

Ian Devereux MSc., PhD., FNZIC., AMAusIMM.

(1940-2020)

Geoscientist and founder of Rocklabs

Adrian Pittari, David Lowe, Chris Hendy, Cam Nelson and Vince Neall

Ian Devereux (born 11 February, 1940) passed away on 25 April, 2020 at the age of 80. Ian is well known as the founder of Rocklabs in 1969, which became a world leader in scientific rock-testing instruments. He has been described as “one of the export ‘Vikings’ of the 1970s, 80s and 2000s who led New Zealand’s expansion as an export nation” (Rob Stock, 18 June, 2017, Stuff). His story and the rise of Rocklabs has been told in his biography *Ian Devereux: To Cut a Long Story Short*, by New Zealand biography writer for Life Stories, Karen Jarvis (self-published, 2017), who particularly recalls this as one of her most interesting biographies (Danielle Clent, 22 March, 2018, Stuff). She notes his fascinating stories as a forensic scientist on the Arthur Allan Thomas case and his “scary and hilarious” travel tales while visiting over 55 countries on company business. Business journalist Rod Oram of the *Sunday Star Times*, who coined the term “export Vikings”, noted Rocklabs as “a new type of business model on the rise: specialised, world-class, hard-working and little known” (Rob Stock, 18 June, 2017, Stuff). Ian is particularly remembered for his business generosity having shared the company profits equally with all staff, and when it was eventually sold to Scott Technology in 2008 the large sum of payment was shared with family, friends and Rocklabs employees. During tougher times, Ian took a large pay-cut himself to reduce company debts without cutting employees’ wages.

Less well known to the New Zealand business community is Ian’s early research career in the 1960s. Yet, his early work on oxygen isotopes has influenced geoscientists from several geoscience subdisciplines, in particular on his palaeotemperature measurements through the Cenozoic (Devereux, 1967a, 1967b; 1968a, 1968b; Devereux et al., 1970) and work on the Otago metamorphic belt (Devereux, 1968c; Devereux et al., 1968). A Science paper on palaeotemperatures from fish otoliths is also worthy of note. Fundamentally a geochemist, Ian was raised in Otago and completed an MSc in geochemistry at the University of Otago (Devereux, 1961). He then worked briefly as an industrial chemist running a small paint factory before going on to complete a PhD on Application of oxygen isotope studies to some New Zealand geological problems at Victoria University of Wellington with DSIR.

Chris Hendy worked closely with Ian at Victoria University and remembers him during his PhD days.

"Ian and I shared an office (and chair actually) as we were both given DSIR PhD scholarships on condition we ran the Nuclides Mass Spectrometer donated to NZ under the atoms for peace program. As Ian had a family (wife Felicity), he ran it in the daytime and I ran it at night. Ian started a little earlier than me and finished sooner, so I had to pick up some of his unfinished projects after he left (Mangaopari Stream section). Ian's thesis was very broad. He wanted to analyse the Otago metamorphic belt and determine the palaeotemperatures using oxygen isotopes of co-existing silicates. However, there was no-one in the Geology Department at Vic who was prepared to supervise it, and so a compromise was worked out. Half of the thesis could be on the Otago schists and the other with Paul Vella's pet project to determine a palaeotemperature curve for the Tertiary in New Zealand. To do this, Ian collected two samples from each marine stage. I was working on the last 100,000 years where there was clearly a pronounced cycle of climate change and so argued with Ian and Paul that there were likely similar shorter-term variations in climate throughout the Tertiary. Paul was also wondering about the evidence of cyclic sea level change (he described them as cyclothems) he could see in the south Wairarapa. Hence Mangaopari Stream. Peter Blattner was persuaded by Ian to pick up the bromine pentafluoride extraction of oxygen isotopes from silicates when Ian left the Institute of Nuclear Sciences. After he finished Ian took up a job with analytical chemist Jim Sprott (of Arthur Allan Thomas fame) to set up a mineral's analytical facility as interest in gold mining was beginning to develop.

From this he saw a need to manufacture such equipment as the orbital grinders." Cam Nelson notes his particular impact on the New Zealand palaeoclimate record.

"Ian was just a few years ahead of my own geology years (1962-65) at Victoria University and so I did not know him personally then. In my subsequent PhD study of the Oligocene Te Kuiti Group limestones in the wider Waikato region I argued that, unlike convention in the global literature of the day, these carbonates were cool-water ones and did not develop in warm tropical seas. When Ian published in 1967 (Devereux 1967b) a NZ palaeoclimate/palaeotemperature record for the NZ Cenozoic based on oxygen isotope analyses of fossils and carbonate rocks, I was delighted to see the absolute marine temperatures in the NZ region in the Oligocene were recorded as being mainly in a cool to warm temperate realm. The paper showed some considerable changes in absolute marine temperatures through the Cenozoic and became a milestone one in NZ palaeoclimatology.

Significantly, the general trends in his climate record have stood the test of time, despite refinements across specific time intervals.

I then had the pleasure of meeting Ian personally when I joined the Earth Sciences staff at Waikato University in 1971. In those formative days we were setting up new geo-laboratories and required rock cutting, crushing, powdering and related machinery. Ian had founded Rocklabs (in Auckland) which promoted and sold such equipment. We ended up purchasing several Rocklab products from him in those early days. Ian was a very amiable person, he would deliver items himself, demonstrate their use, ensure we were happy with the purchase, and give great aftersales service. All in all, a top salesman. I gather over the years that Ian's products found their way into the laboratories of several other geoscience organisations around the country." Vince Neall also remembers Ian at Victoria University.

"Perhaps, for its time it was wonderful to see a geochemist extracting such useful information from microfossils. Ian was intellectually alive. He loved extending his own knowledge into micropaleontology and oceanography and was always prepared for a good scientific argument if things didn't seem logical, even if it wasn't his field of expertise!" Through his business model of Rocklabs he has been described as being 'ahead of his time'. As a geoscientist in the 1960s, his work mirrors our modern aspirations towards multidisciplinary research.



Known geoscience publications from Ian Devereux:

- Devereux I, 1961. A hydrological investigation of solid solution relations in the system $\text{Ca}_3\text{Al}_2(\text{SiO}_4)_{3-x}(\text{OH})_{4x} - \text{Ca}_3\text{Fe}_2(\text{SiO}_4)_{3-x}(\text{OH})_{4x}$. MSc thesis, University of Otago.
- Devereux I, 1967a. Oxygen isotope palaeotemperature measurements on two Tertiary deep-water coral thickets from Wairarapa, New Zealand. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 3, 447-455.
- Devereux I, 1967b. Oxygen isotope palaeotemperature measurements on New Zealand Tertiary fossils. *New Zealand Journal of Science*, 10(4), 988-1011
- Devereux I, 1967c. Temperature measurements from oxygen isotope ratios of fish otoliths. *Science*, 155(3770), 1684-1685.
- Devereux I, 1968a. Application of oxygen isotope studies to some New Zealand geological problems. PhD thesis, Victoria University of Wellington.
- Devereux I, 1968b. Oxygen isotope paleotemperatures from the Tertiary of New Zealand. *Tuatara*, 16, 41-44.
- Devereux I, 1968c. Oxygen isotope ratios of minerals from the regionally metamorphosed schists of Otago, New Zealand. *New Zealand Journal of Science*, 11(3), 526 - 548
- Devereux I, McDougall I, Watters WA, 1968. Potassium-argon mineral dates on intrusive rocks from the Foveaux Strait area. *New Zealand Journal of Geology and Geophysics*, 11(5), 1230-1234.
- Devereux I, Hendy CH, Vella P, 1970. Pliocene and early Pleistocene sea temperature fluctuations, Mangaopari Stream, New Zealand. *Earth and Planetary Science Letters*, 8(2), 163-168.