



The Inlet

Newsletter for the Guardians of Pauatahanui Inlet

AUGUST

2012

The Inlet is a newsletter that brings together local and regional news affecting the Pauatahanui 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*.

P O Box 57034

Mana

Porirua 5247

pauainlet@gmail.com

www.gopi.org.nz

Inside this issue:

Inlet Supports the Fish and Chip Trade!	2
Murray Williams at the AGM	2
Eel grass Under Scrutiny	2
Feature Article: Tunnelling Mud Crab	3
On the Horizon	3
Photographing Mud Crabs	4
Developing Pauatahanui— Judgeford	4
Plea for Milk Cartons	4
Family Corner Emergency Numbers	5
Membership Form	6

FROM THE CHAIRPERSON

At long last the wait is over! The implementation of major components of the Porirua Harbour Strategy has begun.

By the end of this year Greater Wellington Regional Council hopes to have completed its Harbour Estuary Restoration Plan which aims to improve the ecological health of both arms of Porirua Harbour. For the Inlet the plan will provide programmes to restore, nearer to their former state, habitats that are fundamental to Inlet ecology such as eel grass beds, salt marshes and the riparian edge of tidal streams. Investigations will include looking at whether some of the man-made barriers to the natural spread of these habitats can be removed or modified.

The Harbour Strategy strongly supports the involvement of local communities as much as possible in hands-on work with the restoration projects. I look forward to seeing the details and working with you and GWRC to see how we can be involved in really taking care of our Inlet. I hope we will see the first of the projects starting early next year.

Your committee for 2012-2013

The following committee was voted in at the AGM at the end of May.

Chairperson	John Wells
Secretary	Denis Fairfax
Treasurer	Dick Fernyhough
Committee	Wendy Edwards Beverly Fairfax Janet Ryan Tony Shaw Michael Waldron

Subsequent to the AGM Jen Deben volunteered to join the Committee and was formally co-opted in June.

The committee now boasts a nice balance of skills (scientists, accountants, historians, editors, teachers) coupled with experience in advocating for the wellbeing of the Inlet. Read more about your committee members at www.gopi.org.nz/committee.

John Wells

INLET SUPPORTS THE FISH AND CHIP TRADE!

Recent research by NIWA confirms the long-held belief that Porirua Harbour is an important nursery for rig, the species that forms the backbone of the fish and chip industry in New Zealand. Rig, known to science as *Mustelus lenticulatus* and to the fish trade as lemon fish, is a common member of the shark family found in relatively shallow inshore waters. With a maximum length of 1.5 metres it is dwarfed by the 3-4 metre mako and bronze whaler and by the 7 metre great white shark and is of no danger to bathers.

Rig breed successfully only in harbours and sheltered inlets of the North Island. Porirua Harbour is one of these. While not as important as Kaipara and Raglan harbours, Porirua is now known to be of high value as a nursery for first and second year fish.

Rig are caught in commercial quantities all around New Zealand. Although they are landed throughout the year, the largest catches are made between October and March. Rig grow rapidly, reaching maturity between five and eight years, and live to at least 15. It is females that migrate into the shallow harbours and give birth to an average of 11 live young each year. Males are seldom found in these areas.

Genetic studies tell us that all rig belong to one common stock and that females do not return to their own place of birth to deliver their young. Thus rig found in the South Island must have migrated there from the north during their early years.

We should be proud that the Inlet is helping to sustain the mainland's fish trade.

MURRAY WILLIAMS at the AGM

Dr Murray Williams was our guest speaker at the 2012 AGM. A retired researcher with DoC, Dr Murray's specialist subject is ducks and he gave a brief summary of the changing populations that are likely to have inhabited Pauatahanui Inlet in recent historical times, and those we see at present. His summary looked at the likely characteristic species that may inhabit the area in the future.

Highlights of the talk were the loss of blue duck from local streams, the interbreeding of grey duck

with the mallard, and the key reason for the presence of black swan which depend on the continued presence of beds of eel grass, much affected by nitrogenous run off into the inlet. Greater urbanisation in the future is likely to promote populations of paradise shelduck and the canada goose, while causing a decline in mallard. He thought it unlikely that we will see a greater diversity in duck populations in the future than we do now.

EEL GRASS UNDER SCRUTINY

Eel grass, a species of seagrass, is one of the most important components of Inlet ecology. It used to be abundant throughout the Inlet but has disappeared from the eastern end. This is a worry as it provides food or shelter for a wide range of animals, from minute crustaceans to black swans, and is crucial to the success of the Inlet as a nursery for several fish species (visit our web page www.gopi.org.nz/eel-grass/ for more information). GWRC commissioned NIWA to investigate the causes of this decline and explore the possibilities for restoration. NIWA reports* that the Inlet has lost about 40% of its eel grass cover since 1980, mostly from the eastern end. This decline correlates in time with the doubling of nitrate concentration in the sea water in this area since the 1970s, possibly coupled with increased siltation. NIWA makes the obvious recommendation that these probable causes need to be eliminated before successful restoration is likely, but does suggest that some transplantation experiments could be done now to assess the current situation.

* "*Seagrass restoration in Porirua Harbour*" pdf available at www.gw.govt.nz/coasts-and-estuaries



FEATURE ARTICLE

Continuing our promise of articles featuring the Inlet's flora, fauna, history and people, this time we introduce another of the numerous animals found around its shores— a crab.

Tunnelling Mud Crab

If you take a walk through the Wildlife Reserve at Pauatahanui Village and head out toward the hides you will come to the upper intertidal region where the estuary is regularly covered by the tide but still exposed to air for more than six hours on each tidal cycle.

In the mud at the side of the track you will see what look like the entrances to tunnels and you may wonder what produced these features. The answer is *Helice crassa*, the tunnelling mud crab; and indeed, tunnels are exactly what they are.



The olive-green tunnelling mud crab has an almost square carapace and two short-stalked eyes, and is found in large numbers on healthy mud flats. It digs elaborate tunnels in the mud, often with more than one entrance. Active by day, tunnelling mud crabs eat the tiny living organisms (diatoms, algae and bacteria) that grow profusely in this rich and often warm, sunlit, environment. Food is extracted from the mud which is scooped up with flat, spade-like, chelipeds (nippers) and carried into the mouth. The material is sorted by its mouthparts to separate the micro-organisms, which are eaten, and the sediment which is wiped away by the chelipeds to form pellets which can

be seen on the surface of the mud. An area only the size of a hand is sufficient to feed a mud crab for life.

H. crassa individuals sleep in their burrows at night and often plug the entrance with mud to keep out intruders. During the day this crab will seldom move far as it must return frequently to its burrow to wet its gills. It will defend the burrow against intruders and may adopt a threatening posture if in danger; but it is also very wary and will scuttle away at the slightest movement. When out of the burrow it is easy prey for many of the Inlet's wading shore birds (e.g. oystercatcher and spoonbill) as well as black-backed gull and kingfisher. It is also eaten by various estuarine fish like parore, cod, flounder and yellow-eyed mullet, so usually returns to its burrow when the tide is in.

These crabs mate between May and August and the female lays up to 16,000 eggs which take 42 days to incubate. Living in the estuary they can be exposed to wide ranges of temperature and salinity and both immature and adult crabs are admirably adapted to survive these extreme conditions.

ON THE HORIZON

Looking forward to looking back

Good progress is being made on a book about the history of Pauatahanui. While some history of the area has been published there is no complete account of the land and its people from earliest to modern times. The Pauatahanui History Group expects to publish its book early next year. For more information the group's website is www.pauatahanuihistorybook.co.nz.



PHOTOGRAPHING MUD CRABS - by Don Laing

Don Laing is a biology teacher for Te Aho o Te Kura Pounamu (The Correspondence School). To support the students with photo resources Don often photographs wildlife subjects and has had experience with *Helice crassa*. In this brief article Don gives us the benefit of this experience by explaining how he approached the task when asked for pictures of this crab.

"I looked for a low tide during daylight and found the next one was around 6.30 p.m.

Having done similar photography before, I knew that tele lenses would be needed because the mud crabs grow to only about 5cm width and because one can't move very much when the crabs emerge.... Try using a standard focal length and squatting for 5 minutes so you are close

enough for a decent image size in camera and you'll see why standing with tele lenses is the best option particularly for an older bloke like myself.

Watching the crabs emerge is fun - their stalked eyes are the first part you see - after scanning the surroundings, the crab slowly emerges, ready to dart back inside at any movement they detect.

After they have fully emerged it is possible to very slowly bring the camera into position without sending them scuttling back into their tunnels.

The gear: two cameras, one with a 70-200 zoom, the other with a 170-500 zoom, shooting at a sensitivity of ISO 1600, required due to the low slanting light."

DEVELOPING PAUATAHANUI-JUDGEFORD — How might it affect the Inlet?

It is inevitable that development of the Pauatahanui to Judgeford highway will occur in the future. A growing demand for rural lifestyles plus the Transmission Gully Motorway is likely to provide incentives for commercial development. Porirua City Council's proposed plan* for the future of the area allows for an increase in the number of lifestyle blocks and the development of a small village at Judgeford. It also canvasses the idea of a light-commercial and highway-services centre for part of Lanes Flat.

Any of these developments could adversely affect the Inlet if not properly managed. PCC knows this and therefore states categorically that *"any further development must ensure that there is a reduction of sediment inputs and pollutants and there is an increase in ecological restoration (increased plant cover, improvements in waterway habitats and species communities)"*.

These proposals deserve our support subject, of course, to recognising that the devil is always in the detail.

* www.pcc.govt.nz/News---Events/Public-Consultation/Pauatahanui-Judgeford-Structure-Plan

PLEA FOR MILK CARTONS

Friends of Maara Roa are a restoration group with the aim of bringing back the natural habitat of the Cannons Creek valley near Porirua. They propagate lots of seedlings to plant out each season and are asking people for **cardboard** milk cartons to do this task.

If you are able to give any number of these cartons (they must be cardboard) please take them in to:

Friends of Maara Roa
c/o Glenview School
106 Bedford Street
Porirua



FAMILY CORNER

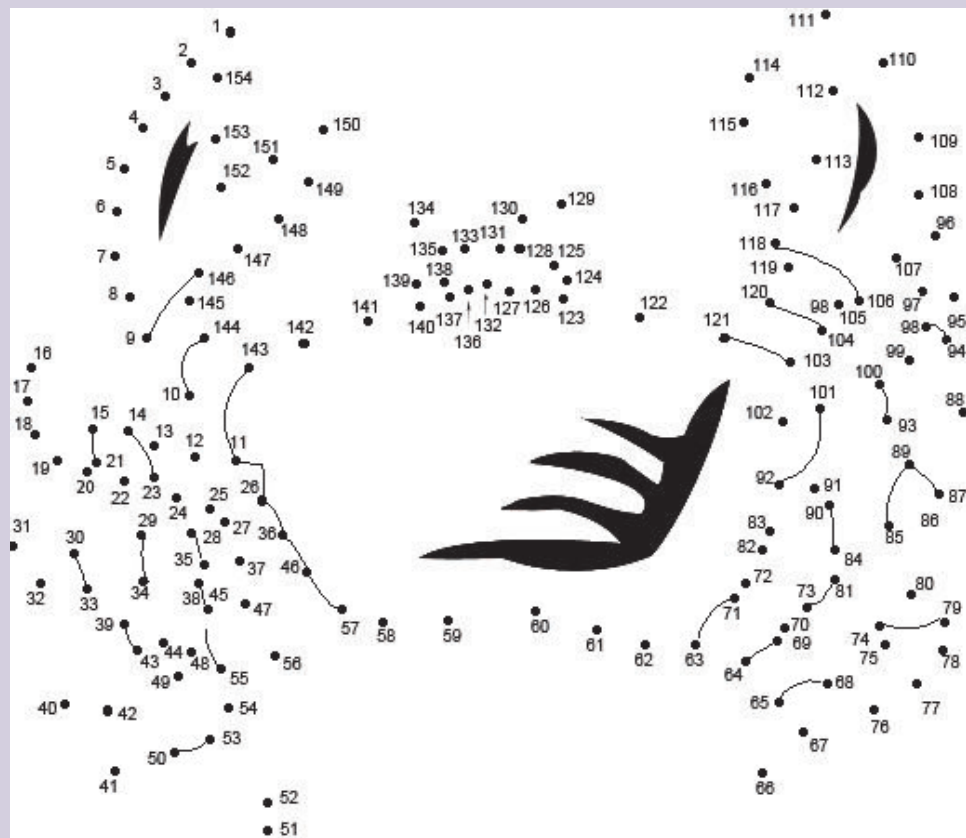
Connecting the dots

Here you will find a drawing that has been turned into a series of dots.

You have to connect the dots, starting with No. 1, to discover what the final picture will be.

For best results it is a good idea to avoid straight lines between each dot, and always make sure you touch each one with your pencil. Don't take short cuts!

Good luck



Activity

Follow the link below to find an activity sheet on the tunnelling mud crab that uses a lot of the information in this newsletter's main article.

www.gopi.org.nz/assets/Educational-resources/Animals-of-the-Inlet/Tunnelling-mud-crabs/1-Tunnelling-mud-crabs-activities.doc

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 www.gopi.org/nz/membership-form or copied from the one at the back of this newsletter. The cost is tiny but the significance of the added voice could be substantial.

Every new member will receive a free Living Waters DVD.

EMERGENCY NUMBERS FOR THE PAUATAHANUI 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)

Fisheries issues: Ministry of Fisheries 0800 476 224 (24 hours)

Pauatahanui 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 2557 (Secretary, GOPI) or pauainlet@gmail.com.



Guardians of Pauatahanui Inlet

www.gopi.org.nz

pauainlet@gmail.com

Membership form: new members

To join the Guardians of Pauatahanui Inlet you can pay your sub either online or by post.

Online payment

1. Pay your sub via e-banking into our Westpac account 03 1533 0009387 00. In the 'Particulars' or 'Reference' columns, write your surname and initials.
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 Pauatahanui Inlet.
2. Then fill in this form and send it, along with your cheque, to Membership Secretary, Guardians of Pauatahanui 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) Five-year individual (\$50.00)

One-year family (\$15.00) Five-year family (\$60.00)

Donation: \$ Do you require a receipt for your sub? or your donation?

Date subs paid: Reference appears as:

(e-banking only)

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 Other:

Three-yearly cockle survey

Stream monitoring

Submissions to local bodies

Our educational programmes for schools

How else do you think we can care for the Inlet? Please use a separate sheet or just email us.