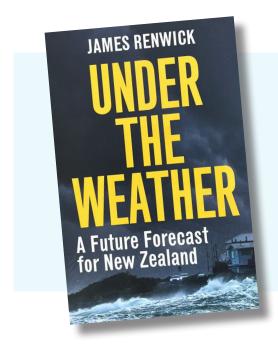
Book review

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James Renwick, 2023.

Under the Weather. A Future Forecast for New Zealand.

Harper Collins Publishers, Auckland, New Zealand. 320 pp.

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ew Zealanders are used to diurnal and day-to-day variability in our weather but the ferocity of recent extreme events, such as Cyclone Gabrielle in February 2023, has taken many by surprise. Scientists have since confirmed that climate change had a role in the severity of Gabrielle (Borenstein, 2023). The Ministry for the Environment (2023) also reports that there is a growing body of evidence that extreme weather events in New Zealand, such as heavy rainfall and flooding, will increase in frequency and severity. This is a daunting prospect. It raises many questions about climate change at the personal level, including: Is climate change already happening now? Is there anything we can do? Is it already too late to make a change?

For the lay person, it can be difficult to obtain credible articles about the science of climate change that are also palatable. Newspaper articles can be too simplified, we know social media contains both information and misinformation, and scientific reports are full of jargon and very specialised. What is really needed is a book that is readable but also relevant, relatable, and scientifically rigorous. *Under the Weather. A Future Forecast for New Zealand* by Professor James Renwick is such a book.

Under the Weather is presented in a format that is easy to read. I purchased the paperback; it is also available as an e-book. The book is typeset with ample margins and a larger font, which is easy on the eyes. Renwick has presented the information in 16 chapters: none is very long and each can be read separately, as a stand-alone 'essay'. The jargon is kept to a minimum and, where it is necessary, it is explained in a conversational manner. Renwick has included autobiographical anecdotes throughout the book and shares his personal points of view. This makes the book far more relatable than most science publications—it feels like a conversation with the author, not a textbook. I think this book will appeal to many readers. That includes the general reader, teachers, university students, and scientists for whom climate change is not their area of expertise. It explains concisely and clearly how we know that the climate has already changed, why climate change is important to our daily lives, what our future will look like, and what we can do about it.

Renwick's fascination with weather and climate began during his childhood in Canterbury, New Zealand. He has 40 years' experience in atmospheric science and climate research and has worked at the New Zealand Meteorological Service and National Institute of Water and Atmospheric Research. He is currently a Professor at Victoria University of Wellington. Renwick was awarded the prestigious Prime Minister's Science Communication Prize in 2018 and is a Companion of the Royal Society of New Zealand Te Āparangi. He was a lead author for the 4th and 5th Assessment Reports, and a convening lead author for the 6th Assessment Report, of the International Panel on Climate Change. In 2019, he was appointed to the New Zealand Climate Change Commission, to advise Government on national responses to climate change.

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Under the Weather focuses on issues related to climate change for New Zealand and its geographical neighbourhood, the waters and island nations of the South Pacific. It is divided into four parts. 1) 'The Global' sets the broad context including the geological and historical climate record. 2) 'The Local' describes and explains the climate of New Zealand and its oceans. 3) 'The Forecast' digs down into the outlook for New Zealand and the South Pacific for the near future, based on "the climate change that is already locked in" (p6). The response so far is also addressed. 4) 'Where to From Here' looks at best- and worst-case scenarios for the future and actions that could be taken at global, local, and personal levels. In a concluding chapter, Renwick poses the question "Can we really halt climate change?" and answers with "a cautious, but hopeful, yes" (p298). A list of useful websites is provided for readers who want to learn more.

But what about the sceptics? In a recent interview for the Medical Assurance Society's online magazine (2021), Renwick said that "you can't win an argument with someone who's opposed to the science of climate change, because it's not about the science". In the misinformation age, you need to connect on a human level, to find out "what people are afraid of, what they hold dear, what they wish for" (Medical Assurance Society, 2021). *Under the Weather* speaks to the reader at the personal level, explains how scientists know that climate change is real, and why climate change is already important to our daily lives. I suggest it is a good place to start reading if you are undecided or lean towards being a sceptic.

There are no graphs or tables in the book; that might disappoint some readers. I found it refreshing to just read and not have to look at diagrams. I would have liked to have seen an author's photograph inside the back cover. Renwick is the go-to person for local media when they want an expert to comment on climate change. Many readers in New Zealand will have seen him being interviewed on TV; some will have heard him speak at their local hall. A photograph would have helped readers identify the book with the person. I enjoyed the autobiographical anecdotes throughout the book. I would have also loved to have seen some biographical photographs, such as a young Renwick out in a howling nor'wester flying his home-made kite.

Under the Weather is very readable, with a relatable style and rigorous scientific content. I highly recommend it to people who want to learn more about climate change, particularly as it relates to New Zealand.

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