In this issue

In 1941, geologists Harold Wellman and Richard Willett traversed the length of Westland, mapping what would become known as New Zealand's Alpine Fault[1]. Their work relied on surface observations.

Carolyn Boulton and her colleagues in their article, A *window into thousands of earthquakes: Results from the Deep Fault Drilling Project* (DFDP**)** describe how a cohort of geologists, geophysicists, and seismologists drilled into the Alpine Fault to discover the physical processes that generate earthquakes on the Australian–Pacific plate boundary.

The project has provided researchers with unparalleled opportunities to understand the mechanisms that generate earthquakes on the Alpine Fault. Results show that fluids play a fundamental role in explaining the weakness during earthquakes.

The new underground observations arising from DFDP are motivating current researchers to discover the physics that underpin these dramatic displacements and the as-yet unpredictable earthquakes that accompany them

With many countries relying on science and technology for their future economic prosperity, science educators must nurture curiosity and encourage high-ability science students to become creative and innovative scientists of the future.

In the exploratory case-study, *If only I had time: Teachers' perceptions of teaching high-ability science students,* Jenny Horsley and Azra Moeed employ semi-structured interviews to investigate how four award-winning science teachers identified and addressed the learning needs of their high-ability science students. The research was underpinned by a constructivist theory of learning.

Their findings suggest that these teachers were not aware of mandated policies for Gifted and Talented students[2]. Rather they used English and mathematics standardised tests for identifying high-ability science students, and supplemented these with their own approaches. Additionally, although the literature identifies the importance of student-led science inquiry, the authors found no evidence of the teachers engaging their students in authentic scientific inquiry to enable them to investigate their own questions. These findings are discussed in the light of extant literature.

In *The lark descending: Are non-native birds undervalued in New Zealand?* Lincoln University ecologist Stephen Wratten, while acknowledging that bird species that are native to New Zealand are in trouble, also notes that recent data shows that introduced bird species are also disappearing[3]. Stephen warns that this could be yet another warning of New Zealand biodiversity loss.

Finally in this issue there are two book reviews. The first, Brian Gill's *The Unburnt Egg – More stories of a museum curator,* is reviewed by Hamish Campbell and the second, Richard Prum's *The Evolution of Beauty: How Darwin's Forgotten Theory of Mate Choice Shapes the Animal World – and Us,* is reviewed by Geoff Gregory.

Allen Petrey
Editor

[1] Wellman, H.W., Willett, R.W. 1942. The geology of the west coast from Abut Head to Milford Sound, Part I. *Transactions of the Royal Society of New Zealand 71*: 282–386.

[2] Education Review Office. 2008. *Schools' provision for gifted and talented students.* Wellington, NZ: Education Review Office. http://www.ero.govt.nz/National-Reports/Schools-Provision-for-Gifted-and-Talented-Students-Good-Practice- June-2008

[3] http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/birds/garden-bird-surveys