Tasmanian Marine Naturalists Association Inc.
c/o 102 Bathurst St., Hobart, 7000

Sea Currents

August 2007 **Issue 38.**

Coming TMNA Events:

Notice of Annual General Meeting

Wednesday 12th September
7pm for the speaker, Kevin Redd
Followed by the election of office bearers

Treasurer / Secretary Brian Eldridge has resigned from this position so we seek an enthusiatic person to fill his shoes. Please consider nominating.

Reminder: Membership Fees are now due

MEETINGS: The meeting will commence with the speaker at 7:00 pm (note earlier starting time) on the second Wednesday of each month in the **Sustainable Living (formerly Tasmanian Environment) Centre, first floor at 102 Bathurst St, Hobart.**
Join us for a meal across the road at the New Sydney Hotel at 6 pm before the meeting.
FIELD TRIPS: Contact the person listed by the Friday evening before the trip for details of where to meet and so you can be contacted in case there is a change of plans. Be prepared to roll up your trousers and wear 'wet' or waterproof shoes with non-slip soles.

SEPTEMBER	
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Saturday 8th	**Field trip: 10 am Walk from 7-mile beach south along the clifftops to Roches Beach, Lauderdale.** About 1.5 h walk one way (not including beach combing on the way!) along good track, suitable for dogs, kids and bikes (minor portages). Lunch *en route* at a secluded beach. Contact Jane 6229 8264 to arrange car shuffle.
OCTOBER	
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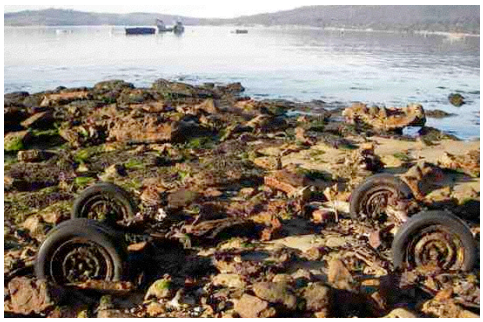
Saturday 27th	**Field trip: Tesselated pavement to Clyde Is (accessible at low tide), Eaglehawke neck, 3pm.** Low tide 16:36 DST, 0.21m. Meet earlier for lunch and walk on Pirates Bay beach. Contact Jane 9229 8264.

Peggys Beach, Electrona, 9th June 2007



Electrona Beach, view over old car tyres towards 'quickmud'. Photo: Ted Mead.

Electrona may seem a strange destination for a TMNA visit, considering the industrial history of this area bordering the Channel between Margate and Snug. But Peggys Beach was not without its charms. True, much of the southern part of the shoreline was littered with bits of clinker and slag. True, the retreating tide revealed the lower shore to be composed chiefly of treacherous 'quickmud'. True, the beach hinterland harboured more than its fair share of woody weeds. Yet those of us with an interest in molluscs soon clocked up quite an impressive list – just three shy of a hundred species, suggesting that looks can be deceptive. I guess if you're a mollusc you wouldn't necessarily agree with the description of this shoreline as 'blighted' (nor, presumably, would the real estate agents selling new subdivisions in Electrona). The fauna was an odd mixture of species you'd expect in sheltered, muddy shores and those from deeper water. Highlights include *Dosinia victoriae*, a rare species of bivalve in southern Tasmania, and the mangrove airbreather *Ophicardelus ornatus* (also rare down south). A handful of shell grit examined under the microscope revealed a few further surprises, such as the bubble shells *Liloa brevis* and *Retusa pelyx*, and the scarce relative of the widespread spotted diala (or alaba) known as *Alaba translucida*. Three feral species were found – the New Zealand clam *Venerupis largillierti* (now widespread in the Derwent and elsewhere), European basket shell *Corbula gibba* (a species increasingly widespread in the Channel) and New Zealand screwshell *Maoricolpus roseus* (a species normally encountered *en masse* but here only as singletons). Besides the molluscs, we were kept busy trying to identify crabs and seagrasses, both of which were plentiful.

Simon Grove

Pre-Science week Public Lecture
August 9th

It was satisfying that all my hard work organising the meeting was rewarded by attendance of 50 - 60 people for the talk by two CSIRO scientists from Commonwealth Marine and Atmospheric Research.
Simon Allen was originally in the British navy and then the petro-chemical industry before moving from Aberdeen, Scotland to Tasmania about 3 years ago to become the scientific equipment manager at CMAR. There he has been involved with developing some of the fascinating new technology used in today's leading edge marine research, for projects such as the Integrated Marine Observing System (IMOS) and the Derwent Project. In his presentation, **The Science of Observation for Observational Science**, he describe some of the exciting tools and techniques essential for observing and recording the changes in our marine environment and our local underwater creatures. He illustrated numerous tracking and undersea recording devices that have been crucial for modelling the ocean currents and temperatures that affect the world's climate.

Dr Elvira Poloczanska, who also hailed from Aberdeen after several years modelling interactions between fisheries and seabirds and then effects of climate change on barnacles and other marine biodiversity, is a co-author of the recent CSIRO report: IMPACTS of CLIMATE CHANGE on AUSTRALIAN MARINE LIFE (www.greenhouse.gov.au/impacts/publications/marinelife.html). Her talk was titled: **Into Hot water? Climate change and Tasmanian Marine Life**. She explained how, as our globe warms, warmer sea currents change the timing of lifecycles so that traditional predator and prey cycles are not longer synchronous, for example puffins and sand eels. She gave most examples from the northern hemisphere since there are over 1000 data sets from there and only 85 from the southern hemisphere! However the trends are the same, so that warmer waters are bringing new species into Tasmanian waters, pushing out the residents that have nowhere to retreat further south. It has been estimated that 10% of Victorian species have already been lost and it is probably higher for Tasmania. It is these unique, cold-loving endemic species that are most at risk. Only a few degrees of warming can tip the balance between species' success or failure at surviving in a changing marine environment. Northern species of red tide phytoplankton, barnacles and fish have already become more common in Tasmania. Pope predicted in 1955 that warmer water would kill *Macrocystis* and Eddyvane has estimated that 90% of historic kelp beds have been lost.

Jane Elek

Antarctic 'treasure trove' found
By Rebecca Morelle
Science reporter, BBC News

A rich array of marine life was found in the cold, deep waters

An extraordinarily diverse array of marine life has been discovered in the deep, dark waters around Antarctica.

Scientists have found more than 700 new species of marine creatures in seas once thought too hostile to sustain such rich biodiversity.

Groups of carnivorous sponges, free-swimming worms, crustaceans and molluscs were collected.

The findings, published in the journal Nature, could provide insights into the evolution of ocean life in this area.

Dr Katrin Linse, an author of the paper and a marine biologist from British Antarctic Survey (BAS), said: "What was once thought to be a featureless abyss is in fact a dynamic, variable and biologically rich environment.

"Finding this extraordinary treasure trove of marine life is our first step to understanding the complex relationships between the deep ocean and distribution of marine life."

New to science

The research formed part of the Andeep (Antarctic benthic deep-sea biodiversity) project, which is the first comprehensive study of Antarctic marine life.

It is designed to fill the "knowledge vacuum" that surrounds the fauna that inhabit the deeper parts of the Southern Ocean.

During three research expeditions that took place between 2002 and 2005, an international team collected tens of thousands of specimens from the Weddell Sea, from depths of between 774 and 6,348m (2,539-20,826ft).

The samples were taken from diverse settings, including the continental slope, the abyssal plain and channel levees.

The researchers found the area to be teeming with lifeforms; well over 1,000 species were recovered, and many were completely new to science.

For example, they spotted 674 species of isopod (a diverse order of crustaceans), most of which had never previously been described; more than 200 polychaete species (marine worms), 81 of which were found to be new species; and 76 sponges, 17 of which had previously been unknown.

Lead author of the paper, Angelika Brandt, who is based at the Zoological Institute and Zoological Museum, University of Hamburg, Germany, said: "I initiated the Andeep project because such a vast area of the Southern Ocean had never been explored.

"We thought we might find some novel species, but previous research had suggested deep-sea diversity this far south would be poor, so we were very surprised to find such enormous diversity."

The findings could help to shed light on the evolution of ocean life in this area, Professor Brandt told the BBC News website.

By comparing the species that are found in the deep-sea and those found in the shallower waters surrounding Antarctica, scientists will be able to better understand how climate and the environment these animals live in drove past evolutionary changes.

TMNA Calendar of events 2007

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NOVEMBER	
Wednesday 14th	**General Meeting 7:00pm**. Beth Strain will talk about her PhD research on the interactions between abalone and the sea urchin, *Centrostephanus*.
Saturday 24th	**Field trip: Adult Ed Parent & Child Marine Life: 2pm Blackmans Bay beach and rock platform.** Low tide 3:24pm DST 0.16m. Other members please come along to help with the class. Contact Jane 6229 8264.
DECEMBER	**No Meeting**
Sunday 9th	**Field trip and Christmas gathering: Tinderbox 3pm.** Low tide 3:50 pm DST 0.36m. A good place for young and old to swim or snorkel or explore the rock platform or boulder reef of the marine park. Playground, toilets, tables and BBQ. Bring a BBQ tea. Contact Jane 6229 8264.

Executive committee, elected at September 2006 AGM

President	Jane Elek	240 Tinderbox Rd., Tinderbox, 7054	6229 8264
Vice President	Simon Grove	25 Taroona Cres, Taroona, 7053	6227 8509
Secretary, Treasurer & Public Officer	Brian Eldridge	100E King St, Sandy Bay, 7005	6223 2846
Committee member	Carol Hodgson	14 Wombara Ave, Kingston	6229 3998

c/o 102 Bathurst St, Hobart, 7000
http://www.geocities.com/tasmarinenat/index.html

"Promoting awareness of Tasmania's marine environment and encouraging understanding and research into the marine ecology of southern Australia"

General meetings are held on the second Wednesday of each month, at 7:00 pm in The Tasmanian Environment Centre, now the Sustainable Living Centre in Bathurst Street. General meetings will usually include an invited speaker who will give a short talk at the start of the meeting.

	1 year	2 years	3 years
Regular	$20	$35	$50
Concession	$15		
Corporation	$40	$65	$90
Household	$30	$50	$70

Please fill in the form below and deliver with your payment to TMNA, c/o 102 Bathurst St, Hobart, 7000:

Name:
Address:
Phone:
E-mail Address:
Amount enclosed: