

ROGUE WAVES: Anatomy of a Monster – Michel Orlagnon. Published in soft covers by Adlard Coles Nautical [www.adlardcoles.com] at £20.00. 160 234mm x 156mm pages with 125 colour photos, paintings and diagrams. ISBN 978-1-4729 -3621-9. Also available for Kindle

I approached this book with some trepidation, almost akin to that experienced when crossing the Gulf Stream from Bermuda to New York in some very lively seas, or crossing the Agulhas Current from Reunion to Richards Bay in 30+ knots of southerly winds – it was dark so we could not see the height of the waves, but we could feel them. The author is a recognised expert in the field, and founder of the International Conference on Rogue Waves – he is a scientist, mathematician and statistician, hence the trepidation.

Rogue Waves addresses the definition of a rogue wave; the difference between a rogue wave and an extreme wave; the effects of rogue waves; measurement, statistical and scientific analysis of rogue waves; and, importantly for mariners, how you can manage the prospect of a rogue wave without a forecast of their appearance.

It starts by defining a rogue wave as of ‘a size and severity which one would not expect given the prevailing conditions’, but this requires further explication – is the definition based on a minimum height which also assumes severity, or is a wave ‘rogue’ because particular characteristics distinguish it from a population of predominantly ‘normal’ waves? The author chooses the notion that ‘a rogue wave is a wave whose severity, in relation to other waves in the same place at the same time, surprises the expert’, and notes some experts may be ‘more surprised than others’.

A discussion of tsunamis absolves them from being rogue, as their formation and propagation are sufficiently known to enable prediction. Similarly, the highest wave recorded, at 524 metres, was the result of an earthquake-induced landslide in Lituya Bay, Alaska – already known to have experienced tsunamis. Other unlikely waves such as standing waves, tidal waves and storm surges are also examined but do not fit the bill.

A chapter addresses Legends and True Stories, emphasising that ‘a proper rogue wave results from a storm, more or less in the vicinity, and the combination of waves created in it by the wind’, and describes a chilling incident that resulted in the cabin boy being consumed by the survivors of the resulting shipwreck. It also reckons the credence of ‘Beware the 100 fathom line’ is largely based on experiences when approaching the Continental Shelf and in the Agulhas Current, rather than science. The author has amassed many other detailed stories about ships and yachts encountering rogue waves and their consequences, and these are spread throughout the book to keep the reader’s interest aroused.

A third of the book addresses the problems of collecting and analysing data, and the theory behind rogue waves – those with an engineering, scientific or mathematical background will find this easier than those of us who struggled in these fields. If you can

see the inner beauty of Rayleigh distribution or Schrodinger's non-linear equation then you will be at home – the rest of us just wonder at your erudition.

Rogue Waves is beautifully illustrated, with photographs and paintings of waves and their impact on ships and shorelines (curiously, shore walkers and shore anglers are more likely to encounter a rogue wave than those at sea) adding to the lustre of the book.

All in all, Rogue Waves delivers what the mariner wants to know – can rogue waves be predicted and what precautions can you take to prepare for meeting one? Well, without writing a spoiler, first get to know what significant wave height means, and know that a rogue wave will be twice that height, and that an extreme normal wave can become rogue in a sea state whose severity grows rapidly. The author helps us understand the where and when.

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