



The Inlet

Newsletter for Guardians of Pāuatahanui Inlet

AUGUST

2017

The Inlet is a newsletter that brings together local and regional news affecting the Pāuatahanui Inlet and its environs.

The Inlet comes out three times a year and current or back issues can be downloaded from our website.

The newsletter includes items of concern that affect the area as well as general interest topics for everyone.

Please contact us if you would like to contribute to The Inlet.

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Inside this issue:

- Photographic Competition 2017 2
- GOPI AGM 2017 4
- Seagrass Transplant Trial - the Outcome 5
- On the Horizon 5
- FEATURE ARTICLE: Fernbird Transfer 6
- GOPI Cockle Survey 2016 - The Results 8
- Family Corner 11
- Emergency Numbers 11
- Membership Form 12

FROM THE CHAIRPERSON

The Guardians management committee always seem to be busy. It is very rare for a committee meeting not to have a full agenda for discussion and planning. To keep up with this demand we need to have a high degree of motivation and one of my ways of achieving such motivation is to think about why it is important to do so.

Primarily, the ecological values of the Inlet are widely recognised, and protecting and promoting these values naturally dominates our activities. Another reason to value the Inlet, however, is as a place we can use for regular exercise.

A quick search on the internet shows up studies that indicate exercising in a natural environment has major positive effects on physical and mental health.

A report from the UK Government site '[Natural England](#)' in 2009 found that, if everyone in the UK was given equal access to green space, the estimated savings to the National Health Service would be 2.1 billion pounds per year.

Another study in 2012 found that regular exercise in a natural environment can cut the risk of suffering from poor mental health by 50%.

So my message to all, as Spring, hopefully, starts to take hold, is to create opportunities for getting out and about and exercising around the Inlet as often as possible.

As the research suggests, you will feel much better for it.



Tony Shaw

PHOTOGRAPHIC COMPETITION 2017

For the first time in the history of the photographic competition, going back to 1999, GOPI ran five different categories for our 2017 event giving more subjects for entrants to explore. Along with the usual *Nature*, *Recreation*, *Human Impact* and *Artistic* themes, we added *Scenic* to the mix so that those photographers who preferred to capture the magic of the Inlet in all its moods, without significant digital enhancement, could enter images that were primarily landscapes of its waters and surrounding hills in various lighting conditions. This category was a definite success with a number of entries capturing some very beautiful views to delight the eyesight.



One of the Scenic category images: 'Inlet Sunset' by Natalie Levy. (Highly Commended)

Naturally, the additional category resulted in five more awards overall, *1st*, *2nd* and *3rd* along with the best in *Junior* and *Youth* categories, and several additional *Highly Commended* images, all selected by our judge, Geoff Marshall. So, in the end, a total of 49 images were on show at the Helen Smith Room, Pataka, when the annual prize-giving ceremony was held on 20 May.

Some of the other winners of the day are displayed here to show the range of artistry exhibited



'Ruffled Feathers'. Keith Harrison: First - Nature



'Dad Dodgems'. Joseph Love: Second - Recreation



by our entrants. All the winning and highly commended photographs can be viewed on the GOPI Google Photo site with the following address:

<https://goo.gl/photos/cKBDqaT6BwekjYbM6>.

The event was well attended on the day and a majority of the winners came along to receive their prizes and listen to our guest speaker, Cr Dale Williams ONZM. Dale was asked to stand in for Mayor, Mike Tana, at the last minute when Mike was unexpectedly called to other business.

Dale was a great help overall, giving us a hand at the beginning of the meeting by assisting with the set-up of tables and chairs and the spread of refreshments provided for all to enjoy at the end of the awards ceremony. Dale, a former Mayor of Otorohanga, also gave a refreshing, off-the-cuff, talk that referred to the work of GOPI and other organisations looking after, what he believed was, the most important environmental feature of the Porirua area.



'Pole Position'. Roger Hayman: Highly Commended - Human Impact

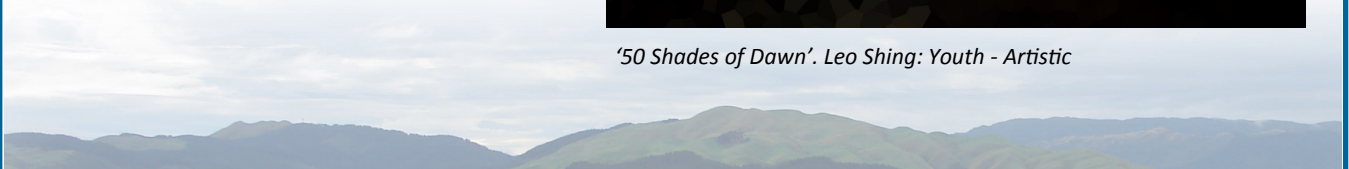
As always, GOPI wishes to thank its sponsors, without whom the competition would not be the success it always is.



'Moonlight on the Inlet'. Anaé Mundell: Junior - Artistic



'50 Shades of Dawn'. Leo Shing: Youth - Artistic



GOPI AGM 2017

Our AGM this year started off in a slightly unusual way. The venue was to be St Mary's church, Whitby, at 7:30pm, but at the due time the doors were locked and we couldn't contact anyone to let us in. If it wasn't so chilly we could have held the meeting outside, and someone did suggest the local pub instead! In the end we were highly enthusiastic with Helen Reilly's offer of a warm lounge at her home where we could congregate for the evening to conduct the formal and informal proceedings. After some shuffling of chairs to accommodate everyone (which included 9 other members of the Guardians whom we were very happy to see) the meeting got underway at about 8pm.

The formal AGM was a very simple affair, unlike those of the previous two years and, after a summary of the annual report and the presentation of the financial statement, all committee members, with the exception of two, were re-elected for another year. Mary Dinniss had already expressed her desire to concentrate on the Forest & Bird Management Committee of the Pāuatahanui Wildlife Reserve where she is very heavily involved, and Philippa Richardson also tendered her resignation.

For the 2017-2018 year the GOPI committee is made up as follows:

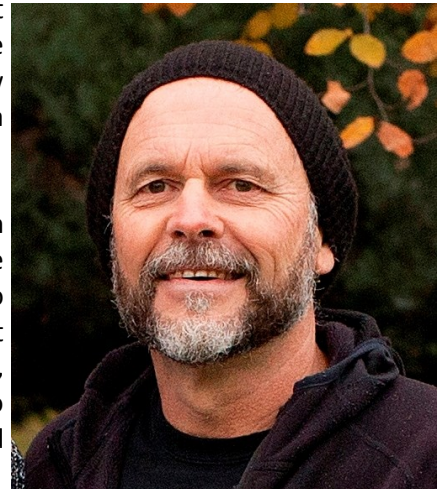
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|-----------|----------------|
| Chair | Tony Shaw |
| Secretary | Helen Reilly |
| Treasurer | Stephen O'Neil |

Plus:

- Janet Ryan (membership secretary)
- Michael Waldron (newsletter editor and webmaster)
- John McKoy
- Christine Stanley
- Lindsay Gow
- John Wells

Following the formal proceedings we were keen to hear our guest speaker for the evening, Cr Dale Williams ONZM. Dale was on the council of Otorohanga for 19 years, 10 of them as mayor. He now represents Porirua City Council for the Northern Ward and as a member of the Te Awarua-o-Porirua Whaitua Committee.

Dale's address to the group focussed on his life experiences, both in the private and public arena. He summarised his time as a motorbike mechanic, eventually owning his own business and then retiring to enjoy life. However, his calling turned to public service, working first at Otorohanga. Dale told us how much he loves being a councillor, recommending it as a career. It was a career opportunity presented to his wife that eventually brought Dale and the family to Wellington, and to his election as the Northern Ward councillor.



Dale Williams

Dale addressed a range of issues facing the future for Porirua and included references to the Whaitua Committee's work and the developments in and around the city that would affect the harbour. He comprehensively answered a number of environmentally aligned questions from the floor. Dale was very positive about the opportunities for Porirua and his whole address was fluent and altogether very interesting.



SEAGRASS TRANSPLANT TRIAL - The Outcome

You may recall, back in April 2015, that we reported on the creation of a trial of seagrass transplants from areas of high growth to parts of the Inlet where it was once known to grow but had now disappeared. It was hoped that meadows of the grass could be re-established in these areas if conditions were conducive to its survival.

We now know that the transplants did not survive in the new area, while the holes in the meadow left behind by the removal of plants have filled up again, indicating that the plant is still thriving in large parts of the Inlet.



Dr Megan Oliver, of Greater Wellington Regional Council, has provided a summary of the results of this trial. She writes:

“Almost two years after seagrass transplants were trialled in Pāuatahanui Inlet the monthly monitoring carried out by GOPI volunteers has come to an end. Though it is disappointing that the seagrass did not survive at the Ration Point site, this, in itself, is an interesting result and points to issues other than light-availability being the problem. Light loggers [measuring the amount of light available] have been deployed throughout the experimental period and these generally indicate that the light conditions were favourable for seagrass growth.

NIWA and GWRC scientists suspect that sediment related factors, such as smothering, lack of oxygen and toxic sulphides (which produce that eggy smell), might be contributing to the demise and failure of seagrass to re-establish at Ration Point.

The Ivey Bay seagrass meadows from which the transplants were taken have recovered well.

GWRC and NIWA are hugely grateful to Mary Dinniss and Tony Shaw for their tremendous efforts transplanting the seagrass, photographing the plots and reporting back each month. The information has been presented at two international conferences alongside results from transplants in Whangarei.”

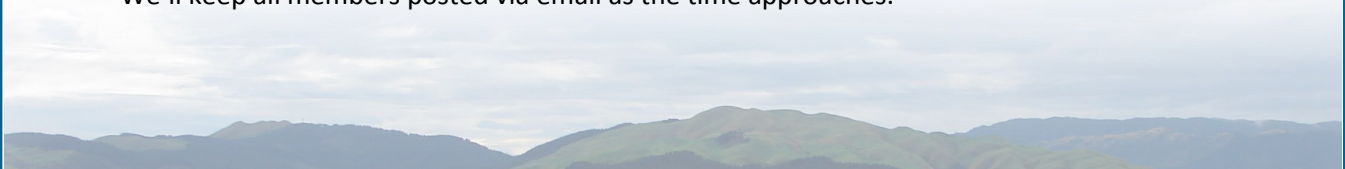
We thank Megan for her feedback on the trial. It gives good closure to what has been a rewarding and informative experiment for the Guardians to conduct.

ON THE HORIZON

Inlet Clean-Up

This year's clean-up has just entered the planning stage and the date of Saturday 12 November has been set.

We'll keep all members posted via email as the time approaches.



FEATURE ARTICLE

We have written before about the planned introduction of our native fernbird into the local wildlife reserve at Pāuatahanui, reporting in April that the transfer of a number of birds would occur around the time of the newsletter's publication. Since then the translocation has not only been completed successfully but the outcome has been far better than anticipated. This month's Feature Article covers this project in detail.

Fern Bird Transfer to Pāuatahanui Wildlife Reserve

The New Zealand fernbird, *Bowdleria punctata* or mātātā, is an endemic perching bird which favours dense, low growing, wetland vegetation. Often heard but seldom seen, it is a shy, well-camouflaged sparrow-sized bird with a long ragged tail. It is a reluctant flyer and prefers to scramble through the undergrowth in search of the insects that are its main diet.

The bird used to be very common throughout New Zealand but draining of swamps and other human encroachments caused a severe loss of its habitat. It is now classified as 'declining' or 'at risk' nation-wide. Last seen in Pāuatahanui in the early 1980s, fire destroyed its remaining habitat there, and it has been absent from the area ever since.

The Pāuatahanui Wildlife Reserve Forest and Bird management team have been developing the salt marsh at the outlet of Pāuatahanui Stream for the last 30 years. The plan has always been the creation, almost from scratch, of a natural estuarine environment similar to other areas around the Wellington region. It is now considered to be the largest and most important salt-marsh in the Lower North Island. The development has involved the planting of thousands of natives of various species to replicate the type of vegetation found in these habitats and, after many years, it has reached a mature state offering ideal conditions for a reintroduction of the fernbird. The decision to undertake such a project was made some time ago but its implementation has required a considerable amount of planning including the gaining of approvals and consents and working on a number of logistical and biological considerations.



Image derived from Ormond Torr: Adult North Island Fernbird. Wanganui, January 2009. (New Zealand Birds Online)

For a start DOC specified that a minimum of 40 birds would be needed to establish a sustainable breeding population in a new location. This quantity could only be taken from a population large enough to withstand such a loss and one which was also within a 4-hour road trip from Pāuatahanui - the maximum travel time considered allowable to avoid overstressing the birds. Choices were, consequently, significantly limited by these requirements but the solution was to be found in South Taranaki. [Lake Rotokare Scenic Reserve](#), near Eltham, is a community-managed wildlife sanctuary that has seen an explosion in fernbird numbers since a predator proof fence was installed a number of years ago. ...And, it is within a half-day's

drive from Pāuatahanui. An application to remove 40 birds from Lake Rotokare Reserve was made to DOC and to the Lake Rotokare Trust, whose members visited Pāuatahanui Reserve before agreeing to the transfer. Approval from local iwi was also essential. In the end the request was granted and planning could begin.

For any relocation programme approved by DOC a qualified conservation biologist must be employed to manage the project. Kevin Parker, who runs a conservation service called '[Parker Conservation](#)', is the most experienced relocation expert for fernbirds. Kevin was contracted to oversee this undertaking.

A major concern for the success of this particular translocation was the different environments found in the two locations. Lake Rotokare is a bush clad reserve with lowland swamps, while Pāuatahanui Reserve is an estuarine habitat. There are different constraints on the vegetation of each area which give a different character to the whole environment. Also, previous projects of this nature have involved movement from mainland to island locations, whereas this one would be from mainland to mainland. For these reasons this translocation was very experimental and the outcome, uncertain.

Because taking all 40 birds at once for a doubtful outcome would present a risk of losing them all, it was decided to split the project into two phases, taking only 25 birds to begin with. If this failed the loss would not be as great, whereas if it was successful, approval for phase 2 could be given.

The time of year was chosen to allow the birds to settle and re-establish territories prior to breeding season, September to the time they fledge in February. The week of 19-25 April was selected and accommodation, transport and personnel all booked for seven days to cover contingencies like weather and bird capture rates. It was thought the best time to capture would be mornings, so the birds could be caged and on the road before 10am. Release by 2pm at Pāuatahanui was then possible. While no daily targets were set, Thursday, 20th, saw 10 birds successfully corralled, with another 10 on Friday and a final 5 on Saturday. In the end it only took three days to reach the goal of 25.

Fernbirds are captured using mist nets. To encourage them into the trap pre-recorded fernbird calls are played on each side of the nets. The birds follow these sounds as if an intruder, or a possible mate, were entering their territory.

As fernbirds are susceptible to stress each cage held just one bird, together with some local vegetation, and the sides were screened to cut out external views. For the non-stop, four hour, drive the vehicle carried a registered bird handler, a driver and also a co-driver who would provide relief during the trip. Kevin Parker was the bird handler on the first day.

A welcome party awaited their arrival at the Pāuatahanui Wildlife Reserve with several volunteers on hand to carry the cages to the point of release. Several photographers were also there to record the historic occasion for the local papers and wildlife organisations. A blessing was given by Taku Parai, Ngati Toa Kaumātua, as the caged birds were set down in the reserve and then the handler carefully opened each in turn to allow the birds to escape into the undergrowth. Most birds flew happily into the shrubbery but one seemed sluggish and, unfortunately, was later found to have died from the stress of the trip.

On the second day the next 10 were captured and translocated using the same routine. A further two of these birds also succumbed to the ordeal.

The third day saw a change of plan. To help reduce the stress levels, capture was delayed until the afternoon when the final 5 birds were netted, caged and driven south. This meant they had fed well during the day and were, therefore, more able to cope with the disruption. Arriving late on the Saturday at Pāuatahanui, these 5 individuals were then left to sleep in their cages overnight in Stout Cottage and released early the next morning. All five appeared to have survived.

So, of the 25 planned translocations, 22 were successfully introduced into the Pāuatahanui Reserve to begin their new life. This was actually considered to be a pretty good result.

Since the birds were brought to Pāuatahanui a close watch has been kept to see if they have stayed in the reserve or moved outside its boundaries. There was a real concern that they might roam into surrounding areas in the search of a more recognisable habitat and that Pāuatahanui Reserve would not retain sufficient numbers to be sustainable. However, according to current reports, many, if not most, are still in the reserve and appear to be doing well. This is very good news. Now, because of the obvious success achieved with this first translocation, the go-ahead has already been given for the second phase. Planning has begun for next year's operation which has been fixed for the same dates as in 2017.

Meanwhile, the management team are running a pest and monitoring programme to give the new arrivals the best opportunity possible as it will take time for them to settle in and become fully established. A final survey will be conducted by the Ornithological Society of New Zealand in the spring to determine the birds' territories and their pairing success.

GOPI COCKLE SURVEY 2016 - The Results

Report provided by Keith Michael - Fisheries Scientist (NIWA)

Porirua Harbour, encompassing Pāuatahanui Inlet and the Onepoto Arm of Porirua Harbour, is the largest estuary in the Wellington region and its conservation widely considered as important by everyone. Since 1992 the Guardians of Pāuatahanui Inlet and community volunteers have undertaken nine, three-yearly, surveys of cockles in the Inlet. These surveys provide an important time-series of data to monitor trends in the abundance and size-structure of cockles in the area between high and low tide (the intertidal zone). By extension these data provide a way of monitoring the long-term health of the Inlet.

To be able to detect changes in the numbers and sizes of cockles the recorded data needs to be comparable for all surveys. Cockles need to be sampled, identified, counted and measured in the same way with each survey so that the changes in cockle numbers and sizes reflect changes in the cockle population, not changes in the way the data was recorded. The most recent survey, undertaken in December 2016, used the same locations and sampling methods (see Figure 1 below) as before. Volunteers dug standard volumes of sediments (quadrats) from predetermined locations that were sampled in previous years, sieved out all the shellfish and recorded the numbers and sizes of live cockles (see the cockle survey report on our website for details).

Before December, and the storm and floods that had just occurred, the cockle population size in Pāuatahanui Inlet was expected to continue a long-term upward trend. However, the 2016 survey showed a decline in the population size since 2001 (See Figure 2 below). For example, the total population size increased 87% between 1995 (180 million cockles) and 2013 (336 million cockles). However, the population size of cockles declined by 14% between 2013 and 2016 to 288 million. Most cockle counts were lower than in 2013 although there were signs that the population might have continued to increase if it hadn't been for the floods. The highest count (a 176-cockle quadrat) was higher than for any of the previous surveys.

Factors relating to the earthquake and floods prior to the December 2016 survey probably had a significant effect on the cockle population in the Inlet. The high levels of sediment deposition observed in the intertidal areas, and the high turbidity of the seawater, are likely to have caused mortalities that reduced cockle density and, therefore, population size. These factors are also likely to cause ongoing physiological effects. The high sediment deposition also affected sampling and data comparability to previous surveys. Two of the 31 transects shown in Figure 1 below could not be sampled because of the high levels of sediment deposition observed in the intertidal areas.

Cockles are assigned to two size groups: adults (greater than 10 mm in length) and juveniles (10 mm and less in length). More adult cockles were found close to low water. Adult cockle densities have remained



relatively high at Brown's Bay, Pāuatahanui, and Kakaho, and have increased at Mana and Motukaraka West since 1998. Adult cockle densities have decreased at Seaview Road. Juvenile cockle densities show broadly similar trends, increasing over time.

The proportion of juvenile cockles in the total population has increased since 1992 when it was 1%, to 16.2% in 2010, declined to 12% in 2013, and increased markedly to the highest of any survey (17.4%) in 2016. Fifty one percent of the cockles at transect 19 (Motukaraka) were juveniles. Relatively high numbers were recorded at Pāuatahanui and Bromley, suggesting heightened recent recruitment (the settlement and survival of juvenile cockles). The largest numbers of juvenile cockles were at the same sites as adults, suggesting cockle larvae were attracted to settle in areas of high cockle densities (conspecific settlement) or the survival of cockle spat was higher in areas with the highest cockle densities.

The negative trend in the cockle population size in 2016 probably reflects changes in the environmental conditions in Pāuatahanui Inlet, and the large flood events produced conditions that are less favourable for cockles. Rebuilding of the cockle population will depend on how long these conditions persist, along with the other climatic and biological factors that determine the recruitment and survival of cockles. The next survey will show how the population has responded.

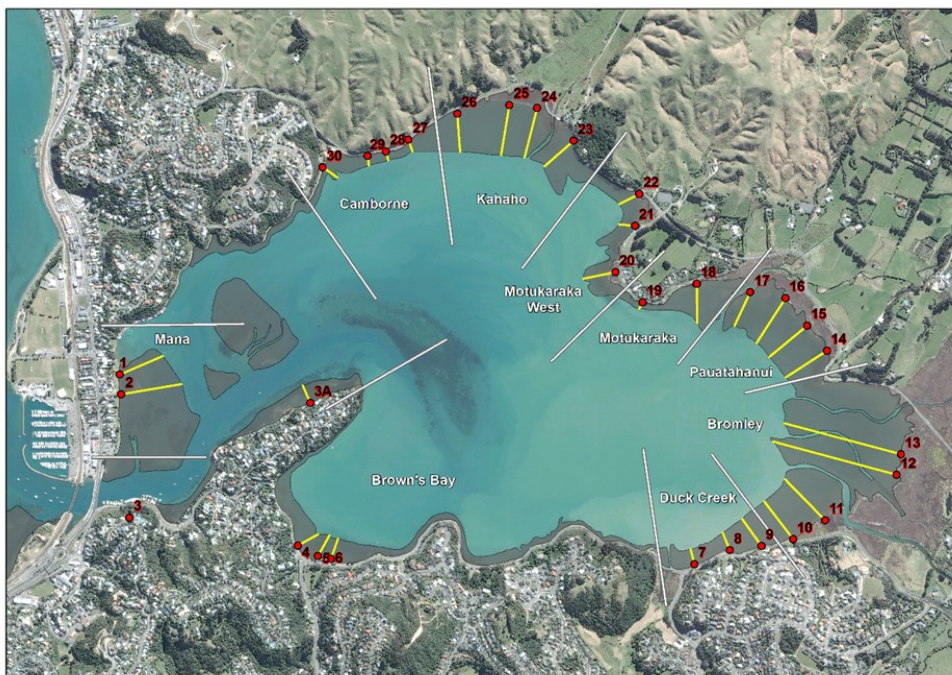


Figure 1: Location of the 31 transects in Pāuatahanui Inlet sampled for intertidal cockle densities and population size structure by the Guardians of Pāuatahanui Inlet (GOPI), 1992–2016.

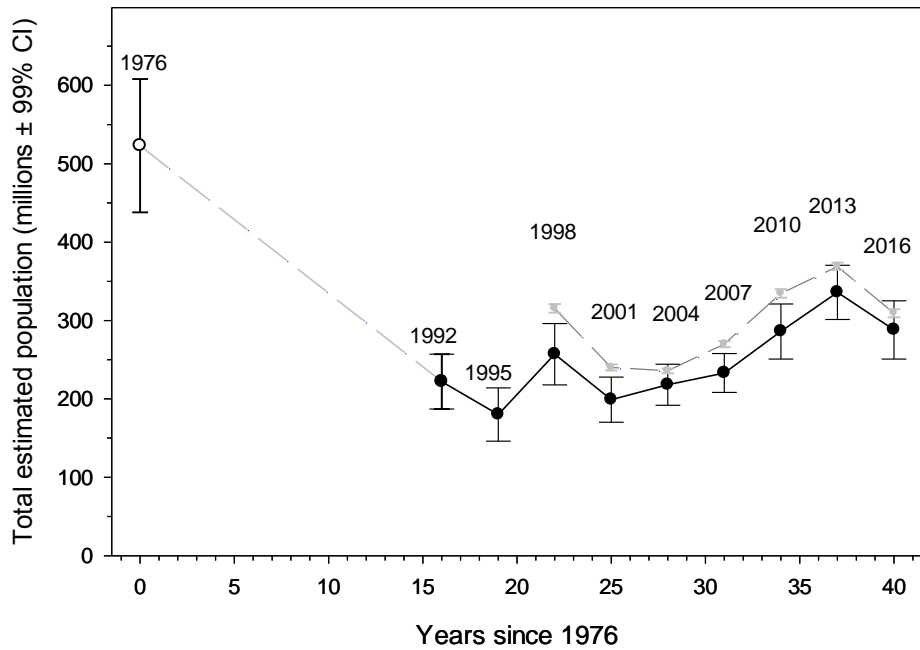


Figure 2: Estimates of total cockle population size and 99% confidence intervals for Pāuatahanui Inlet, 1976–2016.

The initial survey in 1976 (Richardson et al. 1979) used a different survey design. Surveys since 1992 carried out by the Guardians of Pāuatahanui Inlet have used the same survey design and methods.

Previous estimates of population size, shown in black, used counts from individual samples (quadrats). This method is likely to over-state the variance in the estimate (as shown by the ranges of confidence intervals) and reduce the ability to detect significant differences between surveys.

A second estimate, shown in grey, uses an average count for each transect, adjusted by the length of transect. These estimates show less variance.



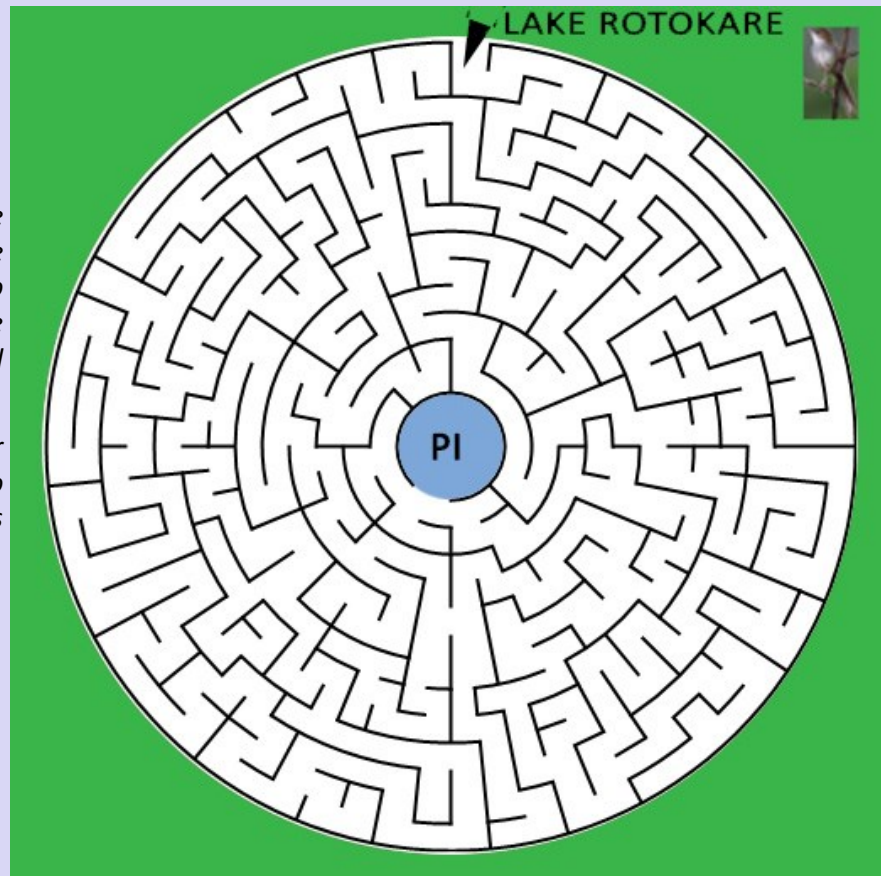
FAMILY CORNER

FERNBIRD MAZE

We included a maze in an earlier issue of The Inlet newsletter but that was some time ago. So here is another one, this time circular in shape.

Fernbirds are going to be relocated from Lake Rotokare Scenic Reserve to Pāuatahanui Wildlife Reserve at the eastern end of Pāuatahanui Inlet (PI).

See if you can find your way through to Pāuatahanui Inlet in as short a time as possible.



PLEASE SIGN UP A FRIEND OR NEIGHBOUR

Sign up a neighbour, friend, or another family member. Just explain to them that membership numbers really count in giving us a strong voice to argue for what we all value about the Inlet. Membership forms can be downloaded from our website <http://www.gopi.org.nz/assets/membersForm/Membership-new.doc> or copied from the one at the back of this newsletter. Better still, if you've received this newsletter by email, just forward it to others with a note encouraging them to join.

EMERGENCY NUMBERS FOR THE PĀUATAHANUI INLET

Pollution: Discharges of contaminants to air, land, storm-water drains, streams, rivers or sea and for after hours consent enquiries: Greater Wellington 0800 496 734 (24 hours)

Boating infringements: Greater Wellington 384 5708 (24 hours)

Illegal fishing activity: Ministry for Primary Industries 0800 476 224 (24 hours)

Pāuatahanui Wildlife Reserve: Department of Conservation 0800 362 468

Let us know what you have reported so we can keep an accurate record and follow up if necessary.
233 9391 (Chairman, GOPI) or pauainlet@gmail.com.



Guardians of Pāuatahanui Inlet

www.gopi.org.nz
pauainlet@gmail.com

Membership Form: new members

To join the Guardians of Pāuatahanui Inlet, you can pay your subscription either online or by post. **IF YOU ARE PAYING ONLINE, PLEASE REMEMBER TO FILL IN THIS FORM WITH ALL DETAILS, AND EMAIL OR POST IT TO US.**

Online payment

1. Pay your sub via e-banking into our Westpac account 03-1533-0009387-00. In the 'Particulars' or 'Reference' columns, **YOU MUST** write your surname **AND** initials **AND** the period of your sub (1-yr or 5-yr).
2. Then fill in this form and either email it to us at pauainlet@gmail.com or post it (see next column for our postal address)

Postal payment

1. Write a cheque made payable to 'Guardians of Pāuatahanui Inlet'.
2. Then fill in this form and send it, along with your cheque, to: Membership Secretary, Guardians of Pāuatahanui Inlet, Box 57034, Mana, Porirua 5247.

Please fill in your details for our records. If you are filling in this form electronically, **click** at the beginning of a dotted line and then type.

Name:

Address:

E-mail: Phone:

Please put next to the subscription you are paying (electronic completion – **highlight** the box and type lower case x.) We are also very grateful for donations. (We are a registered charity for tax purposes: registration number CC47523.)

| | | | |
|-------------------------------|--|--------------------------------|--|
| One-year individual (\$12.00) | <input type="checkbox"/> | Five-year individual (\$50.00) | <input type="checkbox"/> |
| One-year family (\$15.00) | <input type="checkbox"/> | Five-year family (\$60.00) | <input type="checkbox"/> |
| Donation: \$ | Do you require a receipt for your sub? | <input type="checkbox"/> | or your donation? <input type="checkbox"/> |
| Date subs paid: | Reference appears as: | <i>(e-banking only)</i> | |

We'd like to send you newsletters and notices via email. May we do this?

Please tell us which of our activities you would like to be part of.

| | | | |
|----------------------------|--------------------------|--|--------------------------|
| Annual Clean-up day | <input type="checkbox"/> | Submissions to local bodies | <input type="checkbox"/> |
| Three-yearly cockle survey | <input type="checkbox"/> | Our educational programmes for schools | <input type="checkbox"/> |
| Website and video clips | <input type="checkbox"/> | Other: | |

NOW EMAIL OR POST THE FORM. THANK YOU AND WELCOME