G. setifolia	mapere	I	2, 3	
*Glyceria striata**		lc	1	AK 218556
Isachne globosa		lc	1	
*Juncus effusus**	wiwi	lc	1	
J. prismatocarpus	wiwi	o	1	
Lepidosperma laterale		lc	3	
Machaerina sinclairii	tuhara	A		
Microlaena stipoides	patiti	o	2	
Morelotia affinis		I	3	
Oplismenus imbecillis		o	2	
*Paspalum dilatatum**		lc	1	
*P. distichum**		lc	1	
Phormium tenax	harakeke	c	1	
*Potamogeton crispus**		I	1	
Schoenus maschalinus		I	2	
S. tendo	wiwi	lc	2	
Typha orientalis	raupo	A		
Uncinia uncinata	kamu	o	2	

On pampas grass (*Cortaderia*)

R. O. Gardner

A vigorous description by Ponsonby meadow-gardener John Holloway (pers. comm.) of his difficulties with local populations of these plants has led to my considering the subject in a brief and academic way.

As probably everyone knows, the two South American species so unwelcome in northern New Zealand look very different from their native relatives, having much denser hummocks with numerous erect culms standing among a mass of dry old leaf sheaths like coarse shavings. Visitors to this country often speak about silver and purple pampas plumes enhancing our coasts and motorways – more realistic, though, to think of the pampas vista as one of rat-ridden cosy castles protected by the natural equivalent of razor-wire, silver and purple flags brazenly flying, etc, etc.

But the plants themselves, in particular their leaf sheaths, are not without botanical interest. As a leaf senesces and dies the apical part of its sheath begins to spiral and curl inwards. Such behaviour is not found in our native *Cortaderia* species so it might well have some adaptive significance, a possibility that gets encouragement from the fact that prematurely plucked leaves remain straight when dried.

Mr Holloway's drawn-out struggle brings to mind the idea that the mass of dry sheaths could be protecting the basal meristems; this obviously would be handy in South America, home of the guinea pig and other grazing mammals. But the sheaths are not toothed, nor even especially harsh. Alternatively, it might be their resilience that is crucial, the means of preventing inflorescences from being flattened by the notorious winds of the pampas. Or it might be their very inflammable nature that requires explanation. Or perhaps the "castle" idea has merit, and there exists a coevolutionary association between the plant and some insect or larger animal that lives among the sheaths – a piece of ecology which, probably luckily for us, has not been transferred to New Zealand.

In 1984 the Auckland Conservancy of the Forest Service spent at least $388,000 controlling pampas grass in its pine plantations (Knowles and Ecroyd 1985), where it is hated on account of its bloodthirsty leaves and fire-carrying capacity. At the other end of the scale, Mr Holloway has proposed to his clients a kind of siege-tactic, suggesting that individual hummocks be trimmed, then draped with a sheet of black plastic, with a stone or old telephone book or dead possum sitting at the top over a water entry slit – thus, continually wet and deprived of sunlight, the castle should

eventually crumble. An additional possum or cat placed firmly within the hummock might be a compost-maker's refinement.

Reference

Knowles, B. and Ecroyd, C. E. 1985 Species of *Cortaderia* (Pampas Grasses and Toetoe) in New Zealand. *Forest Research Institute Bulletin 105.* (a very thorough and well-illustrated inexpensive booklet)

Checklist of the indigenous vascular plants of Logues Bush Scenic Reserve, Tomarata

Maureen Young

This list was originally compiled by A. E. Esler and N. M. U. Clunie, and has been added to over the years by F. P. Hudson and M. E. Young. Six species were added by ABS members on the field trip on 16 April 1994.

Ferns and Fern Allies (52)

Adiantum aethiopicum
A. cunninghamii
A. hispidulum
Anarthropteris lanceolata
Asplenium bulbiferum
A. flaccidum
A. gracillimum
A. hookerianum (not seen since 1984)
A. oblongifolium
A. polyodon
Blechnum capense (of Allan)
B. chambersii
B. discolor
B. filiforme
B. fluviatile
B. fraseri
B. minus
B. membranaceum
Cyathea dealbata
C. medullaris
C. smithii
Deparia petersenii subsp. *congrua*
Dicksonia squarrosa
Diplazium australe
Doodia media
Grammitis ciliata
Hymenophyllum demissum
H. dilatatum
H. flabellatum
H. revolutum
H. sanguinolentum
Lastreopsis glabella
L. hispida
L. microsora
Leptopteris hymenophylloides
Lindsaea trichomanoides
Lycopodium varium
Lygodium articulatum
Paesia scaberula
Pellaea rotundifolia
Phymatosorus pustulatus
P. scandens
Pneumatopteris pennigera
Pteridium esculentum
Pyrrosia eleagnifolia
Tmesipteris elongata
T. lanceolata
T. sigmatifolia
T. tannensis
Trichomanes elongatum
T. reniforme
T.venosum

Gymnosperms (9)

Agathis australis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Libocedrus plumosa
Phyllocladus trichomanoides
Podocarpus hallii
P. totara
Prumnopitys ferruginea
P. taxifolia