

Education & Training

NIWA continues to be strongly committed to the advancement of science education and knowledge in schools, universities, and the wider public. Our school sponsorship programme in 2002–03 targeted three areas: the Sea & Learn programme, regional school science fairs, and Kelly Tarlton's Discovery Room. This year our sponsorship was strengthened by our association with Royal Society of New Zealand Science, Mathematics, and Technology Teacher Fellows Keith Hartle and Allan Mundy, working in the areas of lake and marine research.



NIWA Discovery Room

NIWA sponsor the marine educational facility at Kelly Tarlton's Underwater World in Auckland. This is known as the 'NIWA Discovery Room', and is designed to help primary and intermediate age children discover the magic of science. More than 37 000 children visit it each year.

NIWA staff and a Royal Society Science, Mathematics, and Technology Fellow (hosted by NIWA) have been developing a **teaching resource on marine science** for South Pacific Island schools based on the ARGO programme. ARGO is a major ocean-observing system consisting of a global array of temperature and salinity floats.

Our links with New Zealand universities continue to strengthen. The joint NIWA and University of Auckland Institute of Aquatic and Atmospheric Sciences has run successfully for two years. We also support three postgraduate Centres of Excellence with Victoria University of Wellington, the University of Otago, and the University of Canterbury to attract the best students and train them at postgraduate level in areas of growing demand. NIWA staff supervised more than 60 postgraduate students across six universities last year. We currently provide seven NIWA PhD scholarships in key areas, including coastal ecology, aquaculture, freshwater ecology, greenhouse gas production, and the ecology of eels (linked to Māori cultural values). Several of our students have received funding from the FRST's Enterprise Fellowships, Tuapapa Putaiao Māori Postgraduate Fellowships, or Bright Future's Fellowships.



Kings High School pupils Brad Collins (left) and Roman Fraser hold up crabs found during their day trip on Kaharoa.

Sea & Learn

NIWA's 2002–03 Sea & Learn programme provided pupils from each of 18 schools with a 1-day hands-on science voyage on our coastal research vessel *Kaharoa* from the ports of Picton, Nelson, Lyttelton, Timaru, and Dunedin. The teaching resource for the programme was developed jointly by NIWA and school science teachers and is linked to the New Zealand school curriculum. In Nelson the Sea & Learn programme linked up with the international education programme 'GLOBE' to collect data for comparison for school students in Golden Bay, New Zealand, Mobile Bay, USA, and Taganaog Bay, Russia.

School science fairs

NIWA is the major sponsor of regional school science fairs, including those in Auckland City, Waikato, Bay of Plenty, Nelson, and Wellington. We also provide additional sponsorship of the Central Northland, North Harbour, Taranaki, Nelson, Marlborough, Central South Island, South Canterbury, and Otago Science Fairs. These sponsorships promote science in secondary and intermediate schools and to the community at large.



Queen Margaret College seventh former Elizabeth Carr's model catapult helped her win the top prize at the Wellington Regional Secondary Schools Science and Technology Fair, of which NIWA is a major sponsor, in August 2002. Her project, 'The Physics of the Trebuchet' (French for catapult), looked at how a 2 kg projectile flew, depending on its angle of release.



We offered 13 sponsored and self-funded **training courses** in 2002–03 to assist in the professional development of staff in regional councils, government departments, and consultancy organisations. These included our popular freshwater biodiversity courses on topics such as native freshwater fish, wetland plants, and aquatic invertebrates.

NIWA also provided funding for 18 **postdoctoral fellowships** in 2002–03 in areas where we need high quality expertise, including marine biosecurity (2), biodiversity (3), aquaculture (2), and simulation modelling (4). We also provided internal educational opportunities for NIWA staff, with 1 **sabbatical leave** grant for senior staff, and 3 **technical training** awards in overseas institutions.



Postdoc Martin Haase