

## MOTU ECOLOGICAL DISTRICT SPECIES RECORDS TO APRIL 2012

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The Motu and Waioeka Ecological Districts together make up the Raukumara Ecological Region, in the eastern Bay of Plenty (McEwen 1987). Vegetation of the eastern Bay of Plenty and East Cape is poorly represented in New Zealand herbaria because since the late 1800s only a small number of botanists have made collections in the area. Their focus has often been on high altitude species, seeking for northern limits of species known from further south, species thought to be restricted to the eastern coast or Raukumara Range, or species known to be generally uncommon. Specimens in Auckland War Memorial Museum Herbarium (AK), The Allan Herbarium, Landcare Research, Lincoln (CHR), and the Museum of New Zealand Te Papa Tongarewa (WELT) record especially the early observations.

For the Motu Ecological District, comprehensive lists of species present have been made by Norman Potts and Marc Heginbotham of Opotiki (Heginbotham & Esler 1985) and by the field survey team for the Motu Protected Natural Areas Programme report (Clarkson 1986), but relatively few herbarium vouchers are known. Records from these two publications and from relevant herbarium specimens, particularly from AK and the National Forestry Herbarium at Rotorua (NZFRI), were included in the Checklist of plant species of the Bay of Plenty (Beadel et al. 2009).

Since the publication of this checklist, visits by the Rotorua Botanical Society and also additional visits by the author and by others such as Graeme Jane, have provided opportunities for herbarium specimens from this Ecological District to be collected and deposited at NZFRI. In addition, specimens collected by Peter de Lange (Department of Conservation, Auckland) have been added to AK. These specimens include a wide range of indigenous and naturalised species, and common as well as uncommon species. Naturalised species have not been a priority for collection by botanists focused on a particular project such as locating threatened species or reporting on natural areas for

protection, so herbarium specimens of these were previously sparse. The recent collections have not only vouchered, apparently for the first time, 151 species known to occur in the Motu Ecological District, but have also added 63 new records, of which eight are also new to the Bay of Plenty. The collecting of herbarium specimens has made a significant contribution to knowledge of the Ecological District, as more than a quarter of the specimens turned out to be new records.

The new records comprise 15 indigenous and 48 naturalized species. Many of the new species records are not a surprise – the majority are weed species known from elsewhere in the Bay of Plenty. However one grass species, *Vulpia fasciculata* (Forssk.) Fritsch, was a new record for New Zealand (Rotorua Botanical Society Newsletter, Hobbs, 2011). A few add a small extension of range to uncommon indigenous species, including one species classified as At Risk – Declining (*Juncus pauciflorus*). The orchid *Thebelymitra* aff. *ixioides* does not seem to have been previously recorded from the eastern Bay of Plenty (Scanlen & St. George 2009), but was seen inland from Te Kaha last spring.

The new records for the Bay of Plenty include two garden escapes or discards – guava (*Psidium cattleianum*) and elephant garlic (*Allium ampeloprasum* var. *ampeloprasum*); several naturalised species – an evening primrose (*Oenothera biennis*), the blue-flowered scarlet pimpernel (*Anagallis arvensis* var. *coerulea*), sharp-leaf willow *Salix acutifolia* and *Senna septemtrionalis*; and two native grasses from Peter de Lange's collections – *Dichelachne inaequiglumis* and *D. micrantha*, neither recorded in the Flora (Edgar & Connor 2010) as occurring near the Bay of Plenty.

Although recent collections have been mainly from the lowland coastal plain near the highway around the coast, a few opportunities have been taken to visit reserves and other less accessible areas. Tim Senior, a Botanical Society member who has a long and close association with the Opotiki to East Cape area, has been invaluable in assisting with these visits.

**Table: New plant species records, Motu Ecological District to April 2012**

\* = Naturalised

β = New record for Bay of Plenty, according to Beadel et al. (2009).

D = Threat status: At Risk – Declining

PdL = AK voucher, Peter de Lange collection

*β	<i>Allium ampeloprasum</i> var. <i>ampeloprasum</i>		<i>Leptopteris hymenophylloides</i> x <i>superba</i>
*β	<i>Anagallis arvensis</i> var. <i>coerulea</i>	*	<i>Linaria purpurea</i>
*	<i>Apium nodiflorum</i>	*	<i>Linum trigynum</i>
*	<i>Araujia sericifera</i>	*	<i>Matricaria discoides</i>
*	<i>Bidens pilosa</i>	*	<i>Myosotis scorpioides</i>
*	<i>Cakile maritima</i>	*	<i>Nicandra physalodes</i>
	<i>Callitriche petriei</i>	*β	<i>Oenothera biennis</i>
	<i>Carex lessoniana</i>	*	<i>Oxalis corniculata</i>
*	<i>Cestrum nocturnum</i>	*	<i>Panicum dichotomiflorum</i>
	<i>Corybas</i> ‘Kaimai’	*	<i>Paronychia brasiliiana</i>
*	<i>Crassula multicava</i>	*PdL	<i>Passiflora edulis</i>
*	<i>Critesion murinum</i>	*	<i>Passiflora tarminiana</i>
*	<i>Cynosurus cristatus</i>	*	<i>Persicaria capitata</i>
*	<i>Dianthus armeria</i>		<i>Persicaria decipiens</i>
β,PdL	<i>Dichelachne inaequiglumis</i>	*	<i>Persicaria punctata</i>
β,PdL	<i>Dichelachne micrantha</i>		<i>Pimelea urvilleana</i>
PdL	<i>Doodia squarrosa</i>		<i>Potamogeton ochreatus</i>
*	<i>Echinochloa crus-galli</i>	*β	<i>Psidium cattleianum</i>
*PdL	<i>Erechtites hieraciifolia</i>	*	<i>Romulea rosea</i>
*	<i>Erica lusitanica</i>	*	<i>Rumex conglomeratus</i>
*	<i>Euphorbia maculata</i>	*	<i>Rumex pulcher</i>
*	<i>Fuchsia boliviana</i>	*β,PdL	<i>Salix acutifolia</i>
*	<i>Gamochaete simplicicaule</i>		<i>Schoenus apogon</i>
*	<i>Geranium gardneri?</i>	*PdL	<i>Senecio diaschides</i>
*	<i>Helianthus tuberosus</i>	*β,PdL	<i>Senna septemtrionalis</i>
*	<i>Helminthotheca echioides</i>	*	<i>Setaria gracilis</i>
*	<i>Homolanthus populifolium</i>	*	<i>Symphyton</i> x <i>uplandicum</i>
	<i>Hydrocotyle moschata</i> var. <i>parvifolia</i>	*	<i>Syzygium smithii</i>
D	<i>Juncus pauciflorus</i>		<i>Thelymitra</i> aff. <i>ixioides</i>
*	<i>Juncus flavidus</i>		<i>Trichomanes endlicherianum</i>
*	<i>Lepidium virginicum</i>	*	<i>Uncinia uncinata</i>
		*	<i>Vulpia myuros</i> var. <i>myuros</i>
		*	<i>Xanthium spinosum</i>

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