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Coastal herbfield plants of South Taranaki

An identification guide

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Department of Conservation
Te Papa Atawhai

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Photo: Lisa Sinclair.

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Samolus repens (sea primrose, shore primrose, maakoako). Sea primrose is a sprawling herb with tough, slender, dark stems and brownish-green leaves. Its flowers are about 7 mm diameter with five white petals. Shore primrose is common on Taranaki's sea cliffs and sometimes extends into cliff-top herbfields.



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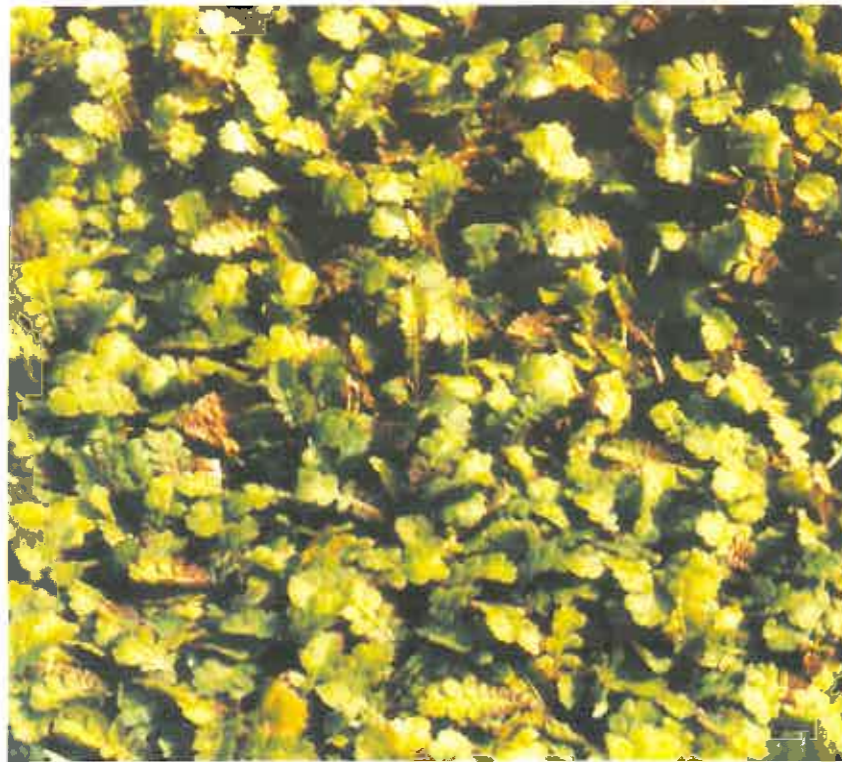
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Calystegia soldanella (shore bindweed or convolvulus, panahi, nihinihi). Shore bindweed is a robust, creeping herb with heart-shaped, fleshy leaves that have obvious veins. Its flowers are large, trumpet shaped and pink with white stripes. Its main habitat is sand dunes, but it grows in herbfields occasionally.

Limosella sp. Limosellas are small herbs with tufts of fleshy leaves rising from thin buried stems. Three different species have been named in New Zealand, but this form is known only from the cliff-top herbfields on the Taranaki coast between Hawera and Patea. *Limosella* "Manutahi" is its current informal name, and this herb is thought to be Rare.



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Leptinella squalida subsp. *squalida* (Cotula). This small, creeping daisy forms patches or sprawls through taller vegetation. Its hairy leaves are notched and spoon-shaped, and are greenish-brown. All its flowers are minute and clustered, similar to the yellow centre of a flower head from a lawn daisy.



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Leucopogon fraseri agg. (patotara, totara papa, totara parae, totara tahuna, totara, dwarf mingimingi). Patotara is a dwarf heath, a small shrub with upright branchlets and small, brownish, prickly leaves. It has small, cream or pink tubular flowers and bright orange fruit. Patotara is widespread in New Zealand, but found in only a few sites along the Taranaki coast. Research is underway to determine if the Taranaki coastal form is distinct from some other forms.

Coastal herbfield plants of South Taranaki

An identification guide

Compiled by Lisa Sinclair, Colin Ogle, Jim Clarkson

Herbfields are areas of vegetation where the dominant plant types are herbs (i.e., non-woody plants), although low shrubs can also grow in this community. The herbfields of the South Taranaki sea cliffs contain many specialised plants that are adapted for life in harsh, salt winds. Human activities have reduced these herbfields to fragments that are now threatened with extinction. Cattle trampling, vehicle tracks, quarrying and weed invasion are the main causes for herbfield decline. Because the herbfield patches are now very small, they are also vulnerable to extinction from natural events like wind erosion, land slips and drought.

Many native insects feed exclusively on single species of native plants. If the herbfield plants become extinct, then so will the native animals that feed on them. An example is an uncommon endemic moth called *Notoreas* "Taranaki" whose caterpillars feed exclusively on the *Pimelea prostrata* var. *urvilleana* plants that occur on the Taranaki coast. It was first discovered by Dr Ken Fox of Manaia, in the 1970s. There are several other *Notoreas* species around New Zealand with habitats that range from mountains to sea level; many of these are found in the South Island. *Notoreas* "Taranaki" is found only in Northwest Nelson and the coast of Taranaki.

This guide is designed to help conservationists recognise many native plants that can be found in the coastal herbfields. Common names are used for the plants where possible, and these may be of Maori or European origin. The formal (scientific) name is also listed, as well as the conservation status of plants that are threatened with extinction.

Notoreas "Taranaki"

Not much is known about *Notoreas* "Taranaki" or its herbfield habitat, and the moth is thought to be threatened. In 1986, two patches of this moth's habitat on the Taranaki cliff tops were recommended for formal protection. However, one has been destroyed subsequently through trampling by stock and is overgrown by gorse. Pasture weeds have advanced as much as three metres into the other patch since 1992. To date, *Notoreas* "Taranaki" moths have been seen in only four places in the South Taranaki coastal herbfields. Urgent conservation action is needed to stabilise the remaining herbfield habitat for these moths.



One step towards protecting the *Notoreas* "Taranaki" moth and its habitat is to fence herbfield remnants to halt the damage done by cattle. However, removal of grazing animals may encourage weed infestation, so weed control in herbfields is another urgent conservation task. Hand-weeding of some herbfield remnants commenced in 1997. It is hoped that weed removal will expose new ground so that herbfield plants can naturally recolonise these areas. Other experimental management options include the use of sheep grazing for sustained weed control. This management option is based on observations of sheep-grazed herbfields in the South Island, that seem to have fewer weed problems. Restoration and expansion of the herbfields is a long-term goal, and could involve the community in growing and replanting herbfields with appropriate native plants.

Notoreas "Taranaki" is an endemic moth, whose caterpillars eat the leaves of pinatoro (*Pimelea prostrata* var. *urilleana*), a sprawling herbfield shrub. This day-flying moth is the size of a thumb-nail, with black and orange striped wings. It is found only on the coasts of South Taranaki and North west Nelson.



Centella uniflora. This creeping herb forms small patches of glossy-green leaves with brown-stained, scalloped leaf edges. The flowers are tiny and dull green, purple-flushed, or white. It is common on damp, open ground in coastal and non-coastal sites.

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Tetragonia trigyna (kokihl, native (or New Zealand) spinach). This is a large, sprawling herb with semi-fleshy, moss-green leaves, often with red stems. Its small flowers are yellow and produce red fruit. *T. trigyna* is a common coastal herb that often sprawls through the vegetation on the herbfield fringes.



Euphorbia glauca (shore spurge, waiu-atua, waiu-o-Kahukura). Shore spurge is a tall herb (40 cm) with pale, blue-green, finger-length leaves. It grows in open colonies on sea cliffs. It is considered to be nationally rare (i.e., not in immediate danger of becoming extinct, but thinly scattered over a limited range). South Taranaki populations are some of the largest on the New Zealand mainland.

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Pimelea prostrata var. *urvilleana* (pinatoro, wharengarara, shore daphne). Pinatoro is a small-leaved, flat-growing (prostrate) shrub, which looks like a miniature grey hebe and has lots of white flowers. It is the food plant for caterpillars of the *Notoreas* "Taranaki" moth.

Myosotis pygmaea var. *pygmaea* (pygmy forget-me-not). A perennial forget-me-not with small, white flowers. Its finger-nail sized, grey-green hairy leaves grow in rosettes. This variety is very rare in the North Island, more common in the South Island. It is currently restricted to one herbfield remnant on the Taranaki coast, though known historically from at least three other sites.



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Myosotis pygmaea var. *minutiflora* (pygmy forget-me-not). A small annual forget-me-not with minute cream flowers (hence the variety name 'minutiflora'). It is very rare in the North Island but more common in the South Island, and is in at least two herbfields on the Taranaki coast. The leaves form rosettes, and are shaggy-haired and dull, brownish-green.

Luzula bankiana var. *bankiana* (coastal woodrush). This rush looks like a grass with hairy-edged leaves up to 80 mm in height. The tiny flowers are in clusters on stalks up to 300 mm tall. It is common in coastal herbfields, though this variety is confined to the Taranaki coast, both sides of Cook Strait, and isolated populations near Auckland and in Northwest Nelson.





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Ranunculus recens (dwarf buttercup; *Ranunculus* spp. = kopukupuku). This is a tiny buttercup that produces yellow flowers at ground level in a rosette of glossy leaves. Until recently, the form of *R. recens* that is found on the coast near Manaia was ranked as Endangered but it is now thought to be a local variety of a more widespread, but still uncommon, species.



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Ranunculus acaulis (sand buttercup; *Ranunculus* spp. = kopukupuku). Sand buttercup has creeping stems and semi-fleshy, yellow-green leaves that are divided into three leaflets. The yellow flowers are at ground level, among the leaves. It is scattered in herbfields along the Taranaki coast and is generally found in damp sand around the New Zealand coast.



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Colobanthus muelleri. A common, small, rosette-forming plant with stiff, outward curving pointed leaves. Its flowers lack petals and are inconspicuous on short upright stalks. The pointed seed capsule is more obvious and once it has split lengthways and the seeds are released, the purple interior is exposed.



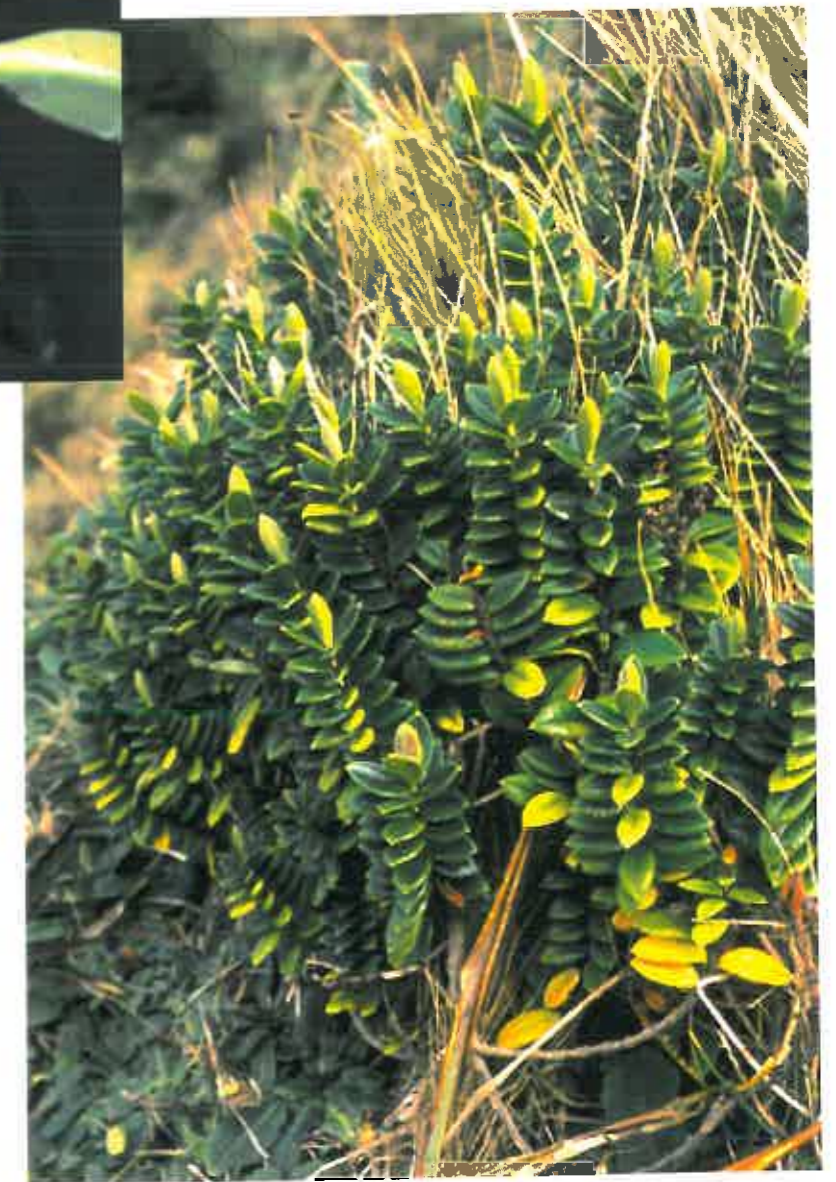
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Oreomyrrhis minutiflora. This is a small native carrot with lettuce-green, feathery leaves arranged in rosettes. The minute, cream flowers on very short stalks appear in the centre of the plant. This 'carrot' can be found in several Taranaki herbfields and has a national conservation status of Local (sufficiently restricted in habitat to warrant monitoring for change in its conservation status).

Hebe elliptica var. *elliptica* (shore koromiko; koromiko is a name given to many *Hebe* species). The low-growing form (up to 50 cm tall) of shore koromiko occurs on the South Taranaki coast and in the Marlborough Sounds. Similar but taller forms are found on the west and south of the South Island and some sub-Antarctic islands. In South Taranaki, this shrub grows on the edges of sea cliffs. Its flowers are pale blue, but quickly fade to white.





Crassula manata. *C. manata* resembles *C. peduncularis* but is perennial, and has rounded leaf tips. Its petals have wine-red tips and the flower stalk does not elongate as the fruit ripens. *C. manata* grows exclusively in Taranaki between Waverley and Pungarehu, and grows in *Zoysia* turfs.



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Selliera radicans (halfstar, raumangu, rekoreko, remuremu). Halfstar is so-named because it has white star-shaped flowers that are lopsided (as though half the flower is missing). It forms extensive sprawling patches of small, oval, fleshy yellow-green leaves. It is a very common coastal plant.

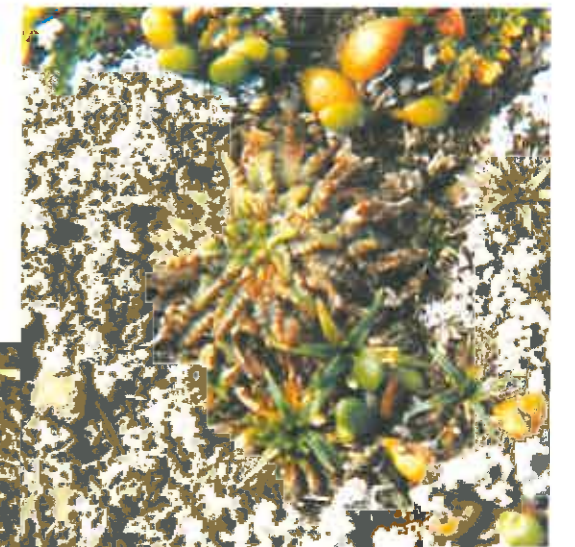


Sarcocornia quinqueflora (ureure, glasswort). Glasswort is a succulent plant with upright, finger-like leaves and tiny, inconspicuous flowers and fruit. It is rarely found in cliff-top herbfields, but is more common in salt-spray zones on wet sea cliffs and estuarine edges. The name "glasswort" comes from its historical use in glass making.

Coprosma acerosa (unnamed S. Taranaki coastal variety) (tarakupenga, tatarakeke, sand coprosma). In South Taranaki, this shrub usually sprawls along the ground, with interlacing brown branches and narrow leaves. This form is unique; in other coastal places, sand coprosma is usually taller. The fruit of *C. acerosa* is translucent white, with blue flecks.



Plantago triandra subsp. **masoniae** (= *P. masoniae*) (a dwarf plantain; *Plantago* spp. = parerarera). This small plantain has a rosette form, sometimes with deeply notched leaves. It is common in some coastal herbfields but is often overtopped by pasture weeds. The coastal form, *P. masoniae*, was first described from the South Taranaki coast at Manaia.



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Coprosma repens (taupata, naupata, mamangi). Taupata is one of the common shrubs on New Zealand coastal cliffs, but often grows flatter in exposed herbfields. The leaves are thick and glossy green, it has clusters of creamy flowers, and its ripe fruit are orange.

Zoysia minima. This short, native grass forms compact turfs in exposed places, and cushions up to 15 cm tall in shelter. In many places along the Taranaki coast it is the dominant plant and often defines the boundary between herbfield and pasture.



Pseudognaphalium luteo-album agg. (Jersey cudweed; *Pseudognaphalium* spp. = pukatea, puketea). This small herb has white furry, thumb-nail sized leaves and minute yellow flowers in tight clusters. Its seeds are dispersed by wind, joined to a fluffy white, wind-catching structure similar to dandelion seeds. *P. luteo-album* is common in herbfields.



Disphyma australe (horokaka, native iceplant, uerueke, ngarangara). Horokaka has thick, succulent leaves. It is densely branching with trailing stems and is common on coastal cliffs and, occasionally, on herbfields. The flowers are pink with many petals.

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Crassula peduncularis. This is a tiny succulent plant with pointed leaf tips. It is an annual (germinates, flowers and dies within one year) that forms loose, moss-like cushions. The flowers are very tiny (0.6 mm) and reddish pink. The flower stalk elongates to about 10 mm when the fruit ripens. On the Taranaki coast, *C. peduncularis* is known from only one herbfield remnant. It has a national conservation status of Vulnerable (facing a high risk of extinction in the wild in the medium term, i.e., 10 years).

