*Deschampsia flexuosa*

A tufted and delicate looking grass with green, hairless leaves which are rough-feeling towards the tip. Flowers from January to February. Common in Diddle-dee ground and drier parts of Whitegrass camp.

## Agronomy

Restricted to soils that are very poor in nutrients and acid to extremely acid. Readily grazed by sheep but nutritive value probably low, not very productive. Tolerates shade very well and is resistant to cold and persistent frost. Incompatible with productive forage species.

(a) plant, (b) ligule, (c) flower head, (d) spikelet, (e) floret.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Rhizomatous
Forage Value	Low

## INTRODUCED

## COUCH-GRASS

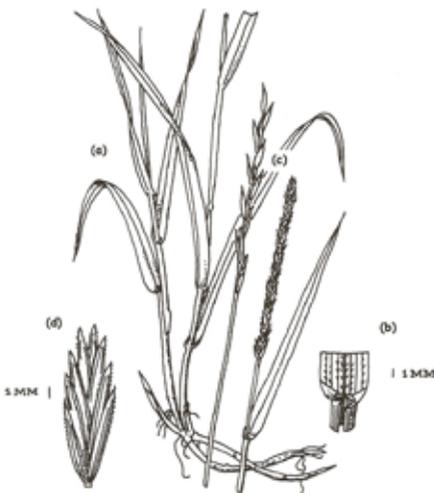
*Elytrigia repens*

A large and loosely tufted grass with creeping, wiry rhizomes, hairy stems and usually dull, green leaves. Flowers from December to February. Common couch-grass is usually found on disturbed ground. Grows on waste ground and cultivated ground and verges around settlements.

## Agronomy

Extremely resistant to cold, tolerates drought and is very sensitive to frequent defoliation. Generally compatible with Timothy and Perennial ryegrass. Needs a high level of fertilisation to express its potential. Susceptible to several rusts and can suffer from snow mould.

(a) plant, (b) ligule, (c) flower head  
(slim and broad-side views), (d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Wiry rhizomes
Forage Value	Medium

NATIVE

## LAND TUSSAC

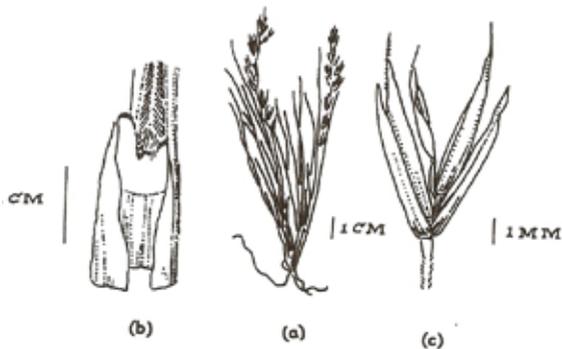
*Festuca contracta*

A densely tufted grass with usually blue-green leaves, flowering between November and January. Land tussac can be confused with Magellanic fescue (p.19), however the flowering heads of Land tussac are more flattened while Magellanic fescue usually has shorter leaves and longer flowering stems. Common in sand dunes, both coastal and inland rocky areas and also Diddle-dee ground.

## Agronomy

Poorly competitive and probably incompatible with productive forage grasses. Well adapted to coastal areas where it is often grazed by stock in spring.

(a) plant with flower heads,  
(b) ligule, (c) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted
Forage Value	Low

NATIVE

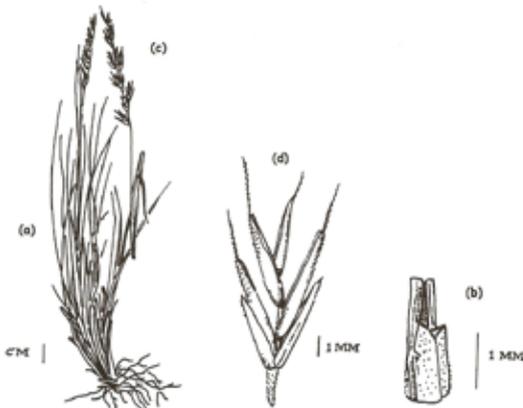
**MAGELLANIC FESCUE***Festuca magellanica*

A densely tufted grass with usually blue-green leaves. Flowers from December to January. Can be confused with Land tussac, (p.18). It is fairly common, particularly in both coastal and inland rocky areas, on open and shallow soil and in Diddle-dee ground.

**Agronomy**

Magellanic fescue is grazed by stock but is not very productive nor palatable.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.

**Agricultural Features**

Longevity	Perennial
Palatability	Fair
Growth Habit	Tufted
Forage Value	Medium

## INTRODUCED

## RED FESCUE

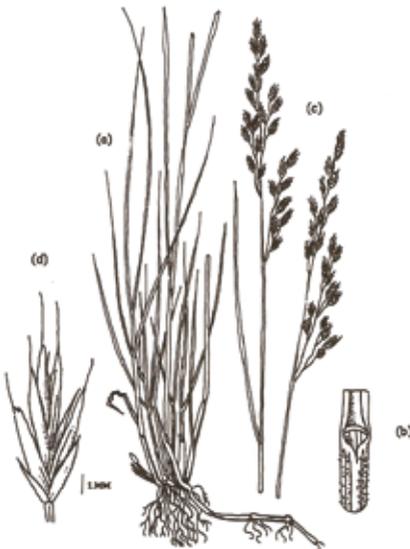
*Festuca rubra*

A tufted grass with long, creeping rhizomes, and fine leaves and sheaths which are often reddish-purple at the base. Flowers from December to January. May be found in improved pastures, gardens and waste ground near settlements

## Agronomy

Tolerates cold very well and is drought resistant. Moderately competitive species and compatible with white clover. Responds reasonably well to nitrogen fertilisation. Palatable to sheep, less so to cattle. Compared with other species, it grows well on soils of poor to moderate fertility. A good pasture grass. Some commercially bred varieties available.

(a) plant, (b) ligule,  
(c) flower head, (d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Loosely tufted with rhizomes
Forage Value	Medium

NATIVE

## CINNAMON GRASS

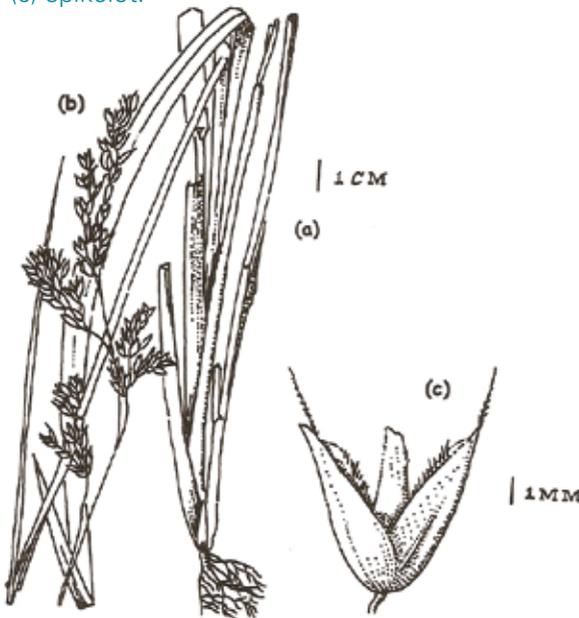
### *Hierochloë redolens*

A large grass that is easily identified by its large, shiny (on lower surface), green leaves and the noticeable cinnamon-like smell of crushed leaves. Flowers from September to January, (occasionally February). It is fairly common on damp ground, particularly beside running water.

### Agronomy

Often grazed by stock, particularly cattle, and has reasonable nutritive value. Has been reported to cause blackening of liver tissue in sheep.

(a) plant, (b) flower head,  
(c) spikelet.



### Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Short rhizomes
Forage Value	Medium

## INTRODUCED

## YORKSHIRE FOG

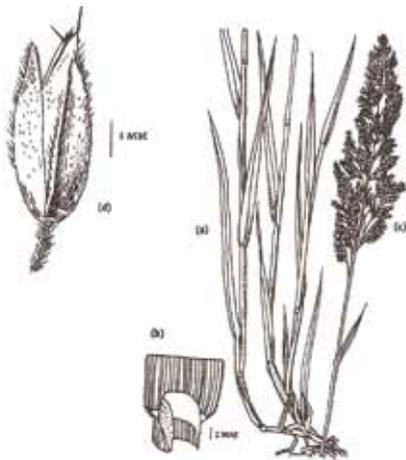
*Holcus lanatus*

This softly hairy grass was introduced to the Falklands in seeds mixtures for pasture improvement. Flowers from November to February and leaves are green or greyish-green. It is easily identified by the soft hairiness of the leaves, and the faint pink stripes on the leaf sheaths. Now common in old pastures and around settlements and appears to be spreading in Whitegrass and Diddle-dee areas, particularly near the coast

## Agronomy

Can suffer from frost in winter but is tolerant of very low fertility soils. It is competitive and, under grazing, is compatible with Perennial ryegrass and with Red fescue in less productive pastures. Only the young shoots are very palatable to stock. The plant has a tendency to go to seed quickly in spring and hence lose digestibility rapidly early in the season.

(a) plant, (b) ligule, (c) flower head, (d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted
Forage Value	Medium

## INTRODUCED

## PERENNIAL RYE-GRASS

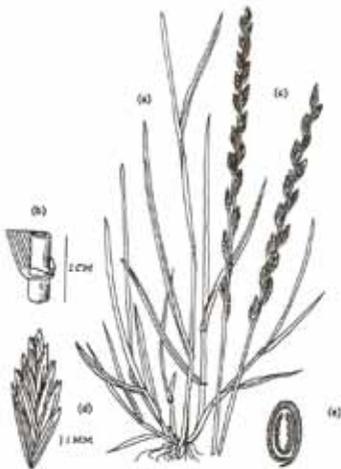
*Lolium perenne*

A loosely to densely tufted grass with the flower head a spike. Flowers from December to May, leaves glossy-green, heavily ribbed above, hairless and usually with a purple-red base to the sheath. Fairly common on waste ground and in gardens, sometimes seen in improved pasture.

## Agronomy

Sensitive to intense frost and drought. Intolerant of shade and very competitive given reasonable level of fertility. Compatible with smooth-stalked meadow grass, Timothy, Yorkshire fog and white clover. Very valuable and productive pasture grass on generally not used for reseedling.

(a) plant, (b) ligule and auricle, (c) flower head, (d) spikelet, (e) cross-section view of leaf blade folded inside sheath.



## Agricultural Features

Longevity	Perennial
Palatability	Good
Growth Habit	Tufted, usually with rhizomes
Forage Value	High

## INTRODUCED

## REED CANARY GRASS

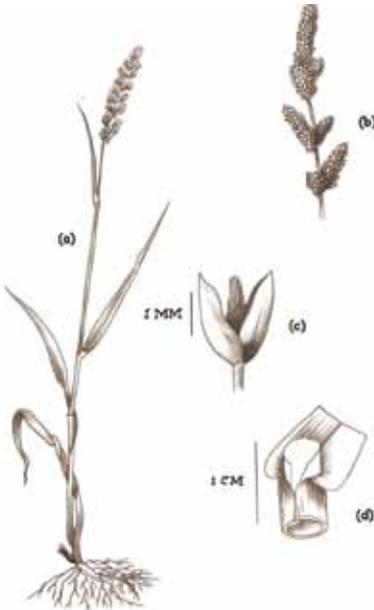
*Phalaris arundinacea*

A tall, robust grass with hairless, light-green or whitish-green leaves. Flowers from December to February. Reed canary grass spreads naturally by creeping rhizomes, but plants can be raised from seed. Frequently occurs in wet places, along the margins of rivers, streams, lakes and pools.

## Agronomy

Although reasonably palatable, suffers from low voluntary intake levels in sheep and cattle. Some newer cultivars have been bred with lower levels of alkaloids and are reasonably palatable and nutritious.

(a) Plant, (b) seed head, (c) spikelet,  
(d) ligule.



## Agricultural Features

Longevity	Perennial
Palatability	Fair- moderate
Growth Habit	Rhizomatous
Forage Value	Medium

## INTRODUCED

## TIMOTHY GRASS

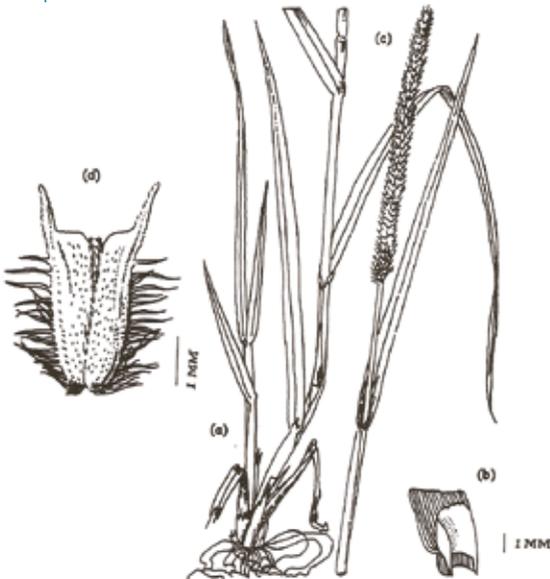
*Phleum pratense*

A tall grass that flowers from November to February. Leaves are green or greyish-green and hairless. Timothy has slightly 'bulbous' stem bases. Common in improved pastures, greens and waste ground near settlements.

## Agronomy

Poorly competitive and compatible with many other forage species especially with Meadow fescue and White clover. Timothy is a valuable grass for both grazing and hay, particularly on moist and heavy soils. Very good resistance to cold but sensitive to drought.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Short-lived Perennial
Palatability	Good
Growth Habit	Large clumps, loosely or densely tufted
Forage Value	High

NATIVE

**MOUNTAIN BLUE-GRASS***Poa alopecurus*

An upright grass with male and female flowers on separate plants. Flowers from November to January, (sometimes February). Leaves usually blue-green and hairless. The stiff, leaves of Blue-grass, and the white 'cottony' hairs around the flowers on female plants make it an easy grass to identify. Found most places except with Tussac.

**Agronomy**

Adapted to cold climates and poorly competitive. Although it seems to be unproductive and has a low nutritive value, it appears to be selectively grazed by stock. Easily overlooked in Whitegrass camp unless it is flowering. Most common in rocky areas (both coastal and inland) or in Diddle-dee or Balsam-bog ground.

(a) plant, (b) ligule, (c) flower head,  
(d) female spikelet.

**Agricultural Features**

Longevity	Perennial
Palatability	Fair
Growth Habit	Densely tufted
Forage Value	Low

## INTRODUCED

## ANNUAL MEADOW-GRASS

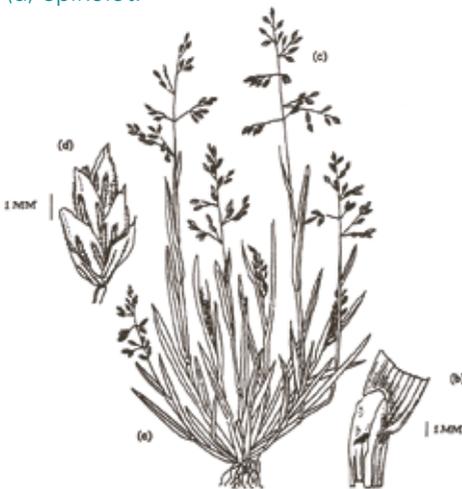
*Poa annua*

Can be distinguished from the other Meadow-grasses with loose panicles by its branching pattern of usually only one or two branches at any point on the flower head. Flowers from November to March, leaves are folded, green and hairless. Common in the Falklands, particularly on disturbed or waste ground, or cultivated ground near settlements. Can also form dense swards around sheep tracks, penguin rookeries and in goose feeding areas.

## Agronomy

Colonises empty places such as gaps in the centre of paddocks created by animals. Not competitive and often associated with Perennial rye-grass. Although in the Falklands it is readily grazed by stock due to its good nutritive value, it is not very productive. Has a wide climatic tolerance.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Annual
Palatability	Good
Growth Habit	Low-tufted forming small mats
Forage Value	Medium

## NATIVE

## TUSSAC

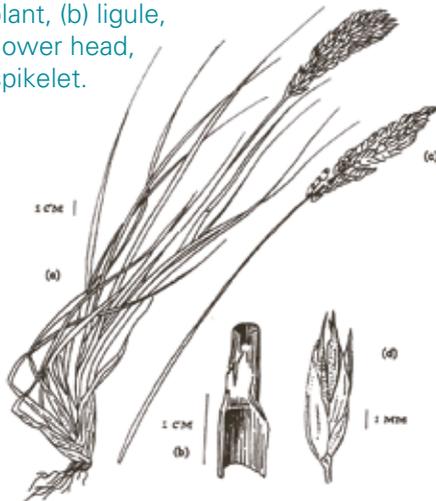
*Poa flabellata*

A large coastal grass which forms 'stools' of stems up to 2.5m in total height and 1m, or more, in diameter with green, spreading leaves. Flowers from September to November, sometimes December. Younger plants could be confused with Marram Grass (p.11), which can be found in a similar habitat. Locally common in coastal areas and on the small islands (where grazing is restricted). Forms dense stands when not grazed.

## Agronomy

Potentially a very valuable fodder resource in the Islands, remaining palatable and nutritious all year round. However, it does not tolerate heavy grazing, particularly in summer. Plants may be established from seedlings on coastal sites (See also Falklands Conservation's handy guide to Tussac grass) and are very susceptible to rust. It is not very productive grass though may have potential as an out of season forage resource.

(a) plant, (b) ligule,  
(c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Good
Growth Habit	Densely clumped tussocks
Forage Value	High

## INTRODUCED SMOOTH-STALKED MEADOW-GRASS

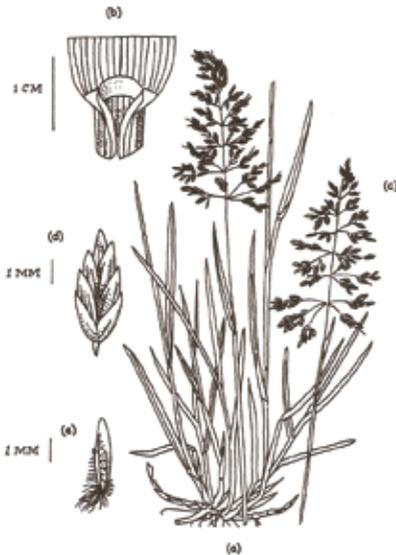
### *Poa pratensis*

A very variable grass with slender, creeping rhizomes and green or greyish-green leaves with smooth sheaths. Flowers from October to March. It can be identified by the short ligule, folded smooth leaf and boat-shaped tip to the leaf. Common on waste ground, slopes of greens and in improved pastures, particularly near settlements or open sandy areas by the coast.

### Agronomy

Very resistant to cold, drought and heat. Although competitive, it grows very slowly after sowing but is persistent. A good complement to Perennial rye-grass. It has been introduced to the Islands for re-seeding pastures and is very readily grazed by stock due to its high palatability. The main drawback is its low productivity.

(a) plant, (b) ligule, (c) flower head, (d) spikelet, (e) floret.



### Agricultural Features

Longevity	Perennial
Palatability	Good
Growth Habit	Tufted & forming a dense sod
Forage Value	High

## INTRODUCED

## SHORE MEADOW-GRASS

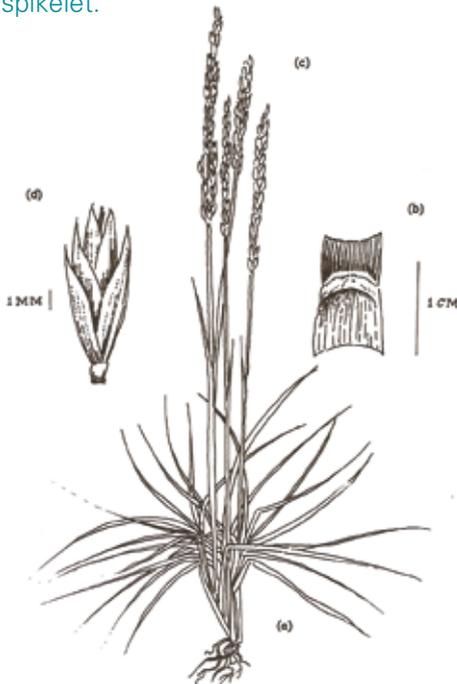
*Poa robusta*

Also called "Spikey grass". A very stiff, prickly-leaved grass growing in clumps with leaves often lying flat along the ground. Flowers from November to January. One of the easiest grasses to identify, due to its hard, very prickly leaves. Common in sandy or muddy open areas by the sea.

## Agronomy

The leaves of Shore meadow-grass are too stiff and prickly to be grazed by stock.

(a) plant, (b) ligule, (c) flower head, (d) spikelet.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted and mat-forming
Forage Value	Low

## INTRODUCED

## NATIVE FOG

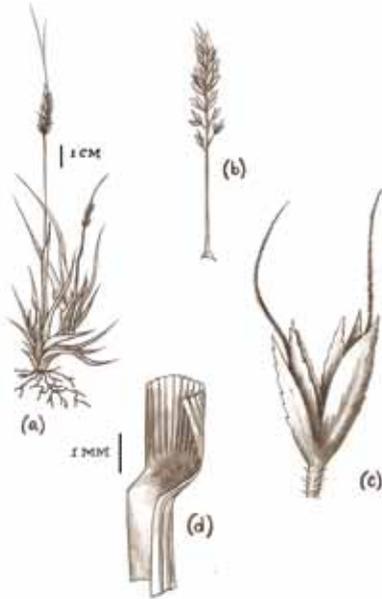
*Trisetum phleoides*

A rather densely tufted grass with variable length leaves (1-12cm), folded or flat, pointed, thin tips and leaf sheaths without auricles. Flowers from January to February and the flowering stems are softly hairy not "furry" like Yorkshire fog. Found in sandy or shallow and open soils, especially in Diddle- dee ground.

**Agronomy**

Little known about its management or value.

(a) plant, (b) flower head, (c) spikelet, (d) ligule.

**Agricultural Features**

Longevity	Perennial
Palatability	Fair
Growth Habit	Densely tufted
Forage Value	Medium

## INTRODUCED

## SQUIRREL-TAIL FESCUE

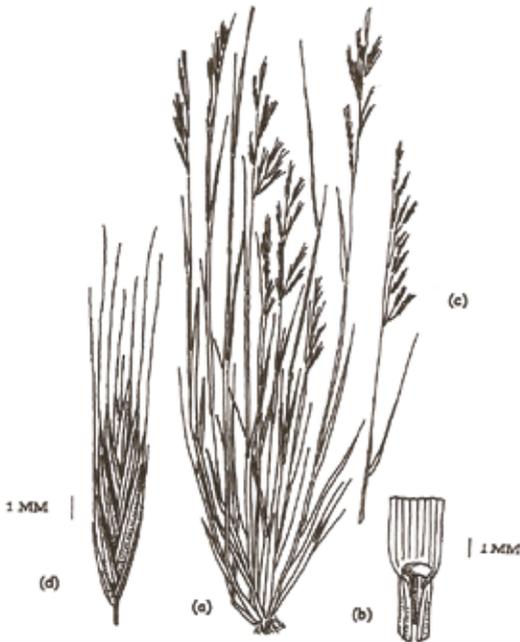
*Vulpia bromoides*

Noticeably one-sided panicle flower heads. Flowers in January and February. Leaves are green and quite stiff. Although it could possibly be confused with Land tussac (p.18), Squirrel-tail fescue is generally a smaller plant and has no auricles. Common grass found in greens, disturbed ground around settlements and sandy or open soil along the coast near settlements.

## Agronomy

Probably of very little agricultural value, but is grazed.

(a) plant, (b) ligule, (c) flower head,  
(d) spikelet.



## Agricultural Features

Longevity	Annual
Palatability	Fair
Growth Habit	Tufted
Forage Value	Low

---

# FORAGE LEGUMES

---

## INTRODUCED

## WHITE CLOVER

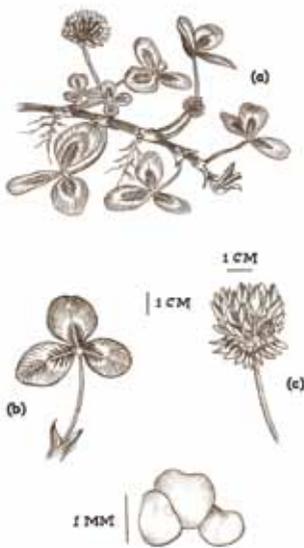
*Trifolium repens*

A low-growing clover with 3-lobed, smooth, elliptic to egg-shaped and long-stemmed leaves. Flowers during spring and summer. The stems function as stolons so White clover often forms mats with the stems creeping and rooting at the nodes. Found particularly around settlements, gardens, buildings and roadsides.

## Agronomy

The most important clover species for grazed swards and normally used to provide a source of Nitrogen (fixes atmospheric nitrogen when established) for a sown companion grass while itself yielding herbage rich in protein and of high digestibility. Persistent under grazing conditions, provided the grazing is not hard and continuous.

(a) plant and nodal roots, (b) leaf, (c) inflorescence, (d) seeds.



## Agricultural Features

Longevity	Perennial
Palatability	Excellent
Growth Habit	Stoloniferous
Forage Value	Very High

## INTRODUCED

## ALSIKE CLOVER

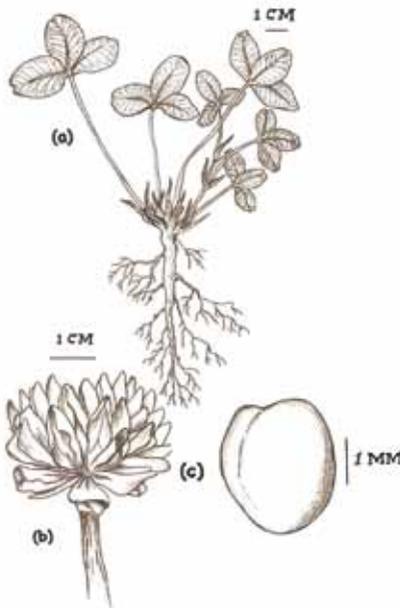
*Trifolium hybridum*

Has an upright growth form similar to that of red clover and develops many fine stems. Flowers are white, flushed with pink below. Leaves are 3-lobed and hairless. Occasional plants are found around some of the main settlements in the Falklands.

**Agronomy**

Performs well on wet or acid soils under conditions of fairly low fertility. Usually sown in mixtures with grasses such as Timothy or Cooksfoot. It is considered non-aggressive, however has a tendency to cause bloat and should be fed to livestock with care. Given appropriate inoculation, might prove a valuable species in the Falklands.

(a) plant , (b) inflorescence.

**Agricultural Features**

Longevity	Perennial
Palatability	Excellent
Growth Habit	Stoloniferous
Forage Value	Very high

## INTRODUCED

## BIRDSFOOT TREFOIL

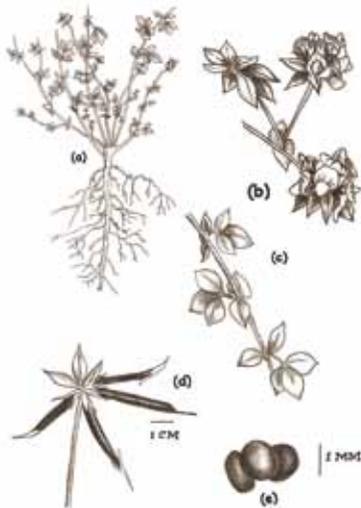
*Lotus corniculatus*

Produces yellow flowers from December to February and leaves are pale green and alternate. The base of the shoot system forms a crown from which numerous stems are then produced. Common in valleys and greens.

## Agronomy

A legume with a well-developed taproot, which allows it to penetrate deeply into the soil. Can become woody with age. A useful legume on poor soil. Used in agriculture as a forage plant, grown for pasture, hay and silage. May grow satisfactorily on marginal and shallow soils and can tolerate lower pH and phosphate levels than White clover. Fixes nitrogen when inoculated. May prove very useful in suitable circumstances as a constituent of long term grassland.

(a) Plant, (b) flowers (c) leaves on stem, (d) ripe seed pods (e) seeds.



## Agricultural Features

Longevity	Perennial
Palatability	Good
Growth Habit	Rhizomatous
Forage Value	High

## INTRODUCED MARSH BIRDSFOOT TREFOIL

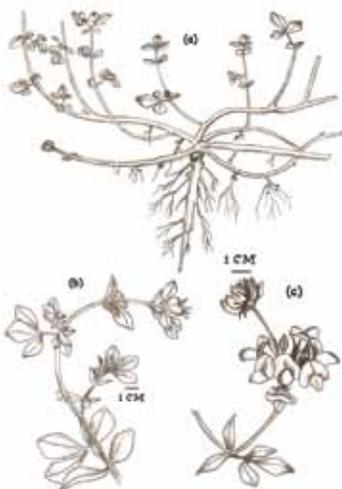
### *Lotus uliginosus*

A pioneer legume, leaves more or less hairy, with upright or scrambling growth habit early in the season. The stems are usually longer than Birdsfoot trefoil and somewhat trailing with loosely spreading hairs. Flowers from December to February and leaves are similar to Birdsfoot trefoil but a greyer shade of green and larger and broader. It is more likely to be found where there is plenty of moisture.

### Agronomy

Although adapted to acid soils with low fertility, it responds to increased soil pH and improved fertility. Good grazing for cattle and sheep. Compatible with non-aggressive grasses such as Timothy or Meadow fescue. Recognised as a valuable pasture legume, particularly for wet, acid soils in cooler regions. Has long been identified as having potential in the Falkland Islands as a pasture species. Bred varieties available.

(a) Plant, (b) aerial parts,  
(c) inflorescences.



### Agricultural Features

Longevity	Perennial
Palatability	Good
Growth Habit	Rhizomatous
Forage Value	High

# OTHER PASTURE SPECIES

---

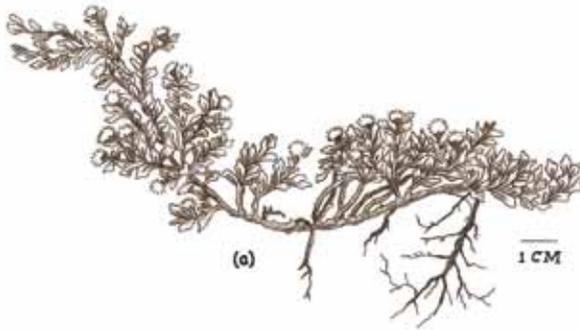
NATIVE

**CHRISTMAS BUSH***Baccharis magellanica*

Usually a dwarf evergreen shrub but can be erect and bushy in sheltered areas. The stems are rough and woody with many branches spreading across the ground. Terminal flowers are yellow-white. Flowers from December to January. Small pale-green holly-like leaves. Can be abundant in Whitegrass or Diddle- dee camp.

**Agronomy**

The most nutritious of all the dwarf-shrubs in the Falklands. Can increase under intensive grazing. Contains complex phytochemicals of unknown value.

**(a) Plant****Agricultural Features**

Longevity	Perennial
Palatability	Fair
Growth Habit	Shrubby
Forage Value	Medium

## NATIVE

## DIDDLE-DEE

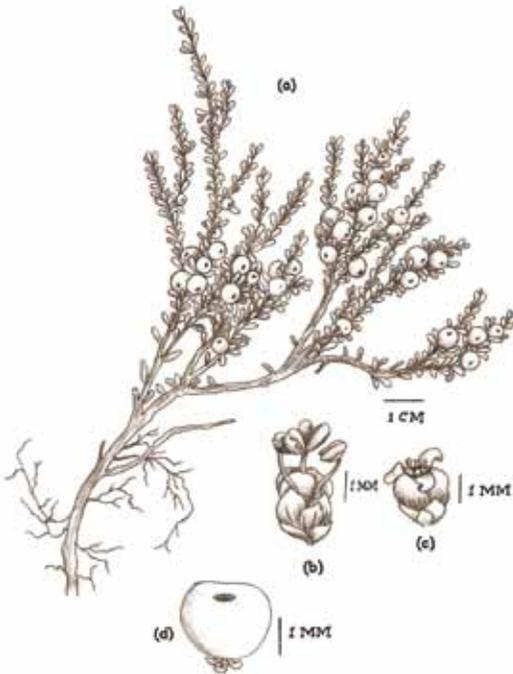
*Empetrum rubrum*

Small evergreen shrub with red berries reaching up to 30cm. Flowers from September to October and leaves are alternate, simple, oblong and resinous. The stems and roots are woody and large root twigs can often be found amongst the vegetation. It grows in dry organic, peaty soils. Abundant, the dominant species on better drained ground and on "hard camp".

## Agronomy

Not particularly palatable or nutritious. May produce chemicals in its roots to deter other plants growing nearby.

## (a) Plant with berries



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Shrubby
Forage Value	Low

NATIVE

## FACHINE

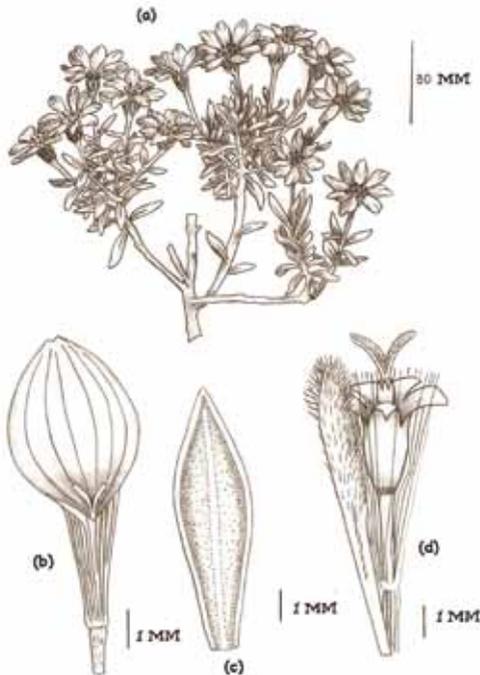
*Chiliotrichum diffusum*

Large (up to 2m) evergreen, daisy-flowered bush with grey-green leaves. Flowers from December to February. Most often found in the wetter parts of Whitegrass camp, especially near streams and sheltered valleys.

## Agronomy

Selectively grazed by stock (especially cattle and horses) although not particularly palatable or nutritious.

(a) plant with flowers, (b) ray floret. (c) leaf underside, (d) disc floret



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Bushy
Forage Value	Low

## NATIVE

## NATIVE RUSH

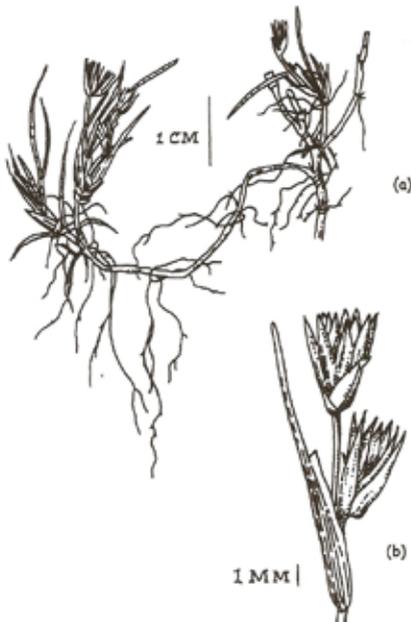
*Juncus scheuchzerioides*

A purplish, perennial rush with long, spreading rhizomes. Flowers from November to December and leaves are 2-14 cm long, usually longer than the flowering stems. Can be distinguished from the other rush species found in the Islands by the distinctive lines running through the leaf blades. It is often a major component of short-grazed greens and found in damper parts of most vegetation communities. Most frequently found in moist, sandy areas.

## Agronomy

It appears to be highly palatable to stock but does not have a particularly high nutritive value.

(a) plant, (b) flower head



## Agricultural Features

Longevity	Perennial
Palatability	High
Growth Habit	Tufted
Forage Value	Medium

NATIVE

## NATIVE WOODRUSH

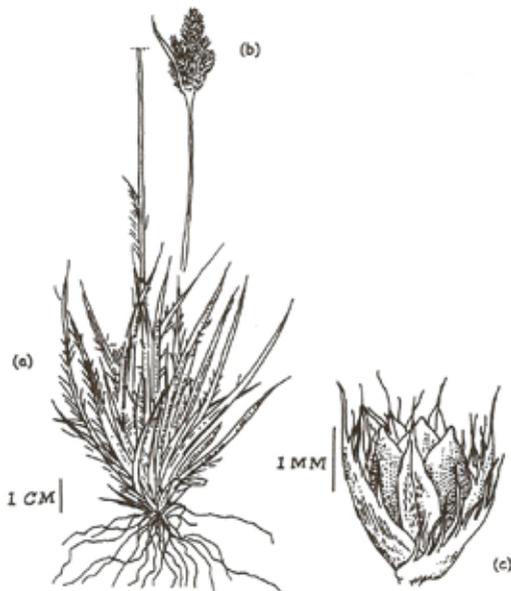
*Luzula alopecurus*

A tufted, hairy, grass-like rush. The finely pointed leaves growing from the base of the plant are normally 5.5-20cm long, 2-6mm wide and with longish straggly hairs. Flowers from November to January. Hairy looking flower heads distinguish Native woodrush from its relative, the Field woodrush. Common, particularly in rocky areas, coastal cliffs and slopes and among Balsam-bog and Diddle-dee.

## Agronomy

It appears to be palatable and grazed by stock, but has fairly low nutritive value.

(a) plant, (b) flower head,  
(c) capsule inside tepals.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted
Forage Value	Low

NATIVE

## TALL RUSH

*Marsippospermum grandiflorum*

A large rush with stems 16-30cm long and creeping rhizomes. One leaf per stem (other leaves reduced to sheaths at base), cylindrical and upright. Flowers from October to November. The short bracts around the flower of Tall Rush tell it apart from Brown rush. It is usually found in Diddle-dee or Balsam-bog areas.

## Agronomy

The presence of Tall rush is generally an indication of good quality pasture on well drained soil; it provides shelter for palatable grasses and also for stock. The plant prefers only slightly acid, neutral or basic (alkaline) soils and requires moist or wet soil.

(a) plant with flower, (b) flower head.



## Agricultural Features

Longevity	Perennial
Palatability	Fair
Growth Habit	Rhizomatous
Forage Value	Low

NATIVE

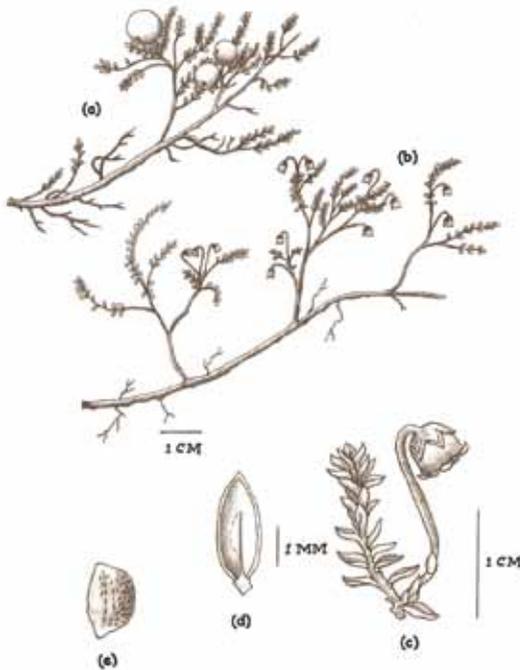
**MOUNTAIN BERRY***Pernettya pumila*

Small evergreen shrub reaching up to 60cm in length. Flowers from November to January and leaves are pointed, dark green shiny and alternate. Common in most communities, particularly in dwarf-shrub heath, open peat and sand.

**Agronomy**

Not particularly palatable but the foliage is eaten by stock.

(a) Plant with fruit, (b) plant with flowers, (c) flower,  
(d) leaf (e) seed

**Agricultural Features**

Longevity	Perennial
Palatability	Poor
Growth Habit	Shrubby
Forage Value	Low

NATIVE

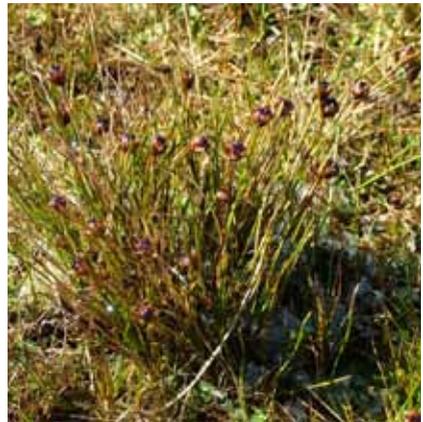
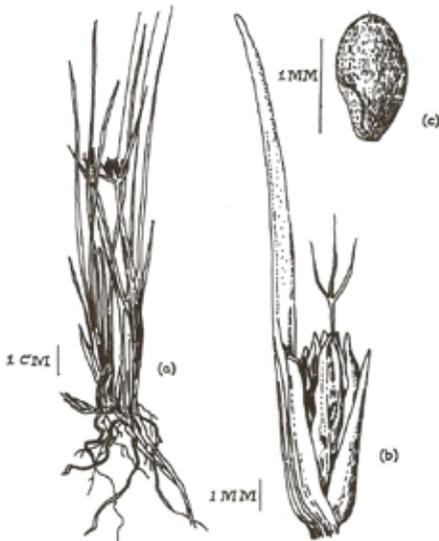
**BROWN RUSH***Rostkovia magellanica*

Variably tufted or creeping short rush (7-20cm) with hard shiny leaves and a single brown nut at the top of its stem. Flowers from October to November. The channelled leaves are usually larger than the stems. It is common in wet hollows and damp areas, especially in wetter Whitegrass camp.

**Agronomy**

Not likely to be nutritious but often seen to be grazed.

- (a) Plant with flower heads,  
(b) flower head, (c) capsule.

**Agricultural Features**

Longevity	Perennial
Palatability	Poor
Growth Habit	Tufted
Forage Value	Low

## INTRODUCED

## PLANTAIN

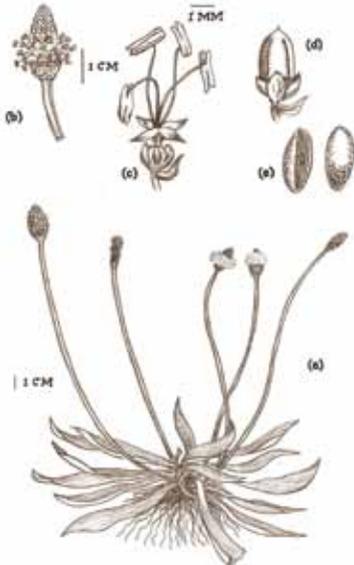
*Plantago lanceolata*

Rosette-forming perennial herb, with leafless, silky, hairy flower stems and a dark globular flower head. The basal leaves are lance-shaped and are generally low-growing, though they can be erect in pastures. Leaves have 3-5 strong parallel veins narrowed to a short stalk at their base.

## Agronomy

Reportedly nutritious and palatable in a wide range of (dryish) soils. There are some bred cultivars, mainly from New Zealand. Best sown with clover or a non-competitive grass. Reportedly lacks persistence.

- (a) Plant with rosette leaves  
 (b) seed head, (c) flower (d) capsule  
 (e) seeds



## Agricultural Features

Longevity	Perennial (to 3-4 years)
Palatability	Good
Growth Habit	Tufted
Forage Value	Medium-high

## INTRODUCED

## CHICORY

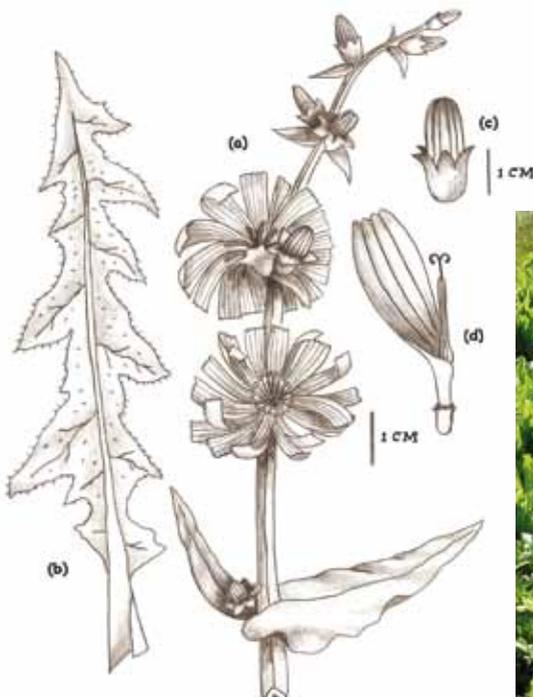
*Cichorium intybus*

A stout plant with branched stems and heads of clusters of blue flowers. It can spread by either stolons or rhizomes. Flowers from October to November. The basal leaves are slightly hairy, toothed or lobed .

## Agronomy

In the Falklands it may be sown in drier areas and it prefers less acid soils. The young leaves can be used as salad. Although nutritious, it reportedly lacks persistence in pastures

(a) Plant with flowers, (b) leaf, (c) seed, (d) floret.



## Agricultural Features

Longevity	Perennial
Palatability	Poor
Growth Habit	Stout herb
Forage Value	Medium

---

## Sources used in compiling the information presented in this guide.

Davies, W., 1939. The Grasslands of the Falkland Islands. Falkland Islands Government & Crown Agents for the Colonies, London, S.W.1.

Davies, T.H. & Riley, J. 1992. Reseeding in the Falkland Islands. Herbage production of a range of grass species and cultivars. Grass and Forage Science Volume 47, 62-69.

Frame, J., Charlton, J.F.L., & Laidlaw, A.S., 1998. Temperate forage legumes. CAB International, UK.

Hubbard, C. E., 1984. Grasses . Penguin Books, London.

McAdam, J.H., 1986. Growth and production of a *Cortaderia pilosa* (Gramineae) community in the Falkland Islands. Grass and Forage Science, Volume 41, 281-287.

McAdam, J.H. & Walton, D.W.H., 1990. Ecology and Agronomy of Tussac grass. Queen's University Belfast. UK.

Miller, S.M., 2002. Improving the productivity young sheep in the Falkland Islands. PhD Thesis, University of Queensland, Australia.

Peeters, A., 2004. Wild and Sown Grasses. Profiles of temperate species selection: ecology, biodiversity and use. Blackwell Publishing, Rome. Italy.

Sanderson, M., Labreuveuxm, M., Hall, M.H. & Elwinger, G.F., 2003 Nutritive value of chicory and English plantain forage. Crop Science 43, 1797-1804

Spedding, C.R.W & Diekmahns, E.C., 1972. Grasses and Legumes in British Agriculture. Bulletin 49. Commonwealth Agricultural Bureaux. UK.

SAG., 2004. Manual de Terreno. Identificación de especies en Pastizales de la XII región. Chile.

Various end of contract reports from staff in agricultural research units based in the islands since the 1980's and the Department of Agriculture.

---

## Photograph credits

We acknowledge the photographs reproduced as follows (by page number T = Top; L = Left; R = Right, B = Bottom):-

Gary Braasch (15); Graham Callow (14B; 17T); Carl Farmer (1T, 10T, 14T, 16T); Martin Hamilton (10T, 16B, 25TR, 25 TL, 30B, 30T, 31TR, 41B); Martin Henry (46B); Honour Kristinsson (31B); Peter Llewellyn (6B, 9T); Ali Liddle (11b, 11T, 21T, 21B, 28T, 41T); Jim McAdam (6T, 23T, 23B, 27TL, 27B, 47TL, 47TR, 41T, 30T, 30B, 34, 45All); SAG 2004 (7R); Andy Pollard (17B, 9T, 22T, 28T, 28B, 39B, 35, 25B, 32T, 32B, 47B); Rebecca Upson (26B, 16TR, 19B); Paul Shannon (20T); Mike Morrison (41T); Sergio Radic (36R, 37All, 48B); Forest and Kim Starr (20B, 20T Mid, 20TL)

## Acknowledgements

The authors are grateful to Ali Liddle, Helen Otley, Sergio Radic, Andy Pollard, Sally Poncet, Martin Hamilton and Rebecca Upson for helpful comments and permission to use photographs marked appropriately. All other photographs are either credited above or taken by the authors. Andy Pollard, Department of Agriculture, Falkland Islands Government (DoA), made helpful comments at all stages in the production of this booklet.

Original line drawings by Joanna Brown and Maria Jose Rodrigo. Some text provided by Fiona Wilson, and funded by the Shackleton Scholarship Fund.

The United Kingdom Falkland Islands Trust organised the production and Chris Armour of the Agri-Food and Biosciences Institute (AFBI), designed and laid out this booklet. Publication of this booklet was funded by DoA and AFBI.

---

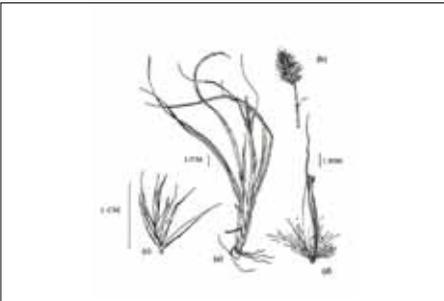








# Falkland Islands Pasture Plant Guide



In recent years farmers in the Falkland Islands have been improving the quality of their pastures by sowing introduced species or by rotationally grazing native pasture.



This guide aims to help them evaluate the progress of their pasture improvement either through monitoring the contribution made by the sown species or assessing the directional change in species composition associated with rotational grazing.

