Tāne's Tree Trust
Native trees for the Future
Newsletter
June 2015
Newsletter No. 36 ISSN No 1176-1245

Restoration of the Awahou Stream using natives

Tane's Tree Trust Field Trip and AGM

Over the last several decades, Jaap and Sue with friends Ham and Jan Gifford, and more recently Tim Sharp, Peter Goodwin and others have transformed 9 hectares of riparian zones along the Awahou Stream, from dense exotics to native shrubland and forest.

The Awahou is one of the major streams flowing into Lake Rotorua. Since riparian areas within the primarily farmland catchment were fenced off, the sides of the stream become infested with blackberry, willow, barberry and other exotics.

The Bay of Plenty Regional Council has supported the project for the last 15 years. It has financed the machinery for the removal of a substantial rubbish dump, as well as for the clearing of very large willows along the stream. In addition the Council provides funding for plants and herbicides.

The restoration of the Awahou is an excellent example of best-practice where conversion of blackberry up to 4 m tall in places interlaced with just about every other aggressive brush weed in the central North Island has been cleared and planted with a range of native shrub and tree species. Many native planting projects are not well maintained and as a result performance is often severely compromised.

With Jaap's background as a nurseryman, his focus is on planting good quality nursery raised plants with well-formed root systems with minimal distortion. The riparian plantings along the Awahou also demonstrate how native timber tree species can be planted along fertile river terraces for future potential speciality stands.

Tane's Tree Trust's 2015 AGM

Where: Jaap and Sue van Dorsser's farm and native plantings along the Awahou Stream

Address: 1 Central Road, off Hamurana Road, Ngongotaha. Telephone 07 332 3860

When: 10am to 3pm - 22nd August 2015

Programme:

- 10am Tea and coffee - Brief AGM
- Selection of brief talks (provisional contributors)
- TTT introduction Peter Berg
- Jaap van Dorsser – Native plant root systems
- Scion Greg Steward
- Bay of Plenty Regional Council
- Ministry for Primary Industries
- 12 noon – Free lunch
- 1-3pm Field visit - Inspection of Awahou Stream plantings

NEW KAURI PUBLICATIONS

Later this year two new publications will be available to Tāne's Tree Trust members.

Thinning of a planted New Zealand kauri stand – Mangatangi Forest, Hunua Ranges;

by Greg Steward and Ian Barton

The first is a paper on the thinning trial done with a Sustainable Farming Fund grant in a planted kauri stand at Mangatangi in the southern Hunua Ranges. The trees were planted at one metre spacing in 1973 and two plots were thinned in 2011; one on a moist, flat terrace and the second on an adjacent drier slope. Unthinned control plots were also established at the same time. All trees were remeasured in 2014 and this paper reports the findings from the measurements taken.

Growth responses were quite marked. Diameter current annual increments were 0.36 cm in the thinned terrace plot but only 0.08 for the unthinned plot. On the drier slope the thinned plot CAI was 0.24 cm and 0.09 in the unthinned plot. Volume mean annual increments were 4.7 m^3/ha for the terrace thinned; 4.2 m^3/ha terrace unthinned; 1.1 m^3/ha for the slope thinned and only 0.4 m^3/ha for the slope control.

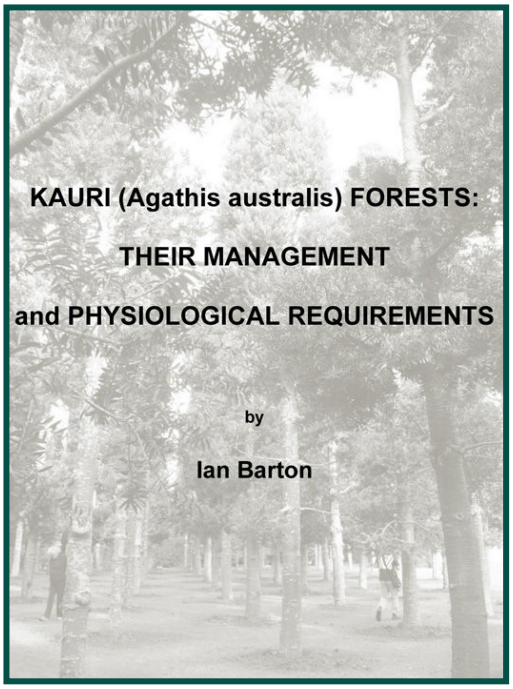
It is expected that the trial will be remeasured early next year.

Kauri (Agathis australis) Forests: their management and Physiological requirements;

by Ian Barton

This booklet (ca 65 pages) is a summation of the lectures given at the School of Forestry, University of Canterbury, by the author, on kauri and its management. It has been augmented by Emeritus Professor Warwick Silvester with two papers; the first on water use efficiency and the second on litter production and nutrient cycling.

As stated in the introduction the booklet, it is a summary of my almost 60 years working with kauri plus reviews of research done by many others. It contains a great deal of scientific information but also covers the establishment of new kauri forests and the management of these and naturally regenerating forests. Because this work is ongoing, references are also made to topics where more research is needed. The work contains 24 figures (including many photographs), 16 tables and 3 maps. There is a comprehensive bibliography and a full index. Many of the figures and all photographs are in colour.



Details of when these publications will be available will be included in our next newsletter

Let's talk about Tahi (One or first)

We can do no better than introduce Tahi using their own words

"On an Island in the South Pacific - a land known as Aotearoa (New Zealand) - you will find Tahi. A secluded ecological retreat of over 740 acres, encompassing surf beach to native forest. In an environment dedicated to conservation and the restoration of ecosystems,"

Tahi is the inspiration of John Craig former Professor of zoology at Auckland University and the inspiration and co-founder of the Tiritiri Matangi ecological island in the Hauraki Gulf. Tahi is over 300 hectares running from the beach to the hills, just north of Whangarei and has been set aside as a natural sanctuary with the following philosophy "*OHUATAHI, (First place of plenty) is the name given to this land by the Maori. At OhuaTAHI - past, present and future are precious, and we combine this philosophy to integrate hospitality with a profound respect for our natural surroundings. Our aim being to preserve both the ecological and the cultural heritage of the land, while providing a sanctuary for people, fauna and wildlife*."

Tahi combines resort accommodation with sustainable land management and provides a number of outdoor activities. They have restored the beach, wetlands, forest and pasture sequestering 800 tonnes of carbon each year and producing 70 tonnes of honey. 230,000 native plants have been planted within and around the 110 ha of forest and scrub and the nursery produces 170,000 seedlings each year for local use.

What has TTT to do with this?

We i.e. TTT, is currently applying for a substantial grant to further develop Tanes Tree Trust totara project initiatives in the north. A part of this is the planting and managing of large numbers of totara seedlings on at least two sites. Tahi have agreed most enthusiastically to provide land for this and to assist in the project. This is an ideal outcome for us and there could be no better place for the project to flourish. John has already planted a number of totara at Tahi and they are doing magnificently well. We already this year have a project to plant totara on a dairy farm at Titoki and our Sustainable Farming Fund application, to work on building code compliance for farm-totara timber, has also been recently approved. The future for totara in the north looks remarkably good. There is an enormous resource of 30 to 120 year old trees in reverting second growth and the proper management of this resource is a major thrust of our current application.

We recommend you take a look at Tahi on the web www.tahibeach.com and ideally take a few days and go visit. It is an amazing development which shows what can be done with so called marginal and reverting coastal land.

Pole stands of naturally regenerated totara forest on farms can be managed for timber, but what about other values?

Kim Jones of the Whitebait Connection and Farm-manager Graeme Helleur, conduct field monitoring of water clarity in the gully.

A dead freshwater crayfish found at the downstream site seems to have been smothered by sediment and/or effected by poor water quality in summer. Koura are very sensitive to water quality.

Michael Bergin setting up a Permanent Sample Plot within a stand of naturally regenerated totara trees on the Titoki dairy farm.

Taratahi Totara and Riparian Management Project

Update:

A dairy farm just out of Titoki, (west of Whangarei), has excellent stands naturally regenerated totara in a gully catchment. At present, the understorey is almost bare in some places under such dense stands of young totara. This is expected to change with active management such as thinning and pruning. Eight permanent sample plots (PSPs) have now been established to record growth-rates and changes in the understorey vegetation development. This project is about integrating native forest within a working dairy farm for timber production, indigenous biodiversity and riparian management.

Kim Jones and Soozee McIntyre from the Whitebait Connection have been undertaking baseline water-quality and freshwater biodiversity monitoring at two sites on the farm - one site at the top of the catchment in the tributary stream that is involved with the totara project, and the other lower down the stream near the main Mangakahia River. So far eels and inanga (one of the adult whitebait species) have been discovered and recorded on the downstream site near the main river. A dead Koura (freshwater crayfish) was also found at this site seemingly affected by the poor water quality there in the summer.

The Inanga were not found in the upstream site. A waterfall below the dam, and between the two sites, seems to be acting as a barrier for upstream migration of the Inanga. Tadpoles, eels and sensitive macro-invertebrates such as mayfly and damselfly nymphs have been found at the upstream site.

Initial results are indicating better water quality and habitat in the totara stream site, due to the established native canopy cover which provides shade, sediment control and less nutrient input from the surrounding landuse and riparian cover (as they don't drop their leaves in the winter like the exotic Willows at the downstream site). The next field monitoring is scheduled for July and monitoring will continue until November 2017.

For more information on this aspect of the project contact Kim Jones at: kim@whitebaitconnection.co.nz.

Donations: A note from the treasurer

All members should be aware that all donations, but not subscriptions, are eligible for a 33.33% tax rebate on your income tax. We will be able to send you a certificate of donation for you to submit to IRD with your tax return.

Please remember us in your bequests.