

**SeniorNet (Pakuranga) Inc**  
12 Ben Lomond Crescent, Pakuranga Auckland 2010  
Telephone 09 576 4500

Established in 1996 especially for Pakuranga, Howick and Botany residents



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## **MARCH HELP DAYS**

|           |        |      |
|-----------|--------|------|
| Monday    | 03 Mar | 1pm  |
| Thursday  | 13 Mar | 10am |
| Wednesday | 19 Mar | 1pm  |
| Tuesday   | 25 Mar | 10am |

**If a bottle of poison reaches its expiration date, is it more poisonous or is it no longer poisonous?**

**Our next Meeting,**

**Friday 7 MARCH**

at 10.00am

St Andrews Church Centre  
Corner Ridge Rd and Vincent St



The main entrance is in Vincent Street with parking in the grounds and disabled parking near the basement entrance.

### *Visitors welcome*

There will be a short Special Meeting to approve new draft constitution. If time allows Brian will talk on the new PhotoScan app.

The main speaker will be Jacqui Knight from the Moths and Butterflies of NZ Trust. Hopefully we will be able to take better care of our Monarch butterflies in future and learn interesting things about some of our wildlife.



## **5 NEW MEMBERS**

Derek Bartle  
Rhondda Bartle  
Benni Vivian  
Tony Vivian  
Harley Wilson

**As I watch this generation try and rewrite our history, I'm sure of one thing: it will be misspelled and have no punctuation.**

At the March meeting we will take time out for a Special Meeting to deal with the formal process of approving the draft Constitution.

To action the Constitution with the Registrar of Incorporated Societies we need to attach an attendance register to show we met the quorum requirements of 10 financial members. We will have an extra table in the Church foyer with about 4 blank forms which require your Membership Number, Name and Signature. Having 4 forms means 4 queues which should reduce the delay in signing. If your membership number eludes you, don't worry it's on your badge or we can fill that in for you.

If there is spare time after the Special Meeting I will demonstrate a phone App "PhotoScan" which is very good at digitising print photos even if they are stuck in an album.

In regards to digitising slides, a reminder that we have a slide copier at the Learning Centre which you are welcome to use for a donation. You could copy about 200 slides in a session. This device also copies print photos but is less convenient and is limited in size and state of mounts compared to using the Photo Scan App.

## Agenda for Special Meeting of Pakuranga SeniorNet Inc.

**10am, 7 March 2025**

Call meeting to order.

Confirm that the minimum Quorum of financial members 10 is present.

Remind members to sign the Attendance Register.

Item of business: The proposed draft new constitution is submitted for approval. It requires a majority vote from those attending. If approved it will be submitted, together with the Attendance Register, to the Registrar of Incorporated Societies for adoption.

Discussion

Vote

Close meeting

## Ramblings

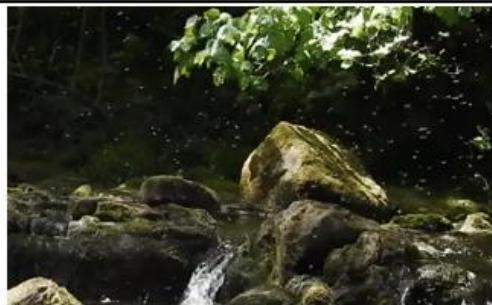
*Dawn Howarth*

How have you been coping with this hot sticky weather. I am definitely a winter person and hate feeling drained by the heat. I have installed ceiling fans everywhere and I love them—so do guests who use our spare bedroom. They certainly make sleeping easier. The one and only heat pump in our house keeps us warm all winter but it doesn't do the same great job in the summer. It is even too hot to go and water my very disappointing garden. I put in 18 runner bean plants and I would be lucky to have had 18 beans from them. Tomatoes too, were disappointing as was my first attempt at growing potatoes. What a laugh, I thought I would have heaps of delicious beans and potatoes for Christmas dinner. Ha ha, I managed to harvest a small bowl of potatoes late January from one bag, the other I have still to dig up. Because of the guests I have relied on store-bought which seem to be cheaper right now. The ones I tried to grow cost about \$150 for the 2 bags they grew in, and two bags of vege compost, and a bag of seed potatoes, a bag of potato plant food, not to mention hours of watering and loving care. But guess what, I have learnt a good lesson—don't trust my gardening skills.

I do keep hugging however and I hope you do too.

### USING AQUATIC MACROINVERTEBRATES AS WATER QUALITY INDICATORS, by K Senner

As the main speaker at our February meeting I explained how I had spent much of my working life studying freshwater macroinvertebrates, as water quality indicators. Any healthy body of water will be teeming with macroinvertebrates. These are tiny animals without backbones. These creepy crawlies can range from tiny snails, ostracods, and mites that can be less than a millimeter in size to, may flies, stone flies and caddis flies that can range in size from a few millimeters to 40mm.



Adult midges swarming along a river bank

In the 1980s, John Stark from Canterbury University assigned indices to over 200 aquatic macroinvertebrates found in the stony riffles of New Zealand's rivers. The indices range from **1** to **10** and reflect each macroinvertebrate's tolerance to water pollution. Macroinvertebrates with a score of **1** are tolerant of a range of stressful conditions, such as high levels of water pollution, low oxygen levels, and high temperatures. In contrast, macroinvertebrates with a score of **10** will only thrive in high-quality waters.

As we walk along the banks of a river, we often encounter flying insects. There may be great swarms of tiny midges or larger insects, some resembling moths. These swarms represent the short lived reproductive adult stages of insects that have spent many months feeding and growing in the river as larvae or nymphs. Because these invertebrates inhabit the water for extended periods of time, they are continuously exposed to any changes in water quality that occur during their growth. In contrast, a water sample tested in a laboratory reflects only the quality of the water at the moment it was collected. Over the preceding months, a water system may have been impacted by various damaging events, which are reflected in the macroinvertebrates surviving in the waterway.

**ADVERSE WATER CONDITIONS** can be broadly categorized into four main types.

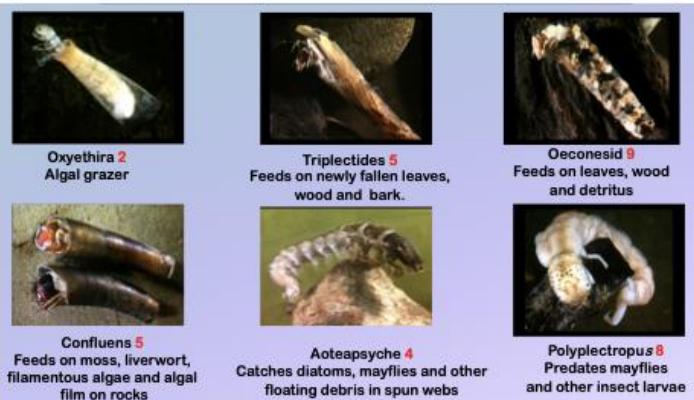
**ORGANIC POLLUTION**:-This occurs when organic material, such as milk spills or animal effluent, enters the water. Bacteria flourish in these conditions, depleting oxygen levels and making it difficult for other organisms to survive.

**INORGANIC POLLUTION**:-This includes substances ranging from heavy metals, such as lead, mercury, and arsenic, to salts like nitrates, phosphates, and sulphates. Some may occur naturally, while others are introduced through industrial activities. These pollutants can eliminate the majority of organisms in a water system.

**SEDIMENT**- Excess sediment enters waterways through land erosion, deforestation, or construction activities. This reduces water clarity, smothers aquatic habitats, and disrupts the feeding and respiratory processes of many freshwater organisms. Fine sediment can also transport harmful pollutants, further degrading water quality.

**HEAT**- Many industrial plants rely on nearby water systems for cooling their manufacturing processes, and the removal of shade-providing vegetation along a riverbank can cause temperatures to rise above optimal levels. This can occur during the summer when flows are low and temperatures are high. Elevated temperatures reduce dissolved oxygen levels, stressing aquatic life.

#### The larval stages of different species of caddis fly.



*As adults they look very similar but as larvae they may be quite different. They have adapted to occupy different ecological niches. The numbers in red reflect the quality of water required for a particular species of caddis fly to thrive. The quality of the water determines the availability of different food sources.*

## Kate's Take continued ...

The Resource Management Act requires industries adjacent to a waterway or building developments to monitor their impact on the local water quality. Established businesses will be required to implement a regular monitoring plan. A typical plan would involve taking samples twice a year from sites upstream and downstream of the activity, as well as some distance further down stream to monitor how the water system has recovered from any impacts arising from the enterprise.

The invertebrates are extracted, from the samples, identified and counted. An average of the tolerance scores is found and multiplied by 20. This supplies the **Macroinvertebrate Community Index (MCI)**

### INTERPRETATION OF THE MCI RESULTS

|                               |               |
|-------------------------------|---------------|
| • High quality water          | More than 120 |
| • Possible mild pollution     | 100-119       |
| • Probable moderate pollution | 80-99         |
| • Probable severe pollution   | Less than 80  |



### POLLUTION TOLERANT ANIMALS



**SEE LEFT** - Paroxythira (2) is one of only two caddis species able to thrive in low-quality waters. They graze on algal films that are often associated with high nutrient runoff. Chironomus (1) midge larvae and Oligochaete worms (1) have adapted to low-oxygenated water by producing haemoglobin, which enables them to store oxygen when it is available. The Psychodid (1), drain fly and the Syrphid fly (1), rat tailed maggot are both adapted to live in highly polluted water. They have a "snorkel" that projects out of the water so oxygen can be directly absorbed from the air. The Ostracod (1) is a tiny crustacean the size of a grain of rice. It looks like a cockle as it has a shell. It moves rapidly on the surface so has access to air. Often it shares its shell with algae, which will generate oxygen.

**SEE RIGHT** – Note the high scores of all these invertebrates. They can only survive in high quality waters. They all have gills that enable them to extract oxygen directly from the water so they cannot survive where the water has been depleted of dissolved oxygen by bacteria.

They are also intolerant of sediment which clogs the gills and impedes the flow of water over the gaseous exchange membranes of the gills. Ichthybotus burrows into the fine gravel and so it is particularly vulnerable to sediment.

### POLLUTION INTOLERANT ANIMALS



The microscope images for this article were created by Stephen Moore, Manaaki Whenua.

K Senner Feb 2025

# Sunnyhills 55<sup>th</sup> Jubilee

Thursday  
April 3rd 2025

## MIX 'n' MINGLE

School Hall  
6 pm - 8 pm  
\$25 per person



Friday  
April 4th 2025

## OPEN DAY

10 am - 12 pm Tours  
12 pm Picnic Lunch  
1:30 pm Jubilee Assembly



Sunnyhills School, Pakuranga, Auckland is celebrating their 55th Jubilee! A Mix 'n Mingle Reunion on Thursday 3 April, 6pm – 8pm is followed by an Open Day (Friday 4 April), including school tours, a picnic lunch and culminating in a Jubilee Celebration Assembly.

Are you a past pupil, parent, or staff member? Then join us to celebrate the rich history, achievements, and cherished memories that have shaped our school!

Whether you are in Auckland or elsewhere in the country or world but will be in Auckland on 3rd or 4th April, if you wish to reconnect with others from your Primary school days, **register for the Mix'n'Mingle by Friday 14 March at [www.sunnyhills.school.nz](http://www.sunnyhills.school.nz) and click on '2025 Jubilee'.** If you don't register, you will still be welcome to join us at the Open day on Friday 4th April.

## COMMITTEE

|                                 |   |
|---------------------------------|---|
| Chairman                        | Brian Erikson<br><a href="mailto:brian@senpak.nz">brian@senpak.nz</a>       |
| Treasurer                       | Mervyn Coward<br><a href="mailto:mervyn@senpak.nz">mervyn@senpak.nz</a>     |
| Secretary                       | Dawn Howarth<br><a href="mailto:dawn@senpak.nz">dawn@senpak.nz</a>          |
| Membership Secretary            | Robyn Carter<br><a href="mailto:robyn@senpak.nz">robyn@senpak.nz</a>        |
| Systems Manager                 | Graeme FitzGerald<br><a href="mailto:graeme@senpak.nz">graeme@senpak.nz</a> |
| Publicity                       | Warren Taylor<br><a href="mailto:warren@senpak.nz">warren@senpak.nz</a>     |
| Course Co-ordinator             | Mike Empson<br><a href="mailto:mike@senpak.nz">mike@senpak.nz</a>           |
| Website Assistant               | Keith Erikson<br><a href="mailto:keith@senpak.nz">keith@senpak.nz</a>       |
| Guest Speaker Co-Ordinator      | Maggie Burrill<br><a href="mailto:maggie@senpak.nz">maggie@senpak.nz</a>    |
| Asst Guest Speaker Co-Ordinator | Fay Mullins<br><a href="mailto:fay@senpak.nz">fay@senpak.nz</a>             |
| Newsletter Editor               | Dawn Howarth<br><a href="mailto:dawn@senpak.nz">dawn@senpak.nz</a>          |

YOU DRINK  
REGULARLY OR  
OCCASIONALLY?

I DRINK OCCASIONALLY,  
BUT THE OCCASION COMES  
REGULARLY.



What happens when Old Car Guys get sent to a nursing home ...

**My wife called to tell me she saw a fox on the way to work.**

**I asked her how she knew it was on it's way to work.**

**She hung up on me.**

**I accidentally passed my wife a glue stick instead of a chap stick..  
She's still not talking to me ...**

**I tried to come up with a carpentry pun that woodwork. I think I nailed it but nobody saw it.**

## COURSE TIMETABLES, HELP DAYS AND COURSE BOOKING INFORMATION

To view all SeniorNet courses and timetable, click here

<http://www.senpak.nz/courses/>



### Course Booking Information

- \* You need to be a member of SeniorNet to take part in our classes.
- \* If you need assistance in deciding on a course, please contact the Tutor who will answer any questions and also take your booking.
- \* We require you to pay a course fee to cover the cost of notes and other expenses. Please bring the correct cash to the first session.
- \* Our Courses are all held at our Learning Centre at  
**12 Ben Lomond Crescent, Pakuranga.**
- \* Please park on the road or in the Gym carpark across the road as no parking is permitted on site. **If you use the gym parking (not available Monday or Thursday mornings) it is important that you park on the left, next to the gym. You can printout the parking advice from our website (under the Courses tab) or write your own and leave on the dashboard of your car.**

WAIVER: Some of our members voluntarily and willingly give help and advice to other members on matters relating to computers, associated equipment and software. This includes information contained in the columns of this newsletter and other publications including our SeniorNet Website. This help or advice is taken solely at the recipient's risk and imposes no responsibility or liability of any kind, either on those providing such help or advice, or the newsletter Editors or SeniorNet (Pakuranga) Inc.