

***Gratiola sexdentata* at Awhitu District Dune Lakes**

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The last recording of *gratiola* (*Gratiola sexdentata*) for the Awhitu Ecological District was in 1997 when Peter de Lange collected specimens from Parkinson's Lake (Kokahuake) at Maioro. I have visited the lake over the past four summers and Ewen Cameron and I surveyed the southern dune lakes extensively in 2006 but never found any surviving plants.



Fig. 1. *Gratiola sexdentata*, Parkinson's Lake (Tricia Aspin, 22 Jan 2008)

Parkinson's Lake has been partially fenced in recent years and kikuyu grass (*Pennisetum clandestinum*) and Mercer grass (*Paspalum distichum*) are rampant on the fringes. On 22 January 2008 while visiting some of Awhitu's sites of threatened plant species with Steve Benham, a dense mat of *gratiola* was found on the south-eastern side of the lake near where Peter recorded it as growing eleven years prior. The whole colony covers an area of 7m x 1m from the edge of the summer-low level up to where winter-high water covers the lakeside vegetation. It has formed a tangled mass of stems and roots several centimetres thick and was actually suppressing the mercer grass when observed in Jan 2008.. Some portions on the higher, drier side were wilted in the current drought conditions. Flowers were white with purplish stripes on the yellowish somewhat hairy corolla tube. Many were present at all stages and much seed had set.

Lakes Puketi and Rotoiti are further to the north nearer to Karioitahi Road and are open to grazing. We were delighted to find sparse populations of flowering *gratiola* among an area of establishing lakeside turf exposed during summer low water levels on the eastern side of Lake Puketi. Here in association with *gratiola* was *Glossostigma elatinooides* and *Limosella lineata*. A small patch of *Myriophyllum votschii* has also established on a log which will be submerged during

high water levels. These latter three tiny plants were previously recorded on the northern side of this lake in 2006. Lake Rotoiti lacks an area of lakeside turf but *Glossostigma elatinooides* has established on old logs which are submerged through winter. Again there was delight when a very small population of *gratiola* was spotted on the southern side. Some Mercer grass and pasture species are present but grazing prevents choking out of the small herbs. This population differed in that several of the stems emerged from the water from a depth of around 18cm.



Fig. 2. *Gratiola sexdentata*, Lake Puketi (Tricia Aspin, 22 Jan 2008)

These dune lakes along with Otamatearoa, Whatihua and a small unnamed lake are refuges for many of the Auckland District's lesser known and threatened plant species including *Isolepis distigmatosa*, *Myriophyllum robustum*, *Potamogeton ochreatus*, *Ranunculus macropus*, *Ruppia polycarpa* and *Sparganium subglobosum*.