



## Community Concerns

**Concerns members of the Brooklands Community held regarding siltation (sedimentation) rates in the Lower Styx River and Brooklands Lagoon were expressed recently to councilors and staff from both Environment Canterbury and the Christchurch City Council.**

During a workshop held at the Brooklands Community Centre staff from Environment Canterbury reviewed the state of current knowledge regarding sedimentation in the these areas. Key points included:

1. The major source of contemporary sedimentation in the lagoon is from sediment-laden floodwaters from the Waimakariri that drape sediment over the lagoon during floods and freshes. Much of this sediment is resuspended by wave action and moved out of the lagoon on outgoing tides. Some sediment however remains and the lagoon is slowly infilling from the southern (Spencerville) end towards the north.
2. An historic source of sedimentation into the lagoon was the unstable Brooklands spit, which was prone to erosion resulting in sand washing into the lagoon. Since rock stabilisation works have kept the Waimakariri river mouth in the same position since 1940 the spit has stabilised and no longer contributes sediment to the lagoon.
3. Surveys by Environment Canterbury of the bed levels of the lagoon between 1932 and 1969 showed that 1.4 million cubic metres (the equivalent of filling 550 Olympic swimming pools) of sediment had been deposited in the lagoon.
4. The last survey carried out in 1984 show that changes between 1969 and 1984 were minor. There has not been a full survey of the lagoon bed levels since 1984.
5. The Styx River contributes only a very small amount of sediment compared to the Waimakariri River. Sediment coming down the

Styx River is deposited in the flat stretch of river upstream of the tidal floodgates. Souring of the Styx River bank below the tide gates may be contributing an undetermined amount of sediment in the lower reaches of the river and the lagoon.

The community outlined their concerns as being the effects of sedimentation on flooding potential, the environmental impact on ecosystems, climate change and sea level rise, pressure from new developments, water pollution, navigational safety, and recreation and fishing. There was a very strong desire amongst those present of wanting to look for solutions.

Positive features of living in the Brookland's area included that the area was a safe environment for children, its aesthetic value along with a relaxed lifestyle, recreational opportunities, good social networks, elements of 'kiwiana' and self-reliance, and importantly, nice clean air.

A further meeting is planned once more is known about the historical dredging of the Lower Styx River. It is also planned to investigate further surveys of the Brooklands Lagoon bed level to ascertain if the siltation rates experienced in the past are re-occurring and if this action forms part of a natural cycle.

Contributed by  
**Brodie Young** (Environment Canterbury)

### Report from the Styx Living Laboratory Trust

Trustees are encouraged by the amount of work and the number of different organisations and individuals who are now involved in the work of the Trust. Not only this, but the level of enthusiasm and commitment shown is obviously an indication that the work the Trust is doing is both necessary and valued.

The Summer Scholarship, the Royal Fellowship and the Styx Annual Address are all achievements that should be celebrated. Additionally the need to recruit more volunteers for two new community groups, will bring to five the number of volunteer groups regularly recording valuable data.

Board of Management members, who also give voluntarily of their time and expertise, are to be

applauded too. Apart from meeting together monthly they have now formed themselves into three working parties and taken on added responsibilities in such areas as Research, Monitoring and Education, Facilities, and Funding, Public Relations and Communications.

All these things happen with little fanfare and are not likely to make headlines in the media, but this is the stuff that communities are made of. Hopefully the outcome will be that we enrich our own lives and leave our environment a better place for future generations to enjoy.

**Lesley Keast**, Chair Trustees

### Report from the Guardians of the Styx

Recently, the Guardians of the Styx celebrated their seventh birthday. Our initial aims (promoting protection, restoration and raised awareness of the Styx River system, acting as a lobby group on behalf of local residents, and liaising with Councils and other authorities) remain as our focus. As well as assisting with City Council planting projects, we are hoping to fund another one in an area that can be identified with Guardians of the Styx activities.

The loss of flow in the headwaters of Christchurch's rivers and streams is a major problem. Regularly, we see a pair of photographs. One, taken a few years ago, shows some activity, such as fishing, on one of our streams. The other shows the same spot today, with little or no water, and little hope that there will be flow in the future. While the bulk of the water in our spring-fed streams comes underground from the Waimakariri, the other big factor is the way sub-surface water flows are disrupted by the actions of man. Full marks to the Christchurch City Council for research on the loss of flow in the headwaters of Kaputone Creek, and investigations into ways of restoring some baseflow. We await the outcome with interest.

**Dennis Hills**, Acting Chairman

### EDITORIAL CONTACT

The Christchurch City Council publishes the Styx Newsletter as a service to the community. The newsletter is distributed as widely as possible through libraries, Service Centres and other such outlets. If you would like to receive a personal copy and you live in Christchurch, it can be mailed directly to you. Back copies can also be viewed on the Styx website at [www.thestyx.org.nz](http://www.thestyx.org.nz).

If you have any suggestions, comments, or enquiries regarding subjects mentioned in the newsletter, please contact:

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## Welcome to the 12th edition of the Styx Newsletter

Published at irregular intervals, the purpose of the Styx Newsletter is to inform people about the progress being made in implementing the Styx Vision, which has been developed and adopted for the Styx River catchment. Many who have recently shifted into the area may not be aware that such a long term Vision for the area even exists. The overall Styx Vision encompasses 5 specific objectives that have been developed and adopted by both the community and Christchurch City Council. These objectives are to be implemented over the 40-year period 2000 to 2040. Full details about the Styx Vision, and what has been achieved to date, are available on the Styx website at [www.thestyx.org.nz](http://www.thestyx.org.nz)

Much of the success of the Styx Project is owed to the number of volunteers who willingly contribute their time and talents. There are now further opportunities for people to join a monitoring group as outlined in this newsletter and you are encouraged to consider whether or not you would like to become involved. In the meantime it is hoped that you will find this edition informative and enjoyable reading.

## Fun On The Styx

**Polystyrene, bloomers and the Styx River – not a lot in common you would think, that is unless you were part of the crowd who gathered to witness the Annual Brooklands Raft Race.**

Held each year on the first Sunday in February this year's event attracted fourteen entries; eight in the children's section and six in the adults' category.

No one seemed quite sure when this tradition began; what can be confirmed is that as far back as 1954 boat races were held annually on the Styx River. According to long term Brookland's residents there was a gap of a few years until the 1980's when the idea of using 'home made rafts' surfaced, or sunk as the case may be.

The quality of the workmanship on some of this year's rafts gave rise to the understanding that participating is more important than winning. The excessive number of crew members, the cause of one raft sinking before it had a chance to leave the start line, seemed only to confirm this premise.

The 10am start time was stretched a bit as excited children raced around putting on life jackets and ensuring that a good supply of water bombs had been stowed on board their craft. Lacking a starting gun, a loud yell of "Go" set the children's rafts off along the 2.5km course running between the Spencerville and Brooklands Boating ramps.



*Starting frenzy*

The adults seemed to be less organised than their younger colleagues but finally all craft were launched and after some jockeying for positions, they too took off down the river amidst a frenzy of paddles on water.

Chaney's Bridge provided a great vantage point, not to mention the launch site from which to hurl some unwelcome missiles on the hapless rowers below.

The finish line and some of the children may, in years to come, be able to tell their grandchildren that they were part of the Hostile Hillbillies whose crew won the children's race in 2007. Others are more likely to recount what it is like to try and wash flour out of your hair, or get polystyrene bubbles off your legs.

Does it help anyone to know that the crew of the "Back to Black" raft powered their way down the course to claim the dubious honor of accepting the 'toilet seat trophy' for yet another year? Probably not, unless you are a member of the Brookland's Fire Brigade.

What is valued, and should be cherished, is the coming together of local residents, of participating and having fun, and the sense of community spirit that such an event generates. Obviously one young bystander comprehended that he had missed something this time round as he was overheard declaring, "I'm going home right now to get started on my raft for next year."

# Learning in the Styx

**Winning a Community Board Award added yet another layer to an already successful and continuing project involving both students and teachers of Casebrook Intermediate School.**

Although the programme for the 2006 Heritage Awards Ceremony states that the award was for the creation of "Styx Mill Art and Technology Projects," anyone who has visited Casebrook School will know that this is only the 'tip of the iceberg' leading to a much larger and fascinating learning experience.

On entering the School foyer one is immediately aware of the influence art plays in the culture of this school. Two metre long banners hang from the rafters and the walls are festooned with examples of woven baskets and colourful paintings. One of the most predominant banners features a small appliquéd black duck paddling its way across a sea of blue fabric interspersed with stylized green rushes.

An escorted tour of the school grounds reveals



Students, Kieran McCann and Alex Mehlhopt, along with teacher Shona Kelleher receiving the award from Myra Barry (Deputy Chair of Shirley Papanui Community Board) and Terry Ryan (Rehua Marae and Trustee of the Styx Living Laboratory Trust)

more. A school trip to the Styx Mill Conservation Reserve in nearby Hussey Road proved the impetus, leading to the development of a project that seeks to recreate a little piece of the Reserve within the school grounds. Each year students visit the Reserve, then utilising an arsenal of learning tools, seek to

make a lasting contribution to the décor or ecology of their surrounds, learning many different skills along the way.

In the early years of the project pupils contributed two large outdoor murals featuring the Styx Mill Reserve and the Panako Walkway. Subsequent students, not to be outdone, each created a ceramic tile about one particular aspect that impressed them on their visit to the Reserve. These tiles grouped together and framed make up three colourful outdoor pictures hanging on a classroom wall above a native garden.

Each year students seem to outdo the efforts of the year before and in 2006 the school's quadrangle was in the process of being adapted from a patch of scrappy lawn into a section of native bush, intersected by walkways. Student-made art works are dotted around with the pièce de résistance being a remarkable piece of sculpture constructed from polystyrene and strong enough to provide seating for 4 or 5 students. Covered in mosaic tiles the inspiration for the design of this seat has been many of the birds and plants found within the Styx Mill Conservation Reserve.

For Year 8 student Jaden Harris, one of the highlights



Individual student-made tiles combining to form outdoor picture

of the visit to the Styx Mill Conservation Reserve was the sighting a hawk. Back in the classroom, with the help of the digital photo he had taken, Jaden was able to identify it as a New Zealand native, the harrier swamp hawk. Most people are aware that the kiwi and bellbird are native birds, but Jaden expressed surprise that the hawk he had seen also qualified for this label.

One of the five aspirations outlined in the 40 years Vision for the Styx catchment is that it becomes a place of research and learning. Possibly without realising it, students attending Casebrook Intermediate School are fulfilling that intention and in the process they are learning to create a unique environment for themselves.

Visiting Styx Mill Conservation Reserve students gained a greater understanding of the plant, bird life and ecology of the area. They then took what they had learned and, utilising soft materials technology, produced quality visual art works including a computer generated presentation of their visit to the Reserve. All these activities were of such a high standard that members of the Shirley Papanui Community Board concluded that they were indeed worthy recipients of a 2006 Heritage Award.

# Ranger's Report

Who loves all the wet weather we have had lately? Native plants certainly do. The wet weather has been great for all the native plantings that have gone in during the past, however weeds also love the wet stuff and have really taken off during the Christmas break.

In the Styx Newsletter dated July 2005 the Ranger's Report tells of Dr Eric Godley and I gathering seeds from a rare prostrate kowhai located in West Melton that Dr Godley had photographed over forty years ago. The seedlings have now been growing for over 18 months and as you can see from the photo are looking great. The Christchurch City Council

nursery at Smith Street propagated almost fifty plants and when they are of a suitable size they will be planted out at the Styx Mill Conservation Reserve.

Natural regeneration is a big part of the planting plans at the Styx Mill Conservation Reserve. The photo shows native plants growing in old rotting tree rings. Here seeds have fallen from the above native tree canopy, resulting in free plants that come already potted.

When planting out areas of native plants, old dead willow logs are used around plants to help moisture retention, and suppress weed growth. This action has the added bonus of providing food for insects and therefore also, food for our native birds.

With bell birds now being frequently heard around this Reserve the process of bringing back the dawn chorus of our musically talented native birds is well on its way.

**John Parry,**  
Park Ranger



Prostrate kowhai growing from seeds collected July 2005

# Styx Digest

## SUMMER SCHOLARSHIP

Partnership works. An inspired example of this is the 2nd Styx Scholarship, which is open to tertiary students who wish to conduct further research in the Styx Catchment during their summer break. The Styx Living Laboratory Trust, Lincoln University and the Shirley Papanui Community Board all contribute in differing ways to this scholarship; this year awarded to Guinevere Coleman.

The scholarship covers a ten week period and this year Guinevere spent much of that time collecting and comparing invertebrate samples taken from a boxed drain, a restored section of the drain that is now an open waterway and the main Styx River. The data and specimens collected could then be compared with samples collected prior to restoration work on the drain beginning.

Tentative results from Guinevere's work found little change in the invertebrate community within the boxed drain, although changes in the proportions of snails, worms and chironomids were noted. When compared with samples taken from the Styx River, it was found that in the River the sensitive invertebrates (mayflies, cased caddis and free-living caddis) were found predominantly on the gravel substrate, rather than where silt was present.

Guinevere is to make a presentation outlining results and conclusions reached as a result of her work to Scholarship partners later during the year.

## SCIENCE TEACHER IS AWARDED FELLOWSHIP

Bill van den Ende, Head of the Biology Department at Burnside High School, was recently awarded a New Zealand Sciences, Mathematics and Technology Fellowship administered by the Royal Society of NZ. This means that for one year Bill will leave the classroom behind and be working in conjunction with the Christchurch City Council and the Styx Living Laboratory Trust to complete an aquatic vegetation and environmental survey of the Styx River. The data generated will then be statistically analysed and the findings used to determine the most suitable management options for the river. Once this work is completed it will form a model for similar surveys of the Avon and Heathcote rivers and their tributaries.

One of Bill's tasks will be to identify sites that can be used for future monitoring of macrophytes in the Christchurch area and to develop methodology for community monitoring programmes. The definition of a macrophyte being, "any plant that can be seen with the unaided eye, such as aquatic mosses, ferns, liverworts, or rooted plants." Community volunteers are needed to continue the work by regularly collecting data in order that comparisons and changes can be recorded and analysed. (Refer section entitled Volunteers Needed). Bill explains that after 30 years teaching science in the classroom this is a wonderful opportunity for him to do some "hands on practical research that will bring benefit to the community."

## SECOND STYX BOOK PUBLISHED

"Settling Near The Styx River" by Dennis & Helen Hills is a 259-page book providing information about almost 150 individuals or families who settled in the Styx area during the 19th century. In the "Christchurch Press" of 24 June 2006 Mike Crean's review stated, 'The authors are long-time residents and renowned historians of the Styx area, in the north of Christchurch. This volume follows their first book, "The Styx Story". It is an invaluable record of the early settlers and their families in the district, extending from Harewood to Brooklands. The Hills have researched thoroughly, using many genealogical leads, to present a complete bank of data on Styx pioneers. Local readers will devour this, but outsiders, too, will find interest in families, many of whose names still grace streets in the area'.

The book retails for \$45, or it can be obtained (signed, if requested) at the same price (post paid) from the Styx History Group, P O Box 20-311, Christchurch 8543.



Kowhai growing at Styx Mill Conservation Reserve



Native plants growing on rotting logs

# VOLUNTEERS NEEDED

**Would you like to become involved?**

In reading this newsletter it is likely that you have picked up how worthwhile the work being done by community volunteers is proving to be and that is one of the reasons why more volunteers are required.

**Groups that need volunteers include:**

## INVERTEBRATE MONITORING

This is an existing programme that involves approximately 2 hours in the field, with a partner, collecting samples. Once collected the samples need to be examined in the laboratory by microscope and classified within 2 days of collection. This task takes between 2 – 4 hours.

## SPRINGS MONITORING

Currently this programme is in the process of being set up and will come on stream later in the year. It will involve fieldwork recording water flow at particular spring sites within the Styx catchment.

## MACROPHYTE MONITORING

The setting up of this programme is one of the tasks being undertaken by Bill van den Ende (refer section entitled In Brief, Science Teacher is Awarded Fellowship) and will commence later in the year.

No previous experience is required for any of these programmes, as full training will be given. However, there does need to be a commitment to attend training sessions and to monitor regularly, which in some cases can be as little as twice a year.

Those already involved with monitoring programmes have discovered that they have increased their knowledge and understanding, become competent in new skills, enjoyed meeting new people and gain satisfaction from making a significant contribution to the long term welfare of their environment and community.

*If you would like further information about what is involved, or are interested in becoming part of any of these programmes, please contact Victor Brown, telephone 960-8555.*