NZPCN Conference 2015 Field Trip Huriawa

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Made on the New Zealand Plant Conservation Network website – www.nzpcn.org.nz

Huriawa, or Karitane Peninsula, is a rugged headland that protects the small coastal fishing port of Karitane at the mouth of the Waikouaiti River.

It is famous for its pä, built originally by Käti Mamoe and known as Pa Katata but strengthened and expanded by the Käi Tahu fighting chief, Te Wera, about 1750. It was regarded as the strongest defensive structure of its type in Otago and one of the most impressive earthworks in Te Waipounamu (South Island) from pre-European times.

The Crown returned ownership of the reserve to Te Rünanga o Ngai Tahu as part of the historic Ngai Tahu Claims Settlement Act of 1998. Today it is jointly managed by Kati Huirapa Rünaka ki Puketeraki and the Department of Conservation under a protected private land (PPL) agreement.

History

There were some fortified pä in the south, but the colder southern climate meant that vegetable crops such as kumara, a staple part of the diet in warmer northern areas could not be grown. Thus, Kai Tahu were primarily hunters and gatherers and ranged far and wide to collect mahika kai (food resources).

Te Wera and his people survived a six-month siege by his cousin Taoka thanks to a permanent spring, Te Puna a Te Wera, which supplied the pä with fresh water, and the fact that the pä was well provisioned with preserved food in preparation for an expected attack. They also fished at night to supplement their reserves of dried fish, preserved birds and fern root. Eventually the pä was abandoned and Te Wera went south to Rakiura (Stewart Island), where he died of old age.

A whaling station was sited on the Waikouaiti River estuary shore from 1834 to 1848, although little evidence of this remains.

Soon after the arrival of Europeans in Otago (1840s), the Crown acquired the peninsula under the Public Reserves Act for construction of a lighthouse and a children's playground.

During the 1950s and 1960s, excavations by archaeologists found evidence of extensive middens, post holes for palisades, house sites, drains and underground fire pits (ahi komau).

Conservation management

During the time of Te Wera, the peninsula was probably cleared of vegetation, to allow for better visibility of invaders. Today it is mostly covered with exotic grasses, but native shrubs and trees are regenerating naturally in places.

Gorse, boxthorn, thistles, horehound and cotoneaster are the major weed species.
Kaitiaki have started replanting native vegetation to help stabilise soils, improve drainage, stop erosion and to provide habitat for nesting birds. They have established a nursery and are growing plants from local sources. Several local schools are actively involved in this project.

Revegetation may encourage hoiho (yellow-eyed) and kororä (little blue penguins) to nest and breed here again, especially if they are provided with nesting boxes.

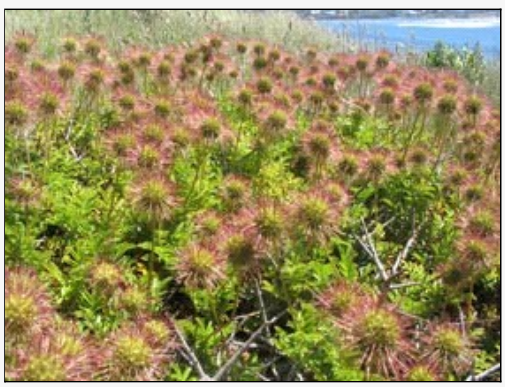
Acaena novae-zelandiae

Common Name(s):
red bidibid

Current Threat Status (2012):
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2043

Caption: Karitane Peninsula, Otago
Photographer: John Barkla



Caption: Karitane Peninsula, Otago
Photographer: John Barkla

Apium prostratum subsp. prostratum var. filiforme

Caption: Kennedy Bay
Photographer: Gillian Crowcroft

Caption: Meurky Walk
Photographer: Melissa Hutchison

Common Name(s):
New Zealand celery

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. In New Zealand known from the Kermadec, Three Kings, North, South, Stewart and Antipodes Islands. Also in eastern Australia as far north as Brisbane and along the whole coastline of southern Australia and Tasmania

Habitat:
Coastal and lowland. Very rarely montane. Common on rock ledges, boulder falls, cliff faces, within petrel scrub on damp seepages, in peaty turf, saltmarshes, within estuaries on mud banks, around brackish ponds, and lagoons. Also found in freshwater systems such as around lake and tarn sides, along streams and rivers and in wet hollows occasionally well inland, and sometimes at considerable elevations.

Features:
Perennial, glabrous, prostrate herb. Stems prostrate, sprawling, often ascending though surrounding vegetation, not rooting at nodes; 0.3-1.2 m long, up to 6 mm diam. Leaves dark green to yellow green, basal ones on long, slender petioles up to 500 mm (usually much less); pinnately 3-foliolate to 1-2-pinnate; segments ovate, obovate to cuneate, deeply incised and toothed; Leaves opposite compound umbels similar though with leaflets divided, elliptic, ovate, obovate or more or less cuneate, primary segments elliptic, ovate, obovate, or more or less cuneate in outline, with overall length 0.5-3x the greatest breadth, ultimate segments to tertiary order 8-74 per leaf. Inflorescences in compound umbels, sessile or pedunculate; peduncle usually present. 2-20 mm x 1-3 mm, usually ebracteate, sometimes one present present, this usually shedding early in umbel maturation. Rays 10-20, 0.4-8 mm long. Petals off-white to cream, with yellow-brown mid vein, ovate 0.75-1.5 x 0.5-1.0 mm, constricted at base, apex acute. Stamens about length of petals, filaments pale yellow to cream; anthers whitre or pale yellow, 0.3-0.4 x 0.3-0.4 mm. Ovary glabrous, stylopodium disciform; style 0.25-0.40 mm. Mericarps (1.5-)2.0-2.7 mm long, ovate to ovate-oblong, apex narrowed to persistent withered calyx teeth and style remnant, base broad and rounded to weakly cordate; ribs prominent, broad, rounded and spongy. Surface dull yellow to pale brown.

Flowering:
August - March

Fruiting:
September - July

Threats:
Not Threatened

References and further reading:

Johnson, A. T., Smith, H. A. (1972). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2051

Cotula australis

Common Name(s):
common Cotula, soldiers button

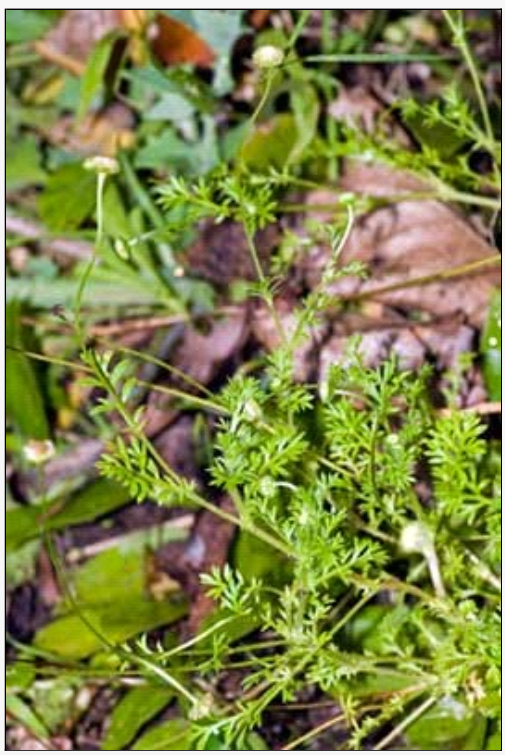
Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

References and further reading:
Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2092

Caption: Cotula australis
Photographer: John Smith-Dodsworth



Caption: Hutt River north of Stokes Valley. Apr 2006.
Photographer: Jeremy Rolfe

Hebe elliptica

Common Name(s):
kokomuka, shore hebe, shore koromiko

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. North, South, Stewart, Snares, Auckland and Campbell Islands. In the North Island scarce, known only from the west coast in scattered locations on the south Taranaki coast, on Kapiti Island, and Titahi Bay. Naturalised on Chatham (Rekohu) Island. Indigenous also to the Falkland Islands. Also naturalised on Maatsuyker Island, Tasmania

Threats:
Not Threatened

References and further reading:
Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2149

Caption: Curio Bay, Catlins
Photographer: John Barkla

Caption: Enderby Island
Photographer: Jane Gosden

Myoporum laetum

Common Name(s):
Ngaio

Current Threat Status (2012):
Not Threatened

Distribution:
Endemic. Three Kings, North and South Islands. Also on the Chatham Islands where scarce and probably naturalised.

Habitat:
Coastal to lowland forest, sometimes well inland (in Hawkes Bay, Rangataiki and Wairarapa). Often uncommon over large parts of its range.

Features*:
Decumbent shrub, shrub, or small tree up to 10 m tall and in decumbent forms 2-4 m across. Trunk to 0.3 m diam. Bark light grey to brown, thick and corky, firm, persistent, rough and furrowed. Branches stout, spreading. Leaf buds dark brown, purple-black to almost black, very sticky. Petioles flattened up to 300 mm long. Leaves somewhat fleshy, yellow-green to green, conspicuously white to yellow gland-spotted, (40-)100-120 x (10-)30-40 mm, lanceolate, oblong-lanceolate, oblong to obovate, acute to acuminate, margins crenulate-serrulate in upper half to third, margins sinuate to plain. Flowers in 2-6-flowered axillary cymes. Peduncles up to 15 mm long. Calyx-teeth 2 mm, narrow-lanceolate, acuminate. Corolla campanulate, white, purple-spotted, 5-lobed, lobes hairy on upper surface. Stamens 4. Fruit a narrow-ovoid drupe, 6-9 mm long, white or pale to dark reddish-purple.

Flowering:
October - January

Fruiting:
December - June

Threats:
Not threatened. However, in some parts of the country such as urban Auckland, Wellington and along portions of the Kaikoura coast hybrid swams involving Tasmanian boobialla (Myoporum insulare sens. lat.) are common. The widespread planting of Tasmanian boobialla, or hybrids poses a risk to ngaio in places where it is not common.

Caption: Awhitu, Auckland region
Photographer: John Sawyer

Caption: Otago Peninsula
Photographer: John Barkla

***Attribution:**
Fact Sheet prepared for the NZPCN by: P.J. de Lange (22 April 2011). Description based on Allan (1961)

References and further reading:
Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.

Brooker, S. G., Cambie, R. C. and R. C. Cooper (1998). New Zealand Medicinal Plants. Reed: Auckland.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=992

Olearia avicenniifolia

Common Name(s):
Mountain akeake

Current Threat Status (2012):
Not Threatened

Threats:
Not Threatened

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=1044

Caption: Minaret Burn, March
Photographer: John Barkla

Caption: Olearia avicenniifolia, South Otago
Photographer: John Barkla

Phormium tenax

Caption: Phormium tenax
Photographer: Wayne Bennett

Caption: Flowers of Phormium tenax
Photographer: Wayne Bennett

Common Name(s):
flax, harakeke, korari (maori name for inflorescence).

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous to New Zealand and Norfolk Island. A broad circumscription has been adopted here - many botanists feel that plants from the Chatham Islands could be distinguished at species rank from the mainland New Zealand species, other distinctive variants occur on the Three Kings and outer Hauraki Gulf Islands, and along the Kaikoura coast. Norfolk Island plants though uniform differ in subtle ways from the New Zealand forms of P. tenax. Further study into this variation is underway.

Habitat:
Common from lowland and coastal areas to montane forest, usually but not exclusively, in wetlands and in open ground along riversides.

Features:
Stout liliaceous herb, 1-5(-6) m tall. Leaves numerous, arising from fan-like bases. Individual leaves rather stiff at first, but becoming decurved, somewhat pendulous or "floppy" in upper half to a third, 1-3 x 50-120 mm, usually blue-grey (glaucous) or dark green, lamina margin, entire, somewhat thickened and pigmented black, dark red, pink, yellow or cream. Inflorescence 5(-6) m tall, somewhat woody and fleshy when fresh, long persistent, drying charcoal grey or black, with the fibrous interior becoming progressively more exposed. Peduncle 20-30 mm diam., erect, dark grey-green or red-green, glabrous. Flowers 25-50 mm long, tubular, predominantly dull red but may also be pink or yellow; tips of inner tepals slightly recurved. Ovary erect. Capsules 50-100 mm long, dark green, red-green or black, trigonous in cross-section, erect, abruptly contract at tip, not twisted, initially fleshy becoming woody with age, long persistent. Seeds 9-10 x 4-5 mm, black, elliptic, flat and plate-like, margins frilled or twisted.

Flowering:
(September-) October-November (-January)

Fruiting:
(November-) December (-March)

Threats:
Not threatened although see the discussion below about flax dieback. This die back phenomenon is characterised by abnormal yellowing of the leaves and may result in collapse of flax plants or whole populations.

References and further reading:
Boyce, et al. 1951. Preliminary note on yellowleaf disease. NZJ of Science and Technology, 32(3): 76-77

Scheele, S. 1997. Insect pests and diseases of harakeke, Manaaki Whenua Press

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2219

Senecio glomeratus subsp. glomeratus

Caption: Senecio glomeratus subsp. glomeratus
Photographer: John Smith-Dodsworth

Caption: Senecio glomeratus subsp. glomeratus
Photographer: John Smith-Dodsworth

Common Name(s):
fireweed

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. Three Kings, North, South, Stewart and Chatham Islands. Present in Australia

Habitat:
A weedy species of disturbed ground. Predominantly coastal and lowland but does extend to the subalpine zone. Tolerant of water logged and very dry habitats

Features*:
Annual to short-lived perennial herb to 2 m tall. Stems erect or ascending to erect, moderately coarse-hairy, becoming sparsely coarse-hairy and/or appressed cottony or nearly glabrous upwards. Mid stem leaves more or less evenly spaced and sized, 50-200 mm long, dark glaucous green to dark green, elliptic to narrow-elliptic, length:width (l:w) ratio 2-7, coarse-dentate to deeply lobate, rarely not dissected, semiamplexicaul; margin with scattered or frequent denticulations or teeth; both surfaces usually coarse-hairy but commonly coarse hairs sparse or absent above mid stem; lower surface green or purple, above mid stem appressed, woolly, cobwebby or more or less glabrous. Uppermost leaves narrow-elliptic, lanceolate or linear, l:w ratio 3-10; dentate or margin appearing entire due to rolling. Unit Inflorescences of many capitula; total number of capitula per stem often 50-300, over topping variable; mature lateral peduncles mostly 4-13 mm long. Calycular bracteoles of capitula 6-12, 1.0-3.0 mm long; peduncle and margin of bracteoles cobwebby to densely woolly at anthesis; involucre 3.0-6.0 x 1.5-2.5 mm; involucral bracts 12-14, glabrous or basally slightly cobwebby, apex erect; stereomes (on drying) gently to moderately convex, green, black at apex, sometimes with a purple zone 1 mm long immediately below tip, sometimes entirely purple. Florets 26-50, c.80% female, dark sulphur yellow; corolla-lobes deltoid, thickened apically; corolla of bisexual florets 3.5-6.5 mm long, 5-lobed; corolla-lobes of female florets 2-4, mostly 0.2-0.3 mm long; corolla-limb commonly deeper cleft on inner face. Cypsela narrow obloid to narrow-ellipsoid, sometimes slightly clavate, < 1/3 of involucral bract length (1.0-1.7 mm long), commonly all medium to dark red-brown, with papillose hairs in lines or narrow bands, l:w ratio of hairs 3; pappus usually > 5 mm long.

Flowering:
Throughout the year but most plants peak in summer

Fruiting:
Late summer to early winter but can present all year

Threats:
Not Threatened

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange (12 July 2005). Description based on Thompson (2004).

References and further reading:
Thompson, I.R. 2004: Taxonomic studies of Australian Senecio (Asteraceae): 1. The disciform species. Muelleria 19: 101-214.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2312

Solanum laciniatum

Caption: Harold Pierce Reserve, W Waitangi, Chatham Island
Photographer: Gillian Crowcroft

Photographer: John Barkla

Common Name(s):
poroporo, bullibulli

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. North, South, Stewart and Chatham Islands. Widespread from the Hauraki Gulf Islands and Auckland south. In the northern part of its range actively spreading northwards caused it would seem through establishment through bird dispersal of fruit from garden plantings. Also present in south eastern Australia and Tasmania. Naturalised in parts of China and Russia.

Habitat:
Coastal to montane (0-400 m a.s.l.). usually in disturbed successional habitats, in shrublands, gullies, alongside riversides, on forested margins and in reverting pasture. Often appears following fires. A common urban weed in many parts of the country.

Features*:
Erect to spreading, glabrous, soft-wooded shrub up to 4 x 3 m. Stems initially somewhat fleshy, purple-green, dark green to dark purple coloured, maturing with fine, firm, grey chartaceous bark, rather brittle. Leaves in stout petioles up to 50 mm long; lamina 100-800 x 40-60 mm, sometimes even larger, very dark green to purple-green, entire or pinnatisect, (then with 1-4(-6) pairs of lobes almost cut to midrib) on the same plant; lobes up to 50 x 20 mm, lanceolate to linear-lanceolate, or more or less elliptic; base decurrent on petiole; apex obtuse to acuminate. Flowers in 2-10-many-flowered cymes, peduncles up to 20 mm long at anthesis, decurved, slender but robust; pedicels pendent at fruiting. Calyx 5-8 mm long, accrescent; lobes broadly ovate-triangular, mucronate, much < tube. Corolla 50 mm diameter, rotate, violet or white, lobes very borad, margins frilled or ruffled, apices emarginate. Anthes 3-4 mm long. Berry 23-30 mm long, yellow or orange when ripe, fleshy, ovoid, ellipsoid, pendent, stoen cells obvious and frequent similar or shape to seeds. Seeds 2.2-2.5 mm diameter, obovoid though somewhat asymetric.

Flowering:
Throughout the year

Fruiting:
Throughout the year

Threats:
Not Threatened

***Attribution:**
Fact Sheet prepared for the NZPCN by P.J. de Lange 12 May 2006. Description by P.J. de Lange with some elements based on Allan (1961) and Webb et al. (1988).

References and further reading:
Allan, H.H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington.

Webb CJ, Sykes WR, Garnock-Jones PJ 1988. Flora of New Zealand. Vol. IV. Botany Division, DSIR, Christchurch.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2261

Tetragonia implexicoma

Caption: Awhitu Peninsula, Auckland region
Photographer: John Sawyer

Caption: North Otago, April
Photographer: John Barkla

Common Name(s):
native spinach

Current Threat Status (2012):
Not Threatened

Distribution:
Indigenous. New Zealand: Kermadec Islands (Herald Islets, Raoul, Macauley Islands), Three Kings, North, South and Chatham Islands. Also Australia, Norfolk and Lord Howe Islands

Habitat:
Coastal to montane. Mostly found in coastal areas occupying a variety of habitats from cobble and sand beaches through coastal forest and shrubland, as exposed windshorn vegetation on cliffs and rock stacks. Occasionally found growing well inland, sometimes in farmland where it is grows in barberry (Berberris spp.) hedges or on limestone and calcareous sandstone outcrops in otherwise dense forest.

Features*:
Prostrate or scrambling subshrub forming straggling to dense leafy patches up to 4 m long. Stems long trailing, terete, initially somewhat succulent, and often coloured red or pink, maturing dark green to brown-black and becoming woody with age. Leaves alternate, often clustered, sometimes widely spaced along stems, fleshy, papillose; petiole 3-15(-20) mm long; lamina 20-50(-80) × (8-)10-30(-46) mm, ovate-rhomboid to lanceolate, to linear-lanceolate, adaxially dark green, green to almost glaucescent, abaxially paler, sometimes flushed pink. Flowers solitary; pedicels slender, 5-30 mm long. Perianth lobes 4, (1.8-)2.8-3.0(-3.6) mm long, oblong, abaxially papillose-hairy, adaxially finely papillose, yellow. Stamens 12-20. Ovary semi-inferior; locules and styles 2(-3). Fruit 5-8 mm long, succulent, pink to dark red, subglobose.

Flowering:
September - June

Fruiting:
September - July

Threats:
Not Threatened. A widespread and common species throughout most of coastal New Zealand.

***Attribution:**
Fact sheet prepared for NZPCN by P.J. de Lange 24 October 2011. Description by P.J. de Lange.

For more information, visit:
http://nzpcn.org.nz/flora_details.asp?ID=2269