WAIKITE VALLEY FIELD TRIP

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On 4th May three regular Rotorua folk met two from Tauranga at the carpark then motored to the Waiotapu Tavern to meet two more members from Te Teko. In convoy we proceeded to halfway down the Waikite Scarp stopping to view the valley and territory to be covered during the day. Initially the valley was covered in fog and the sound of shot-guns was pretty obvious in the still air, but within moments the air cleared and the location of the hot springs and streams were laid out before us. At the bottom of the scarp and over the road from the Waikite Valley Thermal Pools we stopped and observed *Nephrolepis* sp. (thermal) and *Cheilanthes humilis* growing on steaming earth along the roadside.

We then drove to the west of Corbett Road and walked along the lower reaches of the Otamakokore Stream. The stream is fed from several hot springs higher up the valley including the Waikite Valley Thermal Pools and its temperature was estimated as being between 38 and 40 degrees Celsius. This stream meanders through two dairy farms along the true left bank, one of which there was an electric fence to keep the cows from the stream edge and the other there was no fence at all along the stream. Along the true right bank is another dairy farm which was fenced throughout and between the fence and the stream was almost solid blackberry interspersed with the occasional Lawson cypress.

In the fenced portion of the left bank several healthy populations of giant hypolepis (*Hypolepis dicksonioides*), easily identifiable by their finger-thick hairy stipes, were seen and all along the stream there were considerable numbers of the thermal fern *Christella* sp. (thermal). There were scattered plants of *Christella* along the unfenced portion of the stream mainly growing along the stream bank where there were patches of blackberry which offered some protection from grazing animals. Also along the stream there were

isolated patches of *Nephrolepis* protected from frost by the warm air over the stream. In the lower reaches of the stream just before it reaches several wetland areas two populations of *Cyclosorus interruptus* were seen growing amongst *Baumea rubiginosa* and blackberry. There was no obvious thermal activity in this vicinity so this was quite an interesting site. As the duck shooting season was in its second day we kept away from the wetlands near the confluence with the Te Waro Stream where the author had found the only known population of *Potamogeton pectinatus* in the Atiamuri Ecological District during a DoC survey the previous year.

After leaving the dairy farms we stopped at the Corbett Road bridge over the Otamakokore Stream where an entertaining debate was held on the not-too-close-up identification of water fern (*Histiopteris incisa*), *Christella*, *Hypolepis dicksonioides* and *H. ambigua* including possible hybrids of these two, *Deparia petersenii* and *Diplazium australe*.

The group then proceeded on to the Landcorp Waikite Station where we had lunch before setting out for the Waikite Springs (NZMS260 U16 003 156). We followed a stream up the valley and where ever we could get through the blackberry we studied the thermal vegetation (*Christella*, *Nephrolepis* and *Cyclosorus*) which had been quite heavily browsed by cattle. After scrambling up a muddy track through more blackberry we emerged at the pools of the Waikite Springs where probably the largest population of *Ranunculus macropus* in the Atiamuri Ecological District was found growing amongst *Baumea arthrophylla*.

Back out on the farmland we followed the stream draining the Waikite Springs down stream noting the paucity of thermal vegetation due to damage by grazing and trampling by cattle. Even around a large boiling pool locally known as the "singeing pool" the only ferns were *H. ambigua* and water fern. Further down we crossed a fenceline into a quite extensive thermal wetland. The first thing of note to many on the trip were several patches of *Triglochin striata* and good populations of *Cyclosorus* under kanuka and manuka. Also seen by some and heard by all were several fern birds. Along a stream draining a

vigorously boiling pool there was dense population of *Nephrolepis* with scattered *Christella* and *Cyclosorus* and also some thermal mosses. At the base of the thermal scarp we struggled through some prostrate kanuka (*Kunzea ericoides* var. *microflora* to examine one of two small steaming explosion craters with populations of *Dicranopteris linearis*, *Nephrolepis* and *Lycopodium cernuum*. On leaving this area we were able to look from the brow of a ridge over an extensive thermal wetland dominated by raupo (*Typha orientalis*). Down on the flat we were greeted by the stench of an over cooked dead and rotting cattle beast which some wit commented was still alive because there was gas coming out its nostrils! It appeared that in the past attempts had been made to drain this area without success. A small patch of aquatic herbs sparked an intense debate finally settling on *Limosella linearis* and *Glossostigma* sp. Along the banks of the drain between the hill and the swamp there were several patches on *Nephrolepis* and at the western end of the swamp around a bridge there was dense population of *Christella*.

At 4pm the day was cooling and clouding over we headed back to the vehicles and called it a day. The general consensus was that this trip was well worth while and an eye-opener to most.

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