

EAST CAPE FIELD CAMP – 31 OCTOBER - 2 NOVEMBER 2015

Graeme Jane & Gail Donaghy

After gathering at Tim Senior's bach near Whanarua Bay we headed out on Saturday for Te Araroa to meet Graeme Atkins who was the trip leader for the day. The first stop was a swamp on Hovell's property nearby. It was mainly a raupo swamp so we probed the sedges and grasses on the fringes. The main species were *Eleocharis acuta*, *Machaerina teretifolia*, *Carex secta*, *C. maorica* and a bit of manuka. Other interesting species were the coastal *Juncus caespiticus*, swamp millet (*Isachne globosa*) and the odd *Sparganium subglobosum*. Towards the head of the swamp the raupo was replaced by manuka, but we didn't go that far. The next brief stop, out towards East Cape, was to see a large population of *Pimelea orthia* on some mudstone banks alongside the road. A few km further on we stopped at a small wetland in pasture between the road and the shore, which was unfenced, so grazed. Despite heavy trampling (or perhaps because of it) the area was surprisingly diverse. The dominant species was *Machaerina teretifolia* (mostly trampled) but the treasure was *Mazus novaezelandiae* subspecies *impolitus* forma *hirta* on small mounds in the open areas. Other interesting species which prompted discussion included *Machaerina juncea*, *M. articulata*, *Schoenoplectus tabernaemontani*, *Schoenus maschalinus*, *Thelypteris confluens*, *Drosera binata* and *Ranunculus glastifolius*.

Lunch was nearby where we met up with the Conservation Board on a tour of the area. Afterwards we headed out together to the beach before the lighthouse for a discussion on East Island and local revegetation around the lighthouse nearby (which had been shifted there in the 1920s from the island). A little further on the forest near the Rangiatea homestead was explored. At first a large stand of tawapou was traversed then the adjacent tawa, kohekohe, nikau, titoki and pohutukawa forest on a steep slope where *Clematis cunninghamii* was in flower, scrambling over the shrubs, along with large patches of *Jovellana sinclairii* covering the ground. The steepest places had an impenetrable ground cover of kiekie. In one steep gully, flowering *Libertia grandiflora* formed the major ground cover over a considerable area. A search for *Streblus banksii* was unsuccessful but

we finally located yet another substantial patch of *Mazus* in an outwash area amongst pasture.

Finally we headed to the beach south of East Cape, at first to view *Plantago picta* on the mudstone cliffs, then southwards down the beach, past tall frittering cliffs of mudstone with few plants, to the next beach. The shore and cliffs were fringed with pasture with plants such as spinifex and *Carex pumila* in the sandy areas struggling with grazing. About halfway down the second beach we arrived at an accessible area of *Sonchus kirkii* in a lush flush area on a low cliff. Several species usually associated with coastal saltmarsh or meadows were present in these wet pockets, including a small colony of *Ranunculus acaulis* on a steep face. A final bit of excitement occurred on the way back along the road from the lighthouse where we rescued an overseas student who had just written off his small car after losing control in the gravel (looking at the view).

On Sunday we met Willy Ngamoki at Omaio and spent the day around the Waioira Stream, not far from the road. The first part of the day was spent in tall kanuka scrub on the way down a horse track from the car park to the creek. This was rather open and held a very diverse range of seedlings and saplings including rimu, miro, kahikatea, ramarama, willow-leaved and black maire with good lot of orchids in flower. Kumeraho (localised here on this coast but better known in the western Bay of Plenty) was quite common throughout the scrub along with the odd *Pimelea tomemtosia*, both in flower. Towards the stream, a residual forest patch with tawa, rewarewa and pukatea provided a change. Over the creek from our start the forest was mostly hard beech forest with *Alseuosmia macrophylla* abundant beneath or manuka scrub, often with a dense tangle fern understorey. On the edge of the stream there were several very large sprawling puriri. Downstream we explored another fork for a few hundred metres as it cut a narrow gorge through the hard beech forest. Sunlit patches of *Libertia grandiflora* on rocky banks above the stream were eye-catching. A short distance up, at the forks, waterfalls prevented further progress. Here another unusual find for the area was *Rhabdanthus solandri*.

**Plant species lists for three sites all near Te Araroa
– Hovell's Swamp (part list), Atkins' swamp, Rangiata covenant –
and for Waioira Stream, Kereru property, Omaio.**

Map: X15 Grid Ref: 29179 63648
31 October (East Caper area) & 01-November (Omaio), 2015

Compiler: Graeme Jane

Column 1: Hovell's Swamp; Atkins' swamp; Rangiata covenant

x = present; _ = not recorded as present

Column 2: Omaio, Waioira Stream, Kereru property

Column 3: * = naturalised species

Column 4: species name

1	2	3	4
_ _ x	x		<i>Acaena anserinifolia</i>
_ _ x	x		<i>Adiantum cunninghamii</i>
_ _ x	_		<i>Adiantum hispidulum</i>
_ _ _	x	*	<i>Agrostis capillaris</i>
_ _ x	_	*	<i>Aira caryophyllea</i> subsp. <i>caryophyllea</i>
_ _ x	_		<i>Alectryon excelsus</i> subsp. <i>excelsus</i>
x _ _	_	*	<i>Ammi majus</i>
_ _ x	_	*	<i>Anagallis arvensis</i> var. <i>arvensis</i>
x x x	x	*	<i>Anthoxanthum odoratum</i>
x _ _	_	*	<i>Apium nodiflorum</i>
_ _ _	x		<i>Aristolelia serrata</i>
_ _ x	_		<i>Arthropteris tenella</i>
_ _ x	_	*	<i>Asparagus scandens</i>
_ _ _	x		<i>Asplenium appendiculatum</i> subsp. <i>appendiculatum</i>
_ _ x	_		<i>Asplenium bulbiferum</i> x <i>A. hookerianum</i>
_ _ _	x		<i>Asplenium flaccidum</i>
_ _ _	x		<i>Asplenium oblongifolium</i>
_ _ x	x		<i>Asplenium polyodon</i>
_ _ x	x		<i>Astelia hastata</i>
_ _ _	x		<i>Astelia solandri</i>
_ x _	x	*	<i>Axonopus fissifolius</i>
_ _ x	x		<i>Beilschmiedia tawa</i>
_ x x	_	*	<i>Bellis perennis</i>
_ _ x	_	*	<i>Berberis glaucocarpa</i>
_ _ x	x		<i>Blechnum chambersii</i>
_ _ _	x		<i>Blechnum discolor</i>
_ _ x	x		<i>Blechnum filiforme</i>

x	x	—	—	Blechnum minus
—	x	x	x	Blechnum novae-zelandiae
—	—	x	—	Blechnum parrisiae
—	—	x	x	Brachyglottis repanda
—	—	—	x	* Buddleja davidii
—	—	—	x	Bulbophyllum pygmaeum
—	—	—	x	* Callitriche stagnalis
—	x	—	—	Calystegia tuguriorum
—	—	—	x	* Cardamine flexuosa
—	—	—	x	Cardiomanes reniforme
—	—	—	x	Carex banksiana
—	—	—	x	Carex breviculmis
—	—	x	—	Carex comans
—	—	—	x	Carex dissita
x	—	x	x	* Carex divulsa
—	—	—	x	Carex forsteri
—	—	x	x	Carex geminata
—	—	x	—	Carex inversa
x	—	—	—	Carex maorica
—	—	—	x	Carex megalepis
X	—	—	—	Carex secta
—	—	x	—	Carex solandri
—	—	x	x	Carex spinirostris
—	—	x	x	Carex uncinata
—	—	x	x	Carex virgata
—	—	x	—	Carmichaelia australis
—	—	x	x	Carpodetus serratus
—	x	x	x	* Cenchrus clandestinus
x	x	—	x	Centella uniflora
—	x	—	x	* Cerastium fontanum subsp. vulgare
—	—	x	—	* Cerastium glomeratum
x	—	x	—	* Cirsium arvense
—	—	—	x	* Cirsium vulgare
—	—	x	x	Clematis cunninghamii
—	—	x	—	Clematis paniculata
—	—	—	x	* Conyza sumatrensis
—	—	x	—	Coprosma areolata
—	—	—	x	Coprosma grandifolia
—	—	x	x	Coprosma lucida
—	—	x	x	Coprosma rhamnoides
—	—	x	x	Coprosma robusta
—	—	—	x	Coprosma spathulata subsp. spathulata
—	—	x	x	Cordyline australis
—	—	—	x	Cordyline banksii
—	—	—	x	Coriaria arborea var. arborea

-- --	x	*	<i>Cortaderia selloana</i>
-- --	x		<i>Corybas acuminatus</i>
-- --	x		<i>Corybas trilobus</i>
-- x	--		<i>Corynocarpus laevigatus</i>
-- --	x	*	<i>Cotoneaster glaucophyllus</i>
-- x	--	*	<i>Crepis capillaris</i>
-- --	x	*	<i>Cupressus macrocarpa</i>
-- --	x		<i>Cyathea dealbata</i>
-- --	x		<i>Cyathea medullaris</i>
-- --	x	*	<i>Cynosurus cristatus</i>
-- --	x	*	<i>Cyperus eragrostis</i>
-- x x	x		<i>Cyperus ustulatus</i>
-- --	x		<i>Dacrycarpus dacrydioides</i>
-- --	x		<i>Dacrydium cupressinum</i>
-- --	x	*	<i>Dactylis glomerata</i>
x --	x	*	<i>Daucus carota</i>
-- --	x		<i>Deparia petersenii</i> subsp. <i>congrua</i>
-- --	x		<i>Dianella nigra</i>
-- --	x		<i>Dichondra repens</i>
-- --	x		<i>Dicksonia squarrosa</i>
-- --	x	*	<i>Digitalis purpurea</i>
-- --	x		<i>Dodonaea viscosa</i>
-- --	x		<i>Drosera auriculata</i>
-- x	--		<i>Drosera binata</i>
-- --	x		<i>Drymoanthus adversus</i>
-- --	x		<i>Dysoxylum spectabile</i>
-- --	x		<i>Earina mucronata</i>
x x	x		<i>Eleocharis acuta</i>
-- x	--		<i>Eleocharis gracilis</i>
-- --	x		<i>Entelea arborescens</i>
x x	x		<i>Epilobium billardioreanum</i>
-- --	x		<i>Epilobium brunnescens</i> subsp. <i>brunnescens</i>
x x	--		<i>Epilobium chionanthum</i>
-- --	x		<i>Epilobium microphyllum</i>
-- x	x		<i>Epilobium nerteroides</i>
-- --	x		<i>Epilobium pedunculare</i>
-- x	--	*	<i>Erica lusitanica</i>
-- --	x	*	<i>Erigeron karvinskianus</i>
-- --	x		<i>Euchiton japonicus</i>
-- --	x		<i>Euchiton limosus</i>
-- --	x	*	<i>Euphorbia peplus</i>
-- --	x	*	<i>Festuca rubra</i> subsp. <i>rubra</i>
-- x x	--		<i>Ficinia nodosa</i>
-- --	x		<i>Freycinetia banksii</i>
-- --	x		<i>Fuchsia excorticata</i>

-- --	x		Fuscospora truncata
-- -- x	x		Gahnia lacera
-- -- x	x		Gahnia setifolia
-- -- x	--	*	Galium aparine
-- -- --	x	*	Gamochaeta coarctata
-- -- x	x		Geniostoma ligustrifolium var. ligustrifolium
-- -- x	--	*	Geranium dissectum
-- -- x	--	*	Geranium molle
-- -- x	--		Geranium solanderi
-- -- --	x		Gleichenia microphylla
x -- --	x	*	Glyceria declinata
-- -- --	x		Gonocarpus incanus
-- -- x	--		Haloragis erecta subsp. erecta
-- -- x	--		Hebe parviflora
-- -- --	x		Hebe stricta var. stricta
-- -- x	--	*	Hedera helix subsp. helix
-- -- x	x		Hedycarya arborea
x -- --	--	*	Hedychium gardnerianum
-- -- --	x		Helichrysum lanceolatum
-- -- x	--		Hoheria sexstylosa
x x --	x	*	Holcus lanatus
-- -- --	x		Hydrocotyle dissecta
-- -- --	x		Hydrocotyle microphylla
-- -- --	x		Hydrocotyle moschata var. moschata
x -- x	--		Hydrocotyle pterocarpa
-- -- --	x		Hymenophyllum demissum
-- -- --	x		Hymenophyllum dilatatum
-- -- --	x		Hymenophyllum multifidum
-- -- --	x		Hymenophyllum rarum
-- -- --	x		Hymenophyllum revolutum
-- -- --	x		Hymenophyllum sanguinolentum
-- -- --	x	*	Hypericum androsaemum
-- x --	x	*	Hypochaeris radicata
-- -- --	x		Hypolepis lactea
x x --	x		Isachne globosa
-- -- --	x		Isolepis prolifera
-- x --	--		Isolepis sepulcralis
x -- --	x		Isolepis subtilissima
-- x --	x	*	Jacobaea vulgaris
-- -- x	--		Jovellana sinclairii
-- x --	--	*	Juncus articulatus
-- -- x	--		Juncus australis
x x --	--		Juncus caespiticius
x -- --	x	*	Juncus effusus var. effusus
-- x x	--		Juncus pauciflorus

-- --	x		<i>Juncus planifolius</i>
-- --	x	*	<i>Juncus tenuis</i> subsp. <i>tenuis</i>
-- x	x		<i>Knightsia excelsa</i>
x _ x	x		<i>Kunzea robusta</i>
-- --	x	*	<i>Lactuca serriola</i>
-- x	_		<i>Lagenophora pumila</i>
-- --	x		<i>Lastreopsis hispida</i>
-- x	_		<i>Lastreopsis microsora</i> subsp. <i>pentangularis</i>
-- --	x		<i>Laurelia novae-zelandiae</i>
x x _	_		<i>Lemna disperma</i>
_ x _	x	*	<i>Leontodon saxatilis</i>
-- --	x		<i>Leptecophylla juniperina</i> subsp. <i>juniperina</i>
-- --	x		<i>Leptopteris hymenophylloides</i>
x x x	x		<i>Leptospermum scoparium</i> var. <i>scoparium</i>
-- --	x		<i>Leucopogon fasciculatus</i>
-- x	x		<i>Libertia grandiflora</i>
-- --	x		<i>Lindsaea linearis</i>
x _ x	_	*	<i>Linum bienne</i>
-- --	x		<i>Lobelia anceps</i>
-- --	x		<i>Lobelia angulata</i>
-- --	x		<i>Lophomyrtus bullata</i>
x x x	x	*	<i>Lotus pedunculatus</i>
x x _	x	*	<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>
x _ _	_		<i>Luzula picta</i> var. <i>limosa</i>
-- --	x		<i>Luzula subclavata</i>
-- --	x		<i>Lycopodiella cernua</i>
-- --	x		<i>Lycopodium deuterodensum</i>
-- --	x		<i>Lycopodium volubile</i>
_ x _	_	*	<i>Lythrum junceum</i>
_ x _	_		<i>Machaerina articulata</i>
_ x _	_		<i>Machaerina juncea</i>
-- --	x		<i>Machaerina rubiginosa</i>
-- x	_		<i>Machaerina sinclairii</i>
-- --	x		<i>Machaerina tenax</i>
x x _	_		<i>Machaerina teretifolia</i>
_ x x	_		<i>Mazus novaezeelandiae</i> subsp. <i>impolitus</i> f. <i>hirtus</i>
-- x	_	*	<i>Medicago arabica</i>
-- x	_	*	<i>Medicago nigra</i>
-- x	_		<i>Melicope ternata</i>
-- x	x		<i>Melicytus ramiflorus</i>
-- x	x		<i>Metrosideros excelsa</i>
-- --	x		<i>Metrosideros excelsa</i> x <i>M. robusta</i>
-- --	x		<i>Metrosideros fulgens</i>
_ x x	x		<i>Metrosideros perforata</i>
-- --	x		<i>Metrosideros robusta</i>

--	--	x	x		<i>Microlaena avenacea</i>
--	--	x	x		<i>Microlaena stipoides</i>
--	--	x	--		<i>Microseris scapigera</i>
--	--	x	x		<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>
--	--	--	x		<i>Microsorium scandens</i>
x	x	--	x		<i>Microtis unifolia</i>
--	--	--	x		<i>Mida salicifolia</i>
--	--	--	x	*	<i>Miscanthus nepalensis</i>
--	--	--	x		<i>Morelotia affinis</i>
--	--	x	--		<i>Muehlenbeckia complexa</i>
--	--	x	--		<i>Myoporum laetum</i>
x	--	--	--	*	<i>Myosotis laxa</i> ssp. <i>caespitosa</i>
--	--	x	--	*	<i>Myosotis sylvatica</i> subsp. <i>sylvatica</i>
--	--	--	x		<i>Myrsine australis</i>
x	--	--	--	*	<i>Nasturtium officinale</i>
--	x	x	x		<i>Nertera depressa</i>
--	--	--	x		<i>Nertera villosa</i>
--	--	x	x		<i>Nestegis cunninghamii</i>
--	--	--	x		<i>Nestegis lanceolata</i>
--	--	x	--		<i>Olearia arborescens</i>
--	--	--	x		<i>Olearia furfuracea</i>
--	--	--	x		<i>Olearia rani</i> var. <i>colorata</i>
--	--	x	x		<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>
--	--	--	x		<i>Orthoceras novae-zeelandiae</i>
--	--	x	x		<i>Oxalis exilis</i>
--	--	x	--		<i>Ozothamnus leptophyllus</i>
--	--	x	x		<i>Paesia scaberula</i>
x	x	x	--	*	<i>Parentucellia viscosa</i>
--	--	x	--		<i>Parsonsia capsularis</i> var. <i>capsularis</i>
--	--	x	--		<i>Parsonsia heterophylla</i>
--	--	--	x	*	<i>Paspalum dilatatum</i>
x	x	--	--	*	<i>Paspalum distichum</i>
--	--	x	--		<i>Pellaea rotundifolia</i>
--	--	x	--		<i>Pennantia corymbosa</i>
--	--	x	--		<i>Peperomia urvilleana</i>
x	x	x	--	*	<i>Persicaria hydropiper</i>
--	x	--	--	*	<i>Petroselinum crispum</i>
--	--	x	--		<i>Phormium cookianum</i> subsp. <i>hookeri</i>
x	--	x	--		<i>Phormium tenax</i>
--	--	--	x		<i>Phyllocladus trichomanoides</i>
--	--	--	x	*	<i>Phytolacca octandra</i>
--	--	--	x		<i>Pimelea tomentosa</i>
--	--	x	--	*	<i>Pinus radiata</i>
--	--	x	x		<i>Piper excelsum</i> ssp. <i>excelsum</i>
--	--	x	x		<i>Pittosporum tenuifolium</i>

--	--	x	—		Planchonella costata
—	x	—	x	*	Plantago australis
x	x	x	x	*	Plantago lanceolata
—	—	—	x	*	Plantago major
—	—	x	x		Pneumatopteris pennigera
—	—	x	—		Poa anceps subsp. anceps
—	—	—	x	*	Poa annua
—	—	x	—		Polystichum wawranum
—	—	—	x		Pomaderris kumeraho
—	—	—	x		Prumnopitys ferruginea
x	—	x	x	*	Prunella vulgaris
—	—	x	x		Pseudognaphalium luteoalbum
—	—	—	x		Pseudopanax arboreus
—	—	x	x		Pseudopanax crassifolius
—	—	—	x		Pseudopanax lessonii
—	—	—	x		Pteridium esculentum
—	—	x	—		Pteris macilenta
—	—	x	—		Pteris tremula
—	—	—	x		Pterostylis aff. montana
—	—	—	x		Pterostylis banksii
—	—	—	x		Pterostylis cardiostigma
—	—	—	x		Pterostylis trullifolia
—	—	x	—		Pyrrosia eleagnifolia
x	x	—	—		Ranunculus amphitrichus
—	x	—	—		Ranunculus glabrifolius
—	—	x	—	*	Ranunculus parviflorus
—	—	x	—		Ranunculus reflexus
x	—	—	x	*	Ranunculus repens
—	—	—	x		Rhabdothamnus solandri
—	—	x	x		Rhopalostylis sapida
—	—	x	x		Ripogonum scandens
—	—	—	x	*	Rubus fruticosus
—	—	—	x	*	Rubus phoenicolasius
x	—	—	—	*	Rumex conglomeratus
—	—	—	x	*	Rumex pulcher
—	—	x	x		Rytidosperma gracile
—	—	x	—	*	Rytidosperma racemosum
—	—	—	x	*	Sagina procumbens
x	—	—	x	*	Salix cinerea
x	—	—	—	*	Schedonorus arundinaceus
—	—	—	x		Schefflera digitata
—	x	—	—	*	Schoenoplectus tabernaemontani
—	—	—	x		Schoenus apogon
—	x	—	x		Schoenus maschalinus
—	—	—	x		Schoenus tendo

-- --	x	*	Senecio bipinnatisectus
-- -- x	--	*	Sherardia arvensis
-- -- --	x	*	Solanum nigrum
-- -- x	--	*	Sonchus arvensis
-- -- x	x	*	Sonchus oleraceus
-- -- --	x		Sophora tetraptera
x -- --	--		Sparganium subglobosum
-- x --	--	*	Sporobolus africanus
-- -- x	--	*	Stachys sylvatica
x -- --	--	*	Stellaria graminea
-- -- --	x		Stellaria parviflora
-- -- --	x		Sticherus cunninghamii
-- -- x	--		Streblus banksii
-- -- x	--		Streblus heterophyllus
-- x x	x	*	Taraxacum officinale
-- -- --	x		Thelymitra hatchii
-- -- x	x		Thelymitra longifolia
-- x --	--		Thelymitra pulchella
-- x --	--		Thelypteris confluens
-- -- --	x		Tmesipteris elongata
-- -- --	x		Toronia toru
-- -- x	--	*	Trifolium dubium
x x --	x	*	Trifolium repens
x x --	--		Typha orientalis
x -- --	--	*	Ulex europaeus
-- -- --	x	*	Verbena bonariensis
x x --	x	*	Veronica anagallis-aquatica
-- -- --	x	*	Veronica serpyllifolia
-- -- x	--		Vitex lucens
-- -- --	x		Weinmannia racemosa
-- -- --	x		Winika cunninghamii
-- -- x	--	*	Zantedeschia aethiopica