

MARINE METRE SQUARED

www.mm2.net.nz

Marine Metre Squared (Mm²) is a new nationwide citizen science project that encourages people to get out and explore their local seashore. Mm² is ideal for school field trips to estuaries or rocky shores as it provides an easy method for students to survey plants and animals, and store their data. By repeating the survey at the same site, you can build a picture of seasonal changes and health trends at your site. Anyone can take part – individuals, families, schools and community groups – and registration is free. Registered members get full access to the online Mm² database where they can upload their survey data, compare their shore with the rest of New Zealand and monitor changes over time. Registered members can also join an online community to connect with other members of the Mm² network, get help with species identification, take part in new projects and challenges, and suggest projects of their own.

Contact Environment Southland if you would like one of our education officers to assist you with a muddy or rocky shore study. Call 0800 76 88 45 or email education@es.govt.nz.

Our Marine Metre Squared field trip

By Pat Hoffmann

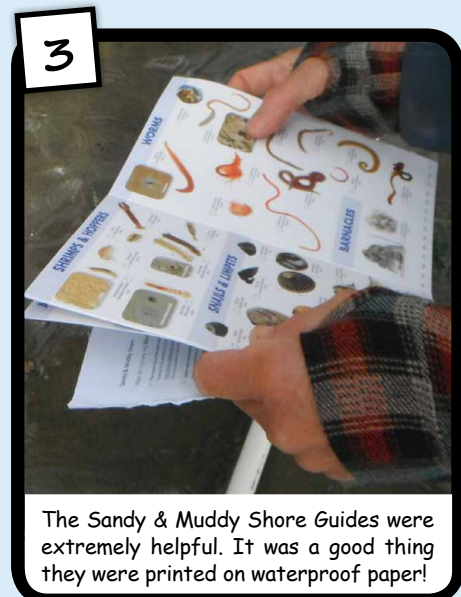
On 13 November, teachers from three Enviroschools in Southland and staff from Environment Southland participated in a Marine Metre Squared field trip run by Sally Carson, programme director at the New Zealand Marine Studies Centre in Otago. We travelled to Mokomoko Inlet near Omaui at low tide and completed two surveys of the muddy shore – one in the low shore zone and another in the mid shore zone.



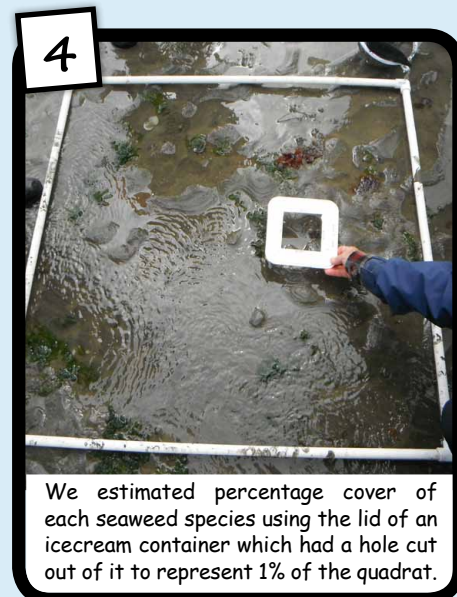
1 We placed our 1m² quadrat at a randomly chosen site on the soft shore of the estuary.



2 We identified and counted all of the animals we could find living on the surface (epifauna) within the quadrat.



3 The Sandy & Muddy Shore Guides were extremely helpful. It was a good thing they were printed on waterproof paper!



4 We estimated percentage cover of each seaweed species using the lid of an icecream container which had a hole cut out of it to represent 1% of the quadrat.



5 We recorded everything we found on a handy fieldsheet downloaded from the Mm² website.



6 We pushed a tin can into the sediment to obtain a core sample, and then used a trowel to dig it out. We collected four of these core samples per quadrat.



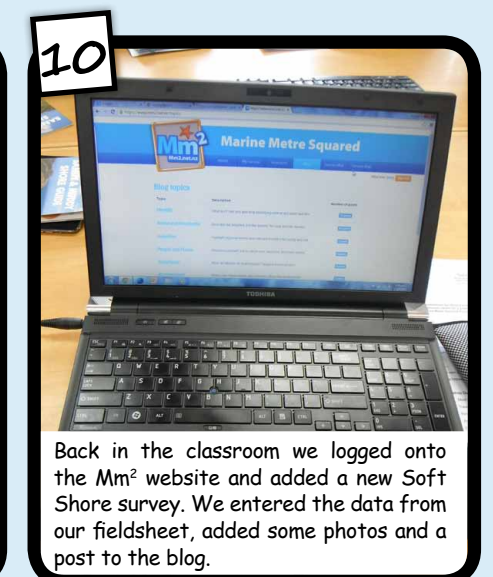
7 We carefully emptied the contents of each can into a sieve and looked for any signs of black, anoxic sediment (the RPD layer). We also measured the depth of the RPD layer below the surface. See page 7 for more info on the RPD layer.



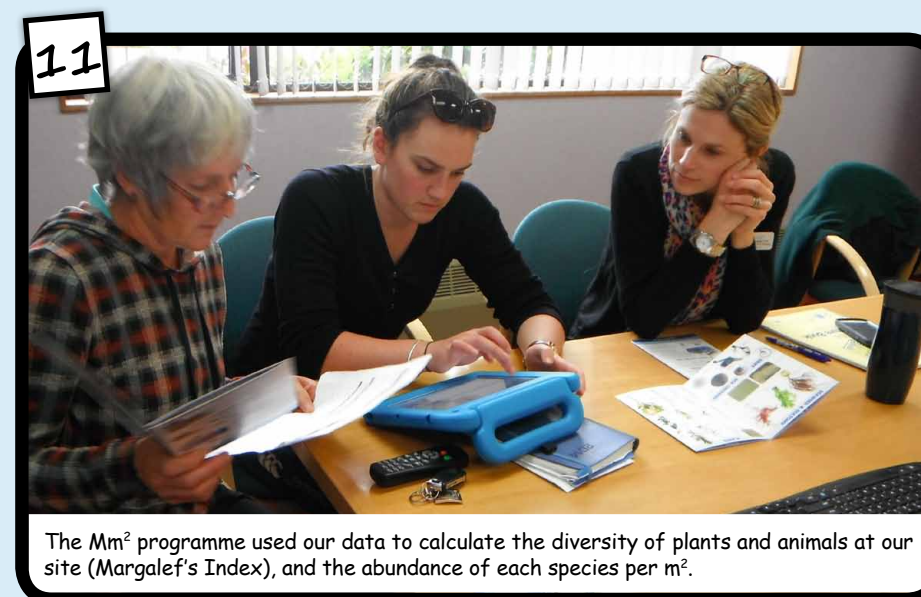
8 We sieved the core samples and identified animals we found in the sediment (infauna). There were more cockles and worms living in the sediment than on the surface.



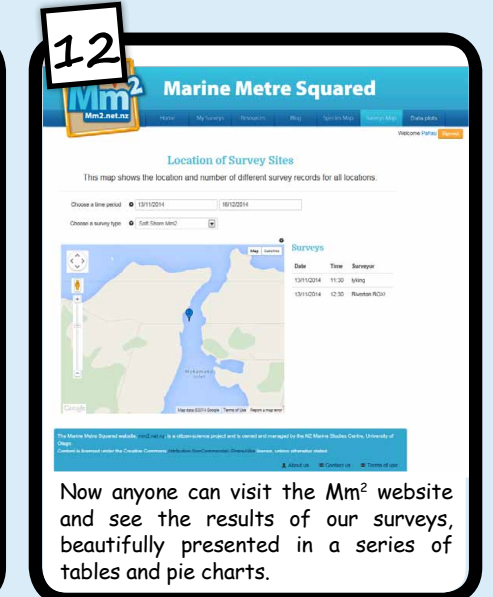
9 We saw some fascinating creatures, including crabs, a ghost shrimp, snails, whelks, limpets, wedge clams, cockles and worms. Our most surprising discovery was this super-smelly sulphur worm!



10 Back in the classroom we logged onto the Mm² website and added a new Soft Shore survey. We entered the data from our fieldsheet, added some photos and a post to the blog.



11 The Mm² programme used our data to calculate the diversity of plants and animals at our site (Margalef's Index), and the abundance of each species per m².



12 Now anyone can visit the Mm² website and see the results of our surveys, beautifully presented in a series of tables and pie charts.