

Seashore Newsletter



ISSUE TWO: JANUARY 2007

Welcome to “Seashore Newsletter” - Western Underwater Research Team’s official newsletter which will be issued every six months to keep supporters and interested parties up to date with Project news. In this first issue of 2007 we explain our aims, objectives, and where we are at with the survey projects. Details at the back of this newsletter explain how you can help and where you can get more information.

The ‘Western Underwater Research Team’ (WURT) is an established (in June 1993) marine environmental group consisting of voluntary supporters, who had an interest in an awareness of the marine environment and its preservation. WURT is a non-profit making group with the members giving freely of their time, skills, and equipment. The personnel within the group are members of the community who are diverse in their interest, occupations, and ages.

Such is the diversity of marine life around New Zealand there is plenty to interest everyone. Utmost is the understanding of coastal dynamics and the effect that human influences have had on these environments. There has been minimal research on species interrelationship within changing habitats and we invite you to be a part of our programmes by contributing any interesting observation that you might have experienced whilst diving. We will also discuss how you can assist in the guardianship of our marine environment which, in some areas around New Zealand’s coast has fallen into an unacceptable state. Now we have the almost impossible task to somehow take into account climate change – do you have any comments or ideas to help us on this subject?

News Update

Hi All – thanks for your supporting feedback about the first edition of the ‘Seashore Newsletter’ and if you have any issue(s) that you would like to share with us or a question, please contact us. We are sometimes asked where Western Underwater Research fits in the order of things, as we are not a lobby organization or associated with any institution or national body. Our mission statement is marine conservation through research and although our survey projects are not exactly earth shattering, most of our work has been in supporting marine research projects and / or with other groups.

Marine Biosecurity:

The first Research Team involvement with the marine environment was an underwater survey of the Asian mud mussel *Musculista senhousia* infestation off Cheltenham Beach, North Shore City (17/7/1993). The idea of us getting involved with this marine invader was encouraged by marine biologist John Walsby. The survey also connected us with a shellfish survey being conducted by freelance biologist Mary Gardner and Judy Gilbert founder of the Cheltenham Beach Caretakers. Back in 1972 researchers counted 4000 cockles to a square metre. The count completed in July 1993 was just 31 - such was the impact of over-harvesting which prompted Ngati Paora iwi to declare a rahui (conservation area) on the beach. Now the mud mussel infestation threatened the whole eco-system of the beach by smothering the sea floor with a mat of mud made by the shell’s anchoring to each other by threads (bysuss). These threads



A spiny starfish feeding on Asian mud mussels - *Musculista senhousia*.

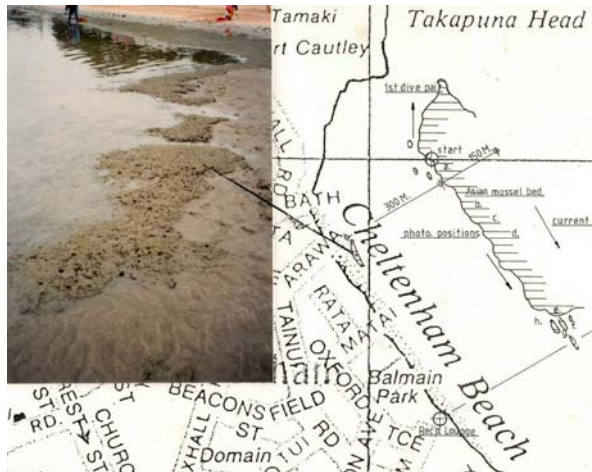
collect sediment and form a mat of some 15 to 20 cm in height. The first underwater observation of this mat was unforgettable and it affected the dive survey team in different ways. It wasn't an awe inspiring observation, more how do you deal with it? The Research Team continued to monitor the area for some two years, noticing on each survey dive an increase in starfish numbers. Eventually, the infestation broke up leaving the sandy beach with patches of mud and some of us frustrated about the way the authorities had handled the problem. Their only input was to comment that it was probably introduced in the late 1970s by the release of ship's ballast water. First recorded at Black Reef near Auckland in 1982 it is now widespread between the Bay of Islands and the Coromandel with some colonies reaching densities of 16,000 per square metre. It may seem the mud mussel had been broken up by the starfish predation at Cheltenham Beach, but some months later a new infestation had taken up residence in an area of the Upper Waitemata Harbour and the cycle started all over again. Needless to say the new infestation was picked up by another concerned group who ran with it for a number of years.

The underlining thing was, as a group we felt absolutely helpless and fourteen years on, alien marine invasion is still a major concern to us. By the time a new species is found and identified it is too late to do any thing about eradication. To reduce the risk of transferring unwanted organisms, ships coming into New Zealand are required to exchange ballast water taken near land with water free from coastal influences. This must be taken at least 200 nautical miles from land, and in water over 200 metres deep but this doesn't control fouled ships hulls.

Last year, concerned about the latest find of a newly introduced sea squirt *Styela clava*, the Research Team contacted Biosecurity New Zealand (BNZ) for information and resources to help identify introduced species. Thanks to Brendan Gould (Senior Adviser – Marine) who sent us a series of identification slates to which we made up in to giveaway kits. Also a distribution of the slate series was recently conducted through magazines like Dive New Zealand. Finally, it is very important that we all get behind BNZ and keep a concerted lookout for these unwanted introduced marine pests.



'Biosecurity New Zealand' giveaway identification slate kits.



Cheltenham Beach – WURT Asian mud mussel infestation map (17/07/ 1993).

To report any suspected exotic land, freshwater, and marine pest, call 0800 80 99 66 and for all you scuba divers out there, if you see anything suspicious while you are diving, collect a sample and/ or take a photograph. Remember to also take note of the location. Make a set of slates part of your dive gear and don't stow it, use it. For more information visit the BNZ website www.biosecurity.govt.nz

WURT References: Public Forum Marine Invaders (30/3/1996) Marine Rescue Centre, Mechanics Bay, Auckland. Ballast Water 'A Marine Cocktail on the Move' - Royal Society of New Zealand Miscellaneous Series 30.

Projects Update

One of the pleasing aspects of conducting underwater surveys you occasionally get to meet interesting people. After finishing a Waterfall Bay survey we returned to Little Huia and came in contact with a family group. Mum is associated to the Auckland Museum and she was collecting a particular species of sea slug *Ercolania felina*. Common in tidal pools on rocky shores and of the order of Sacoglossan, it feeds on a green alga *Chaetomorpha aerea*.

The algae is often observed covered in oxygen bubbles which it produces. The sea slug feeds on the liquid contents of the swollen cells. *Ercolania feline* grows to about 8mm in length and is black in colour except for a lighter coloured foot and a semi-transparent white band running forward from each eye.

NB *Ercolania feline* is its given new name – old name of the sea slug was *Stiliger felinus*.



Sea slug *Ercolania feline* feeding on the filamentous green alga *Chaetomorpha aerea*.

For more information on sea slugs visit www.seaslugforum.net

Pollen Island – moto manawa (Waitamata Harbour) and **Little Huia** (Manukau Harbour).

We pick up some interesting stuff when helping with beach clean ups like hypodermic syringes. The needle exchange programme in New Zealand is very good and we don't have the associated problems like they do in some parts of Australia, but a few do get through by being discarded irresponsibly. We might only have a few syringes wash up on Pollen Island's beaches each year but it is enough to be part of our health and safety procedure. For instance nobody under the age of fifteen is allowed to help with a beach clean up and if by chance a needle is found, it must be put into a special 'needle safe' container. In Australia where the problem is quite serious with literally thousand of needles being discarded on beaches every year, some innovative products have been designed and introduced to make syringes safe before and after use. What most people don't realise is the amount of conformance time and cost that go into a clean up and all credit must go to the volunteers that put in hundreds of thankless community hours each year to make our beaches safe. It must fall on every New Zealander to do their bit and recycle waste responsibly – next time you are driving around, count how many drink containers have been left on the roadside only to be washed into the stormwater system and then discharged into the sea. The Research Team monitors a section of Border Road (Henderson, Waitakere City). Roadside storm drains are regularly the trap for rubbish.

You would have to think what type of person, without any consideration to the marine environment, would leave a plastic bag by the side of a boat ramp with the rotting contents of a shark inside the bag. It took us 20 minutes to dispose of the shark and the plastic bag was taken back into Waitakere City for proper disposal. This is far from being an isolated case; illegal rubbish dumping is quite common in the Waitakere Ranges and it highlights again and again that we need stronger prosecution regulations.



Different types of 'safe' needle containers.



Dumped by a boat ramp (Little Huia) – rotting shark contents in a plastic bag.

As part of the Research Team's underwater surveying procedure, water samples have been collected at the surface and at sea floor depth and then taken to SeaLab for analysis.

Waterfall Bay (Manukau Harbour) A & B sea water samples taken on 03/09/2006.

Sample A (Surface): pH = 8.07, Salinity = 34.2,
NH₃ = 0.06, NO₂ = 0.005

Sample B (12 metres): pH = 8.08, Salinity = 34.0,
NH₃ = 0.06, NO₂ = 0.006

Other readings are also taken at survey sites by the surface support crew (e.g. Waterfall Bay 03/09/2006) such as the Surface Water Temperature (12.9°C), Air Temperature (15.8°C), Wind Direction and Speed (SSW 7 Km/h average 3 Km/h), Barometer 1016 hpa. Seal Counts (total 13 – adult 2, juvenile 11), Other Wildlife Observations (black back gulls total 3) – for further information on SeaLab check out their website www.sealab.co.nz



Seawater samples taken from NZRDS dive sites.

Ron Steven (Rogest) Print Presentations:






A number of Ron Steven (Rogest) prints were presented to individuals and organizations in appreciation of their continuing support. We must also thank Ron for his generosity in donating these prints to be used as a fund raiser to support the Research Team's projects. The Research Team sent Ron, who lives in Canada, a small token of thanks a signed book 'Untamed Coast' written by Bob Harvey Names of those who received Ron Steven (Rogest) prints.

List of print presentations below:

Auckland Region Council – Christine Rose (Vice Chair)
Department of Conservation – Karl McLeod
Waitakere City Council – Bob Harvey (Mayor)
Dive HQ (West Auckland) – Paul Oxtan and Chris Lynch
Western Underwater Dive Club – Jill Ranby (Club Secretary)
Dive New Zealand Magazine – Dave Moran (Editor)
Ministry of Fisheries – Dave Allen (to be presented)

Hope you have found our 'Seashore Newsletter' informative. Special thanks to the Western Underwater Dive Club, Dive HQ (West Auckland), Portage Licensing Trust, Pub Charity Inc, Lion Foundation, New Zealand Lottery Grants Board, Mazda Foundation, New Zealand Community Post, Dive New Zealand Magazine.

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L to R Mike Percy, Mayor Bob Harvey, Dave Moran.

Illustration by John Walsby

