Metalejeunea cucullata	AK 298565	*R. crassa*	AK 299752
Microlejeunea sp. nov.	AK 300169	*R. furtiva*	AK 298545
Pallavicinia lyelli	AK 299714	*R.* sp. nov.	AK 298538
Paracromastigum drucei	AK 298524	*Schistochila appendiculata*	AK 299917
Paraschistochila tuloides	AK 299718	*S. glaucescens*	AK 298586
Plagiochila gigantea	AK 299730	*S. nobilis*	AK 299750
P. lyallii	AK 299724	*Symphyogyna hymenophyllum*	AK 299916
P. pleurata	AK 298572	*Telaranea gibbsiana*	AK 299906
Radula aneurysmalis	AK 300169	*T. perfragilis*	AK 298539
R dentifolia	AK 298532	*T. praenitens*	AK 299716
R. grandis	AK 298561	*Temnoma pulchellum*	AK 298568
R. multiamentula	AK 298557	*Tylimanthus tenellus*	AK 299728
R. pseudoscripta	AK 299758	*Zoopsidella caledonica*	AK 299731
R. tasmanica	AK 298531	*Zoopsis argentea*	AK 299734
R. aff. *fauciloba*	AK 299908	*Z. ceratophylla*	AK 298526
Riccardia aequicellularis	AK 300170	*Z. setulosa*	AK 298547

Populations of naturalised Oyster Bay pine (*Callitris rhomboidea*) at Oratia and Huia, Waitakere Ranges, Auckland

Mike Wilcox

The Australian conifer Oyster Bay pine (*Callitris rhomboidea* R.Br. ex Rich. & A.Rich. Cupressaceae) grows over an area of approximately 2 ha on a property at 151 Parker Road, Oratia, owned by Leo Rapp. The population has been in this area for many years (Allan 1935, 1940). It comprises numerous large trees up to 12 m in height and 60 cm in diameter, and hundreds of pole and sapling trees. The Oyster Bay pine — also known as Port Jackson pine (Harden 1990) — grows here in mixture with kanuka (*Kunzea ericoides*), with associated lemonwood (*Pittosporum eugenioides*), rewarewa (*Knightia excelsa*), mamaku (*Cyathea medullaris*), and mahoe (*Melicytus ramiflorus*), and exhibits a remarkable capacity to regenerate itself more or less continuously. The older trees have a distinct propensity to lean or fall over — a result of shallow root systems. Mr Rapp has observed this in many places. He reports that once dry, the wood is excellent firewood. The foliage of the trees is healthy, and a striking feature of the trees both old and young is the abundant production of cones in clusters on the branches and stems. The cones are very persistent.

As well as Leo Rapp's trees there are further naturalised populations in or near Parker Road. There are several trees on the property of Geoff and Bev Davidson, and on the property owned by Oratia Church Trust, corner of Parker Road and West Coast Road. The church property is gumland vegetation, and was visited by the NZ Plant Conservation Network group in November 2006 during the Cheeseman Symposium. There were numerous mature *Callitris rhomboidea* trees scattered through the block, but most of these have been felled or ring-barked over the last six years (Geoff Davidson, pers. comm.). The resultant opening up and disturbance to the site has triggered mass regeneration of *Callitris* seedlings (Fig. 1), many of which themselves already carry cones after just 3 or 4 years.

Fig. 1. *Calliitris rhomboidea* seedlings, Oratia Church. Photo: Mike Wilcox, 6 Aug 2007

Another population of Oyster Bay pine occurs in the Waitakere Ecological District at Huia approximately 350 m along the Parau Track from the swing bridge across the Huia Stream (and 40 m along from the Farley Track branch-off). Here there c. 10 large adult trees, the biggest c. 15 m tall and 60 cm in diameter. Unlike the Oratia population (Fig. 2), there are no extensive stands of poles and saplings, though there is one canopy gap with several seedlings and saplings. The Oyster Bay pines grow here in admixture with kanuka, kauri, rimu, rewarewa, tanekaha (*Phyllocladus trichomanoides*), mamangi (*Coprosma arborea*), lancewood (*Pseudopanax crassifolius*) and five-finger (*P. arboreus*), and was reported from this locality by Wood (1951).

Fig. 2. *Calliitris rhomboidea*, Oratia. Photo: Mike Wilcox, 23 Jul 2007.

Elsewhere, Chris Ecroyd has observed *Callitris rhomboidea* naturalised on the Scion campus, Rotorua, and at McLarens Falls, and there are a few naturalised plants at the former Bartlett property at Silverdale (Wilcox 2005).

The provenance and history of these Waitakere populations is not known. The only importation record I have been able to locate is the New Zealand Forest Service seedlot AK 29/229, from Queensland (Vincent & Dunstan 1989). In eastern Australia it grows as a columnar tree to 30 m on a wide range of substrates (limestone, dolerite, granite, sandstone). It has a disjunct distribution (Orchard 1998, Farjon 2005): eastern Tasmania (including Oyster Bay), South Australia (e.g. Kangaroo Island, Mt Lofty Ranges), New South Wales (e.g. Broken Bay north of Sydney), Queensland (e.g. Blackdown Tableland). In eastern Tasmania *Callitris rhomboidea* occupies well-drained sites along parts of the east coast, where it is capable of regenerating continuously without major disturbance, or in phases after fire or other major devegetating events (Harris & Kirkpatrick 1991). It occurs in heath, open forest, woodland, and shrubland, and may be associated with *Allocasuarina verticillata*, *Leptospermum laevigatum*, *Kunzea ambigua*, *Banksia marginata*, and various eucalypts (e.g. *Eucalyptus obliqua*, *E. viminalis*, *E. amygdalina*). In the nineteenth century it was an important source of construction timber in central eastern Tasmania (Bowman & Harris 1995).

Fig. 3. *Calliitris rhomboidea* cones, Oratia. Photo: Mike Wilcox, 23 Jul 2007.

As with all *Callitris* (cypress-pines), *C. rhomboidea* is monoecious. The female cones, which are globular and with a distinct broad, conical protuberances (Fig. 3), remain attached to the stem or branches after maturity. The seeds have two lateral wings that are very narrow, with only a limited capacity to fly far from the parent tree. The bark is hard and rather compact. The adult leaves are less than 3 mm long and are obtusely keeled.

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