

Example of Collector Myth

A New Zealand icon

by Pamela McGeorge

IT can be a tall, bulky plant with broad bayonets for leaves; or it may be stocky, with drooping fronds of bronzy-green that sway on windy days or flicker and shimmer with reflections from the sun. It comes in stripes that mirror a sunset, or clothed in deep purple-black. It grows in swamps, on mountain sides and by the sea; it borders bush and embellishes towns. Tui fight over it, Londoners love it and New Zealanders too often ignore it.

The plant is flax, *Phormium cookianum*, native to New Zealand, or *P. tenax*, with many cultivars derived from both varieties.

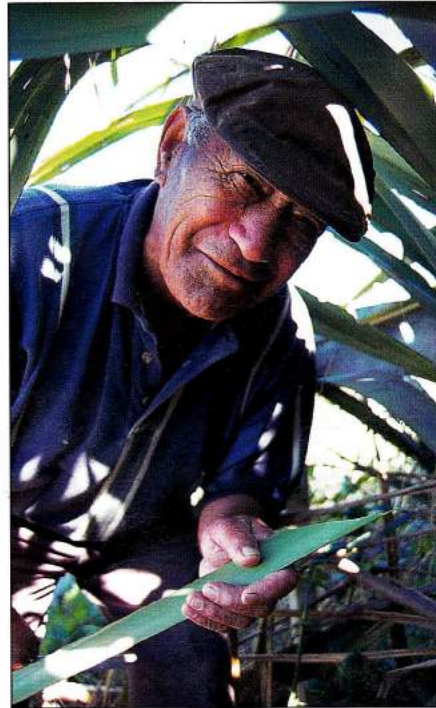
So important was the plant in New Zealand in pre-European days, that old-time Maori chiefs, when they heard that it was unknown in Britain, wondered how the population survived without *harakeke* which for them represented clothing, medicine, furnishings and fishing gear.

When Europeans came to the country, they were quick to realise the qualities of flax fibre for the manufacture of rope. When the outside coating of the leaves is stripped away, a strong pliant fibre, resistant to salt water, is exposed and in this century the fibre has been used for the making of such products as binder twine, underfelt, plasterboard and woolpacks.

Few people know perhaps, that fine silky fabric was manufactured from flax fibre sent to England last century and used to make gentlemen's shirts. An army outfitter in Woolwich had the fabric woven in Dundee, he made the shirts, and they were very popular with officers and men in the army, who appreciated the fabric for its ability to absorb sweat without chilling the wearer.

Maori people would not be surprised. Over centuries, Maori selected forms which were useful for a variety of purposes and cultivated them. They recognised the variable nature of *Phormium* and had names for many distinct forms, some of which were variegated.

Not only did they use the leaves to weave baskets and mats but the fibre



ABOVE: Tana Te Kanawa helps his wife Diggeress with the heavy work of cutting and collecting flax for her weaving. (Photo - Trevor Ward.)

OPPOSITE PAGE,
clockwise from top left:

Havelock North scientist Sue Scheele oversees the care of more than fifty different varieties of flax traditionally used by Maori for weaving. (Photo - John Cheese.)

Margaret Jones with four of the hybrid flaxes which she has developed. From left to right: 'Sunset', 'Stormy Dawn', 'Pizazz' and 'Duet'. (Photo - Trevor Ward.)

'Guardman', one of Jacob de Ruiter's favourite flaxes, thrives in a sheltered corner of his windswept garden close by the sea at Wellington. (Photo - John Cheese.)

'Crimson Devil', one of Margaret Jones' hybrids. (Photo - Trevor Ward.)

was used to make fine cloaks, the nectar was used as a sweetener and the roots and bases of the leaves were used for medicinal purposes. In his book *Maori Healing and Herbal*, Murdoch Riley devotes several pages to the medicinal uses of *harakeke*, *Phormium tenax*.

An entry dated as recently as 1991, states that when the outer covering is pulled off the base of a cut flax leaf, the exposed floss applied to an open wound will stop bleeding. There are reports of ailments as varied as arthritis, toothache and dysentery all being helped by applications of flax based medicines.

The 20th century however, has often discarded traditional uses of plant materials. Though flax remains an ubiquitous plant, common throughout the country, the industry built on it declined after the 1930s. People tend to scorn old wisdom and there was a danger that many of the attributes of this versatile plant, as well as many varieties, could have been lost forever.

One person with the foresight to understand this and the tenacity to do something about it was Rene Orchiston, of Gisborne.

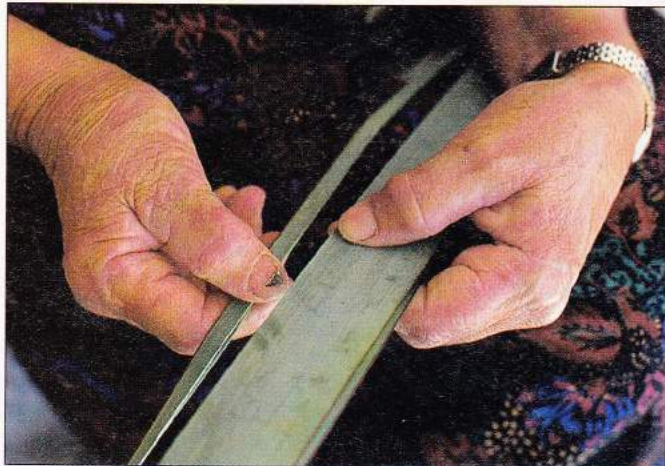
"I've always loved flax," she told me. "Father used it on the farm, to tie up things. Many years ago," she continued, "when I was in Rotorua, I used to watch young Maori women weaving with flax. But it upset me to see them using inferior materials. It seemed such a waste of effort.

"And although the art of flax weaving was not practised much then, I knew that there would be a revival. I thought it was important to try and source the old flaxes used traditionally in weaving. I wanted to find them, and identify them before it was too late."

That was more than thirty years ago. Rene travelled the length and breadth of New Zealand, but particularly on the East Coast of the North Island and in Hawkes Bay, scouring the countryside for remnants of old flax bushes which might be important. She took small divisions of plants and developed her own collection of cultivars.



ABOVE: Diggeress Te Kanawa in contemplative mood with one of the traditional cloaks for which she is renowned.



TOP LEFT: Flax, the tools Diggeress uses to process it, and the fibre at various stages of its preparation. It takes up to three months to prepare the fibre needed for weaving one cloak.

LEFT: Each blade of flax should provide 4 strips of working material. To prepare these strips it is necessary to remove the back rib and sides of the blade.

BELOW LEFT: An incision is made across the dull side of the flax blade - the back - to enable the leaf material to be stripped away to expose the fibre. Much practice is required to make the incision at the right depth. Too deep, and the strip is cut in half; too shallow and the fibre will not separate.

BELOW: Removing the leaf material with a mussel shell, a traditional tool which fits snugly in the hand.



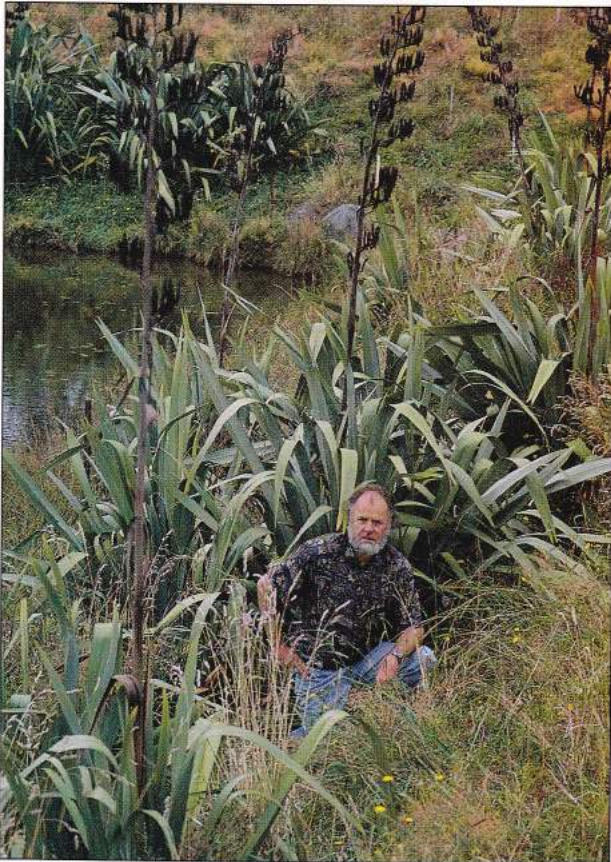
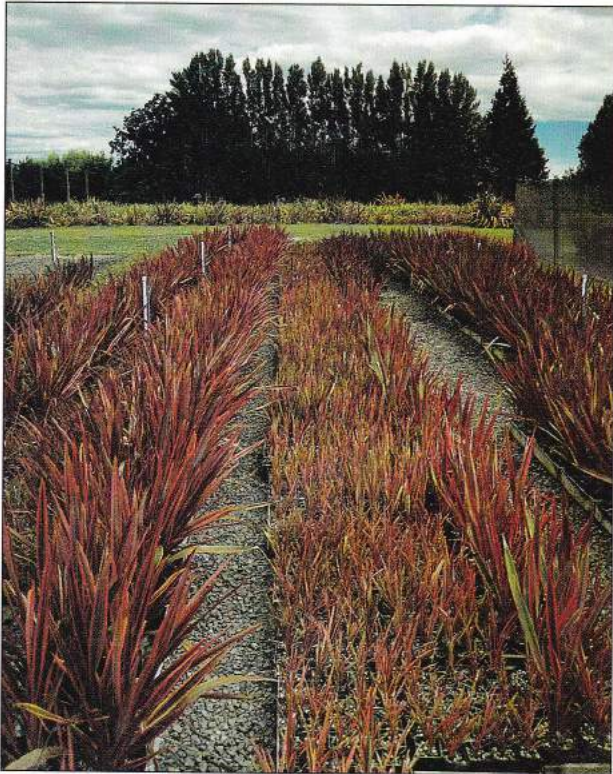


ABOVE: A closeup of one of the cloaks woven by Diggeress Te Kanawa.
BELOW: The strands of fibre must be plied to prepare them for weaving.

AT RIGHT;
BOTTOM: Diggeress twists two plied warp threads together.
CENTRE: Finished warp thread. **TOP:** Weaving in progress, showing detail of the fibre, and the feathers used as decoration on the cloak.
 (All photos on these two pages by Trevor Ward.)



A New Zealand icon



TOP: The production area at New Zealand Flax Hybridisers. From left: 'Firebird', 'Rainbow Queen' and 'Crimson Devil'.

ABOVE: Graeme Platt with the upright flax, *Phormium tenax*, which is useful for shelter, even as a hedge, and those towering spikes of flowers are one of the best means of attracting native birds. (Photo - John Cheese.)

She visited marae, talking to old Maori women who were still weaving, finding out about the cultivars which provided them with the best fibre or leaves for the various articles they fashioned, identifying plants as she found them. In her car she carried gifts of fruit and honey, and small flax plants to share with those she visited. Preserving the Maori names was something else she worked hard to do.

It wasn't always easy. People in each marae had their traditions which they did not necessarily want to share. There was a very real belief that if someone passed on her knowledge, she would automatically lose it herself. There was suspicion of a European woman taking such an interest in Maori culture.

But Rene was patient. Over the years she built up a large collection of named cultivars and her faith in the renaissance of traditional Maori craft was justified. Eventually she received requests from all over New Zealand for superior types of flax. As her bushes grew and multiplied, thousands of plants were donated to marae, community groups and schools throughout the country.

In 1987, Rene offered her collection to the Department of Scientific and Industrial Research, to be used as the basis for a national collection. The collection is now growing on Manaaki Whenua sites at Havelock North, and at Lincoln, on Department of Conservation land in Taupo, Gisborne and Golden Bay and at the NZ Forest Research Institute in Rotorua.

With 50-60 varieties in the collection, caring for it is a big job. Sue Scheele is involved in the ethno-botany programme at Havelock North and it is she who oversees the development and care of the flaxes.

As they do not reproduce true from seed, the plants must be propagated by division. This is done by separating off the fans which develop at the base of each plant.

Traditionally, material discarded from leaves cut for use

was put back around the parent bush, eventually composting down to provide nutrients. However, Sue recommends that this practice is not followed, as the detritus tends to harbour the larvae and pupae of pests that attack the plants.

Sue said all flaxes grow better as cultivated plants and in spite of the fact that flaxes often seem to thrive in swamps, they prefer dryer ground. Plants growing in rich, moist, but well-drained soil produce better quality fibre.

Sue's focus is on the uses of flax. Co-operating with the National Weavers' Association, she is interested in exploring the qualities of various plants - how the leaves dry, the strength and length of the fibre, the colours obtained when it is dried. Trials are under way, growing a selection of Rene's flaxes in different places and conditions.

FRIENDS through flax are Rene Orchiston and Diggeress Te Kanawa, a renowned flax weaver, recognised both here and by overseas museums as an authority on traditional Maori woven cloaks.

"My friendship with Rene Orchiston began many years ago, through her coming to visit me in Oparure, Te Kuiti, to ask the names of the *harakeke* my mother and I used for our weaving," Diggeress wrote in 1993. "I was amazed at the knowledge she had of *harakeke*. Some time later, I was to stay with Rene and view her *Pa Harakeke* (flax plantation), a sight I shall never forget."

Diggeress's skill in weaving was inherited from her mother's side of the family, even though it was her father who encouraged her as a child to watch, and learn from, her mother. This in spite of the fact that her father, when he returned from World War 1, was determined his first child would be a boy, to be named 'Digger' in memory of his fallen comrades. Fate thought otherwise but the name changed only slightly.

"In the old days," Diggeress remarked, "weaving was taught only within the tribal area." But when the Maori Women's Welfare League was started in the early 1950s, the

then president asked Diggeress's mother, Rangimarie Hetet, to start teaching her craft to a wider nucleus of women. Known internationally for her skill, Rangimarie Hetet considered she was never too old to learn. She died two years ago at the age of 103 having woven her last basket when she was 102.

Diggeress wove her first piece when she was eleven. "I was a sickly child," she remembered, "and I had little schooling. Father encouraged me to pick up any discarded pieces of my mother's work and learn from it. He used to help by going out into the bush to gather plants for dye."

With twelve children of her own, concentrated weaving was something that had to wait. "I was too busy sewing and knitting when the children were small," Diggeress smiled. I gulped in admiration. Cooking and laundry would be more than enough to occupy most mothers of twelve!

When Diggeress was first asked to teach weaving in the

1970s she consulted with an elder of her tribe. He felt it was important that knowledge of the traditional craft be expanded and gave her his blessing. "Be humble," he told her. "Don't push yourself forward. If anything goes wrong, just say a prayer."

In her own flax plantation Diggeress grows *Taiore* and *Kohunga*, two varieties valued for their long silky white fibres, used in the weaving of fine cloaks. Her plants are grown on ancestral land and are divided regularly to increase the plants and keep them healthy.

Stripping the outer material from the flax leaves and then preparing the exposed fibre is a long, complicated process. Diggeress uses traditional methods - a mussel shell is the best tool for stripping the leaves to expose the fibre. Much soaking and beating of the strands is then necessary before dyeing and finally weaving can begin.

To make a *kakahu* - or traditional cloak - takes from eight

months to a year, including the preparation time. Diggeress aims to complete one for each of her children - ten are already finished. The first cloak she completed was a gift to a cousin and one has been bought by the British Museum.

Te Maori, the exhibition of Maori *taonga* or treasures, which travelled to New York for exhibition, heightened awareness of how valuable these traditional cloaks are. Now a sought-after item for graduations or weddings, there is a growing demand for the expertise in creating them - if not a corresponding supply of patience.

It seems that the skill Diggeress inherited will continue in the family. One of her daughters is a textile conservator and also weaves. Another daughter teaches in textiles at Unitec in Auckland and recently a granddaughter asked to be taught the age-old craft.

While the woven fibre produces a fine fabric, the leaves have traditionally been used

to weave more utilitarian items.

Kerewai Wanakore of Katikati in the Bay of Plenty uses flax leaves to weave *kete* or baskets, small purses, backpacks, and sometimes hats, which sell in a shop in Rotorua as fast as she can produce them. Once again, it is the preparation of the plant material which is very time consuming.

Kerewai cuts the flax, sorts it by size into bundles, boils it, hangs it up until almost dry and then begins the hard work, scraping both sides of each leaf with a knife, to stop the dried leaves curling.

(Curled, however, the leaves are used for making *piupiu*, the material for the traditional flax skirt worn by Maori.)

"I'm just a baby at weaving," Kerewai hastened to tell me. "It's a hobby. I started about eight or ten years ago and now wish I'd started much earlier. My mother used to do it, but I wasn't interested when I was young. Now I love flax and I love working with



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it. Sometimes I colour it but I use chemical dyes, not traditional plant dyes."

Plants strong in fibre are just as important for Kerewai as they are for Diggeress. She maintains her own small plantation of flax. "It's important to cut the flax carefully," Kerewai emphasised. "It grows better if it's cut regularly - the air and the sunshine get in and kill any bugs."

When she is not preparing her flax or weaving, Kerewai is studying for a Diploma in Teaching at the Bay of Plenty Polytech. People interested in learning her kind of flax weaving contact the Katikati Resource Centre, and about every three months, when there are enough students, Kerewai is called in to do the teaching.

WITH the propensity of flax to produce plants with many colour variations, it has attracted plantspeople interested in hybrids of the species. Lawrie Metcalf, in his book *The Cultivation of New Zealand Plants*, talks about Walter Brockie,

"... a true plantsman ... he was also one of the first to realise the possibilities for producing improved cultivars of *Phormium*."

A plant collector in the 1930s and 40s, Walter Brockie worked for many years at the Christchurch Botanical Gardens. From two plants at the Gardens, he raised a batch of seedlings with varying degrees of pinkish/red colouring. One extremely red plant with small foliage mysteriously disappeared, but another seedling he raised and reproduced, calling it 'Smiling Morn'.

When he became curator of Otari Native Botanical Garden in Wellington, he took a stock of 'Smiling Morn' with him and there are several plants still growing there.

He also advocated the use of flax to hold back gorse. Planted as a thick boundary hedge, he claimed it would prevent gorse from seeding.

More recently, Margaret Jones of Tauranga has developed many colourful hybrids. "I love colour and design," she said, "and that's one reason I like flax. All the leaves have different colours," she pointed out. "As they age, the colours change. It's great for floral work - it gives colour all year round, blends with wood furniture and goes well with pottery. I've bought some pieces specifically to use with flax."

Her main interest however, is in developing variegated plants for their landscaping qualities. Variegated flaxes do not usually produce strong fibres. For more than thirty years she has been selecting and breeding flax cultivars, looking always for improved form, strength and colour.

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Some of her new plants are grown from seed taken from attractive plants. But it is a long process demanding a lot of patience. Margaret may select ten or twenty seedlings from each tray planted, but quite often at the end of two years, not one of these is worth persisting with. Cross-pollination she leaves to the tui.

Her company, New Zealand Flax Hybridisers, supplies the wholesale trade and exports to many countries where new cultivars are sought after as landscaping plants. In England and in Southern California, flaxes are used extensively in city planting schemes. English gardeners drool over these plants which New Zealanders often ignore in their planting schemes.

Margaret's first release in 1978 was *P. cookianum* 'Cream Delight', followed quickly by 'Dark Delight' - dramatic planted against a pale wall - and 'Sunset', a lovely variety for floral work. Well-named, its leaves are neither pink nor orange and as it matures the leaves change colour. It combines well with pink carnations and yellow chrysanthemums.

"There are so many different kinds," Margaret continued, "you can choose a cultivar for its qualities for a specific situation. Don't put a weeping variety near a lawn," she warned, "for the leaves tangle in lawn mowers when they drop. But use it perhaps, in a circular bed surrounded by annuals."

For a small space, or a dark corner which needs light, 'Duet' has bright yellow-green leaves. An upright flax, it grows to less than a metre in height and it flowers regularly. If you want to attract tui to the garden, this is a plant they fight over in the flowering season.

'Limelight' is a similar colour, it also flowers well and attracts birds but it grows bigger than 'Duet'.

Another variety with yellow-green foliage which has proved popular for many years and is much sought after in England, is *Phormium* 'Yellow Wave'. It

was bred by Felix Jury, well known plant hybridiser from Taranaki, who died in April, and who, in the 1950s, planted his garden with a variety of flaxes, selecting out and breeding from those which showed interesting variegations and which he thought would make good garden subjects.

Graeme Platt, long-time nurseryman and breeder of the difficult to find, but attractive *Phormium* 'Platt's Black', spent many years both developing different varieties of flax and selling them from his nursery.

He emphasised that he is a plant selector, not a plant hybridiser. He looks for variety and excellence in nature when selecting plants for breeding purposes. Originally he liked "deviants" and many of his original selections, often variegated plants, finished up at the Auckland Regional Botanic Gardens. Ironically, the most popular are now the ones which Graeme himself dislikes.

He suggests using flax as the native flavour in a New Zealand garden. "It needs to be out in the open," he said, "with cabbage trees. Surround a rose garden for example, with a hedge of flax and cabbage trees. It's ideal as a hedge; it doesn't need cutting."

Flax also provides shelter and will withstand coastal winds. The upright *Phormium tenax* with its big flower spikes, attractive to birds, is very effectively used as a windbreak. But, warns Wellingtonian Jacob de Ruiter, author of *Gardens in the Wind*, the appearance of an isolated flax bush in an exposed position will suffer, as the leaves shred if they are constantly whipped by the wind. He recommends using *P. cookianum* varieties in windy situations - *Phormium* 'Yellow Wave', *P. 'Variegatum'* (a good robust plant), and the green *P. cookianum* will not shred easily.

Close planting will help to protect individual plants in windy situations.

Hybrid flaxes, Jacob says, need shelter. 'Guardsman', which grows to 2.5 metres and is one of his favourites, likes wet feet, but because its crown is weak it will break apart if exposed to wind.

'Guardsman' combined with *P. tenax* 'Williamsii Variegatum' and *P. tenax* 'Purpureum' make a dramatic colour group, especially in winter when their colours seem more intense with the sun shining through the leaves, rather than reflecting off them, as it tends to do in summer.

Jacob likes flaxes planted with native grasses; an attractive combination is *P. 'Purpureum'* with *Carex testacea*.

He ends with a plea on behalf of these plants which he obviously loves. "When grooming them, don't hack off the dead leaves half way up. Nothing looks worse than a butchered flax bush. Use a

RIGHT: A pair of 'Yellow Wave' flaxes in containers are a striking feature either side of a seat at 'Bellevue', Vivien and Daniel Papich's garden at Langs Beach, Northland. Other plants of interest are a hosta in a basket hanging from a puka (*Meryta sinclairii*) and at far right the contorted shape of a dwarf kowhai, *Sophora prostrata*. (Photo - Gil Hanly.)

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Stanley knife, or a razor blade, and cut off any damaged leaves as close to the base as possible."

With their ability to soak up moisture, flaxes have another, less well-known virtue. Where there is a risk of over-flow leeching from a septic tank pit, plantings of flax bushes will effectively absorb the moisture.

According to Graeme Platt, about twenty-five percent of people love flax, twenty-five percent hate it and the rest are in two minds. Whatever your view, this versatile plant is undeniably a New Zealand icon. Bold and distinctive, useful and ornamental, no plant has played a more prominent role in our heritage, and in our landscape, than Phormium. ☼

The following publications provided information for this article:

Harakeke. The Rene Orchiston Collection, Sue Scheele and Geoff Walls, Manaaki Whenua Press.

Weaving a Kakahu, Diggeress Te Kanawa, Bridget Williams Books.

Growing Today, August 1993. 'Coat of Many Colours', by Sue Scheele.

Hybrid flaxes developed by Margaret Jones are available by mail order and from selected garden centres throughout the North Island. For a list of cultivars, send a stamped, addressed envelope with three 40 cent stamps to PO Box 3028 Tauranga.

RIGHT: 'Pizazz' showing its variations of colour in the different stages of its development.
(Photo - Trevor Ward.)

Jack Hobbs' tips on flax

Native Phormium species are unrelated botanically to true linen flax (*Linum usitatissimum*).

P. cookianum, commonly known as mountain flax, is native to New Zealand and generally a smaller plant of weeping habit, distinguished by long, twisted, hanging seed capsules. Both the species and its cultivars require relatively well-drained sites.

P. tenax, with stiffly erect foliage, tolerates almost any soil from dry to boggy.

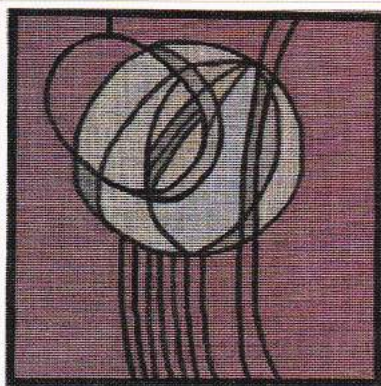
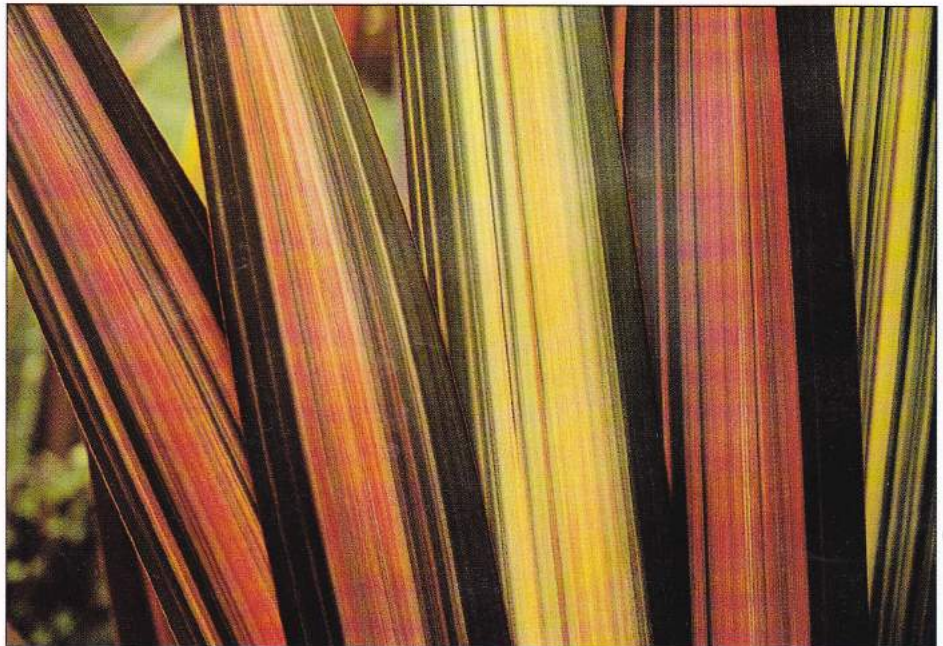
Cultivars grown for ornament belong to both *P. tenax* and *P. cookianum*, and require good drainage.

To maintain the colour of variegated cultivars, any fans which revert back to green (or bronze) should be split off and discarded. The key to maintaining good foliage colour is regular grooming by the removal of old leaves from the outside of each fan. Each leaf should be cut as near to the base as possible, using a sharp knife or secateurs. Late winter is a good time to prune, as colourful new growth soon follows.

Give the plant regular spring and autumn applications of fertiliser reasonably high in nitrogen.

Plants should be divided every few years, though it is important to leave intact the young shoot in the middle and the young shoots on either side, as this is where regeneration starts.

Jack Hobbs' list of various flaxes, grouped according to foliage colour, appeared in the December issue of *New Zealand Gardener*, 1995. Information on these plants is available from the Auckland Regional Botanic Gardens, Manurewa, Auckland. Phone: 09 267 1457.



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