Picris burbidgeae at Waipoua Forest

Jenny Lux

In September 2004 a population of the Nationally Endangered (de Lange et al. 2004) native hawkweed *Picris burbidgeae* S.Holzapfel was discovered on the banks of the Waipoua River in Western Northland. While carrying out some weed control monitoring for the Department of Conservation, Awhi Nathan (a local Ngati Whatua botanist) spotted the unknown plant and sent a specimen to Northland Conservancy botanist Lisa Forester. Two specimens (foliage and later flower heads) were forwarded to Ewen Cameron for verification and lodged at the Auckland Museum Herbarium (AK 288553 & 292155). Although it was probably once a common annual on exposed soil, no native *Picris* had ever been recorded in the area, despite an early survey by Leonard Cockayne (1908) and extensive modern surveys by Peter Bellingham (1985), Nigel Clunie (1986) and Burns and Leathwick (1992).

On 14th October this year Maureen Young, Lisa Forester, Awhi Nathan and I went out to resurvey the population and found 75 healthy young plants. These occurred in two different habitats; either in dry pine duff under the dappled light of a tall plantation of *Pinus radiata* (Fig. 1) or on recently exposed crumbling clay slips at the edge of the river (Fig. 2). A list of the associated plants in each different habitat follows.

Almost all of the plants were still at the rosette stage (Fig. 3), though approximately 10 were just beginning cauline growth. The characteristic harsh, rasp-like bristles were unmistakable, even at this early stage of development (Fig. 4). Many weedy exotic Asteraceae were growing around the *P. burbidgeae*, which at first sight might have been confused with it (e.g. *Hypochoeris radicata*, *Sonchus asper*, *Cirsium vulgare*), however the lanceolate leaf shape, the slightly reddish midribs, the ribbed stems (where present) and the rasping hairs all helped to distinguish it. If they had been at a more advanced stage of development we might have seen the floral bracts with a single line of bifid hairs along midrib on the outer surface, which are characteristic of this plant.

Cheeseman (1925) under *Picris hieracioides*, noted *P. burbidgeae as* "Formerly not uncommon in open places from the North Cape to the Upper Thames and Waikato, but now much scarcer". *Picris hieracioides* is now applied to a different species, which is considered native to Europe. It was collected once in New Zealand from "school grounds, Maungatapere, nr Whangarei" by Harry Carse, April 1897, AK 35263 (Heenan et al. 1999) evidently, it failed to establish further. The taxonomy of the native *Picris* was revised by Holzapfel (1993) wherein this species was initially described as *P. burbidgei.* However as the species takes its epithet from the eminent English/Australian botanist Dr. Nancy Burbidge the correct Latinization is '*burbidgeae'* (iae = female, ii = male). This orthographic error has been corrected to *P. burbidgeae.*

Fig. 1: Pine duff habitat; *P. burbidgeae* at centre. Photo: Lisa Forester.

Fig. 2: Riverbank clay slip habitat; *P. burbidgeae* in foreground at right under young pampas grass. Photo: Lisa Forester.

Herbarium specimens suggest that in New Zealand this species is probably confined to the northern North Island and the Chatham Islands. It is also found in Hawaii, Norfolk Island and Australia (its type locality) (www.nzpcn.org.nz). Other modern records in Northland exist from Three Kings, North Cape, Bay of

Islands, south of Kerikeri, Poor Knights Islands, Hen and Chickens Islands, Mokohinau Islands and near Tokatoka (DOC BioWeb Database & Auckland Museum Herbarium). Old records exist from around the Mangonui area.

Fig. 3: Rosette stage.

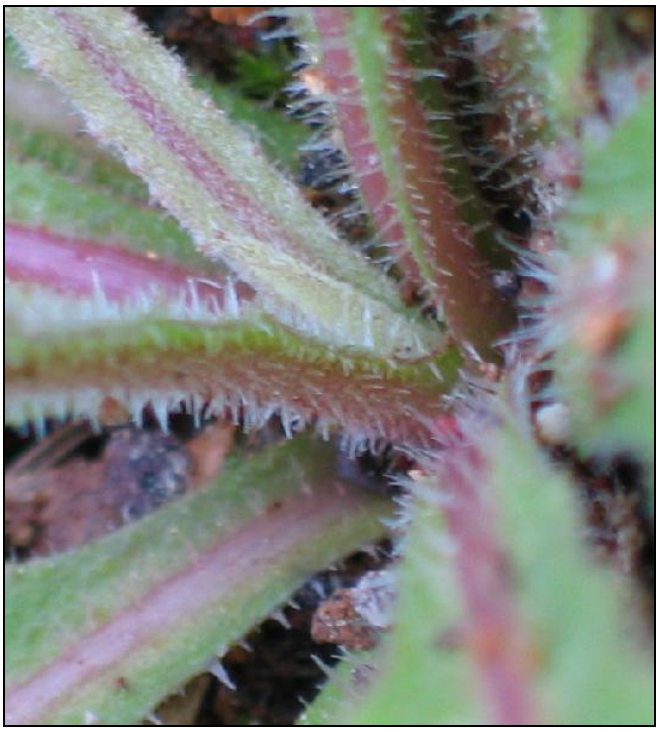

Fig. 4: Bristles.

P. burbidgeae is threatened by habitat loss through coastal development, succession, displacement by weed invasion and weed control (www.nzpcn.org.nz visit Fact Sheet for this species details and how to distinguish it from the similar *Helminthotheca echioides*).

Species associated with *Picris burbidgeae*
*** = exotic species**

	Pine duff habitat	Riverbank clay slip
Alectryon excelsus	x	
**Anagallis arvensis*		x
**Anthoxanthum odoratum*		x
**Aristea ecklonii*	x	x
Calystegia tuguriorum	x	
**Cirsium vulgare*	x	x
**Conyza albida*	x	x
Coprosma rhamnoides	x	
Coriaria arborea		x
**Cortaderia selloana*		x
**Cyperus eragrostis*	x	
Dicksonia squarrosa	x	
Dodonaea viscosa	x	
Entelea arborescens	x	
Gahnia lacera	x	
Gahnia xanthocarpa	x	
**Gamochaeta coarctata*	x	x
Geniostoma ligustrifolium	x	
Geranium solandri	x	
Haloragis erecta	x	
**Hypochoeris radicata*	x	x
**Leucanthemum vulgare*	x	x
Leucopogon fasciculatus	x	
Lobelia anceps	x	
Melicytus ramiflorus	x	

Microtis unifolia	x	
**Modiola carolineana*	x	
Myrsine australis	x	
Oplismenus hirtellus	x	
**Physalis peruviana*	x	
Podocarpus totara	x	x
Ranunculus reflexus	x	
Ranunculus urvilleanus	x	
**Ricinis communis*		x
Solanum americanum		x
**Sonchus asper*	x	x
**Verbena littoralis*	x	x

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Misunderstood – our native parapara (*Pisonia brunoniana*)

Bec Stanley & Peter de Lange

If you have heard of this plant, it is probably not because it is uncommon or threatened, but because its sticky seeds can snare birds. Many people are at once fascinated and appalled by this plant perhaps because it seems to embody how cruel nature can be. There's a common misconception that parapara is not native to New Zealand. Indeed this species is a subtropical and warm temperate species native to entire Pacific Basin including the Hawaiian Islands, Norfolk Island, Australia, Kermadec Islands, Lord Howe and northern New Zealand. So it is very much one of our own and is a valued member of our flora as our only indigenous representative of the Nyctaginaceae.

In New Zealand parapara is a shrub or small tree up to 3.5(-6)m tall with large (up to 300 × 150mm) opposite to slightly whorled, dark green leaves. The leaf margins are usually entire but some island populations, e.g., Cuvier (Repanga) and Three Kings Islands have distinctly wavy (sinuate) leaf margins. It has small, tubular pale green to cream flowers, which are beautifully scented at night time. By far the most obvious feature is the five-ribbed, very sticky fruit which is 250mm long. On offshore islands especially those without rats it grows in coastal forest with karaka (*Corynocarpus laevigatus*), puriri (*Vitex lucens*), kohekohe (*Dysoxylum spectabile*) and nikau (*Rhopalostylis baueri* (Kermadecs) and *R. sapida*.)

Historically parapara was recorded sparingly from the northern third of the North Island, New Zealand. However, by the early 1980s the only mainland populations left were scattered trees near the head of the remote Whangape Harbour, north of the Hokianga, a few trees near Mangawhai, and just south of East Cape. At East Cape a single, 6m tall tree was recorded by Heginbotham (1985), somewhat posthumously as it turns out, because the tree, which was on private land, was deliberately destroyed sometime around the early summer of 1984 by the landowner, who disliked the notion that the tree could potentially trap birds. While it is seriously at risk of extinction within the mainland part of its New Zealand range it is thankfully sparsely distributed, and at times locally common on some northern offshore islands (including the Kermadec Is, Three Kings Is, Hen & Chickens, Little Barrier Is, Mokohinau Is, Mercury Is, & Karewa Is off the Bay of Plenty).

In the Auckland region, parapara used to grow in coastal forest on the "shores of the Waitemata Harbour" where a specimen was collected during the