

Coastal Plants - Pingao



in partnership with



Western Bay of Plenty
District Council



Tauranga City



Opotiki District Council



Department of Conservation
Te Papa Mataraua

working together to care for our coast



Coast Care
BOP
Programme

Coast Care Information Brochure Number 5

Pingao

Desmoschoenus spiralis Golden Sand Sedge

Pingao is a native sand-binding plant and was a prominent feature of New Zealand's dunelands. Its tufts of coarse grass-like leaves are a rich green-bronze colour and are borne on long, thick rope-like stems trailing across the dunes. The colouration of Pingao makes it stand out against the grey-green of Spinifex, our other native sand binding grass species. Dried pingao is prized for its golden colour.



Pingao is a sand binder and dune builder. Wind blown sand is trapped amongst its leaves, which accumulates and supplies nutrients to the plant. The stems continue to sprout new shoots as the sand shifts and covers them. The seed heads are conspicuous with their rigid dark spikes which grow above the leaves and bear hundreds of dark brown seeds.

The Story of Pingao

“At the beginning of time there was great conflict between Tane, God of the Forest, and his brother Tangaroa, God of the Sea, Tangaroa was jealous of Tane, jealous of his success in separating Ranginui the Sky Father from Papatuanuku the Earth Mother.

Tane sought to end the warring between them and as a sign of peace, he plucked out his eyebrows and gave them to Tangaroa. Tangaroa could not find it in his heart to forgive and he threw the eyebrows back onto the shore. There they grow today as pingao, the sand sedge, at the boundary between the forest and the sea”.



Status

Pingao was the most widespread and successful plant of our dunelands, along with Spinifex (*Spinifex sericeus*). It is not found anywhere else in the world. Pingao has now declined to the extent that it has disappeared from many areas and is vulnerable elsewhere.

Today our natural dune systems have been reduced to a fraction of their former extent. Increasing recreational use, grazing, fire, introduced invasive plants, subdivision,

coastal reclamation and sand mining have all contributed to the reduction of pingao and our foredunes.

Use of Pingao

Pingao is much sought after by Maori weavers. Sundried, it produces a bright golden yellow fibre which provides a vibrant contrast to the red and black dyed fibres used in tukutuku panelling, and also for the weaving of kete and whariki. With a resurgence in Maori arts and crafts, there is an increasing demand for pingao as a raw material, but at the same time pingao is not plentiful. Supplementary planting and careful management of established stands is now necessary. Sustainable harvest is possible, but careful management is necessary to ensure plant survival.



Pingao after careful harvest of leaves

Pingao and spinifex are very effective in long-term control of coastal erosion. Plants can grow to keep up with the movement of sand whereas rigid walls and structures are soon buried or undermined. It is now common practice to use native vegetation in dune restoration programmes.

The Future

Dunes and their special plants such as pingao are just as unique and important as our great Kauri forests. However, few natural dunelands remain or are adequately protected. The threat of invasion by weeds such as boxthorn, boneseed, shining buckthorn and gorse is very real.

Programmes of pingao revegetation and protection are required to re-establish a sustainable population and resource for our dunes. In tandem with planting, rabbit control is essential as pingao is very palatable to these animals. They have been known to destroy hundreds of plants in just a few days.

We need your help and support to retain this important foredune plant species. Please look after the fragile dunes and the dune plants along our coastline. You can help by reducing your impact on the dunes - use the main accessways and stay off the foredunes.

Many of the Coast Care projects operating throughout the Bay of Plenty Region are involved in the protection and enhancement of pingao - please help to protect pingao for the future.

Growing Pingao

The following are basic guidelines:

The propagation of pingao by seed is more successful than growing from cuttings. Please contact your local council to gain permission to collect seed - they may be able to help with advice on cultivation and sites to plant out.

Seed heads are conspicuous from October onwards, with the upright spikes bearing hundreds of brown seeds. The seeds ripen from mid December onwards and harvest time can be easily identified when some seed husks have started shedding and can be found around the base of the plant. Either collect full seed heads by cutting off with garden secateurs or by shaking attached seed heads inside a plastic bag to dislodge the ripe seed. Seed can either be dry stored in paper bags or sown fresh into a moist 50/50 peat/sand mixture to germinate - keep moist. Stored seed is best sown in warmer spring temperatures, usually September-October.

Once germinated (4-8 weeks), water regularly and ensure the seed tray has good free drainage. The seedlings should be left to grow to 8cm high before carefully pricking out into root trainers or planter bags. Seedling mix should consist of around 50% coarse sand and the remainder good quality potting mix. Slow release fertiliser assists with plant growth e.g. Agroblen, Osmocote, MagAmp, Nutricote etc.

Your pingao plants should be watered carefully during the summer period. Planting out should be undertaken between July and September to ensure good establishment for the coming summer period.

Deep planting is vital, ensuring the top of the potting mix is about 100-200 mm below sand level, to prevent wind erosion exposing the root ball, and to place the rootball deep into reliably damp sand.

Contact

Prepared by Greg Jenks, Coast Care BOP Programme. For further information on Coast Care groups and programmes contact your local District Council or Environment Bay of Plenty's Coast Care Coordinators at:

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