

The Oceanographer's Companion

Essential Nautical Skills for Seagoing Scientists and Engineers

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Scientists and engineers embarking on their first voyage for oceanographic or meteorological research are often unprepared for the experience. Going to sea involves learning a new language – that of the seaman. This is necessary for clear communications, for the safety and well-being of the members of the scientific party and the ship's crew. *The Oceanographer's Companion* is intended to familiarize a student with the basics of navigation, seamanship, marine engineering, communications, safety-of-life-at-sea, shiphandling, knots and splices, first aid, and so much more. The book will have a very practical feel with lots of examples.

KEY FEATURES

- Written by an experienced seagoing scientist for practicing seagoing scientists and engineers
- Accessible for all levels using straightforward language
- Very practical, focused primarily on hands-on examples using easily accessible tools
- Handy guide that covers everything needed at sea
- Includes details on how a seagoing scientist or engineer can work in real scenarios

SELECTED CONTENTS

Research Vessels of the Past and Present—A Brief History of Seagoing Science. Seagoing Skills—Crews, Scientific Party, Logistics, Emergencies, First Aid, and Cardiopulmonary Resuscitation. Research Vessel Construction—Terminology, Equipment, and Machinery. Stability and Trim—Tonnage, Safety of Life at Sea, Maritime Organizations; Sea Change. Science Spaces—Open Deck, Wet Lab, Dry Lab, Computer Lab, Stateroom, Lockers. Mariner's Compass—True and Magnetic, Variation, Deviation, Correcting, and Uncorrecting. Coastal Navigation—Nautical Charts, Geographic Positioning, Marine Electronics, and Instruments. Rules of the Road—Classes of Vessels, Lights, Day Shapes, Maneuvering, and Collision Avoidance. Marlinspike Seamanship—Lines, Knots, Splices, Blocks, Tackle, Cleats, and Fairleads. Trailerable Boats—Hubs and Hitches, Trailing, Boat Ramps, Launching, Recovery, and Anchoring. Handling Equipment—Superstructure, Deck Machinery, Wire Ropes, Clothing, and Commands. Oceanographic Stations—Preparation, Time, Position, Weather, Personnel, and Ancillary Data. Cruise Planning and Execution—Project Instructions, Foreign Waters, Geographic Names, and Tides and Tidal Currents. Underwater Operations—Planning, Equipment, Safety, Diving, American Academy of Underwater Sciences Certification, and Underwater Archeology. Celestial Navigation—Spherical Trigonometry, Spherical Triangles, Azimuth, Sextant Altitude, Amplitude, and Line of Position. Appendix A. Appendix B. Appendix C. Index.

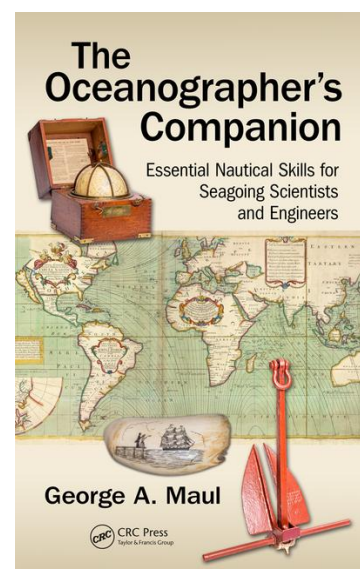
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Reviews

"This is the equivalent of a detailed oral history of practical knowledge about conducting all manner of sea-going oceanographic fieldwork – transcribed, organized, and indexed in a comprehensive volume. Written for students of oceanography (or interested amateurs), it includes thought-provoking exercises following each chapter. The knowledge and skills covered in this book are still relevant, with fewer opportunities for young oceanographers to acquire them. It is the sum of nearly sixty years' experience in the field, the kind of information 'you can't learn in school' – until now. There is no other book like it, and probably no one other than George Maul who could have written it so well."

— Doug Wilson, National Oceanic and Atmospheric Administration, Baltimore, Maryland, USA

"'Everybody's in the same boat' is more than a metaphor when you're at sea. Dr. Maul's book provides the knowledge needed to make you a better shipmate, your cruise more enjoyable, and everyone safer. It's written in an entertaining and informative way, with a pleasant blend of history and tradition, science, and practical matters. Maul is extraordinarily qualified to write such a book, with all of the credentials and experience required to relay this information."

—Mark Bushnell, CoastalObsTechServices, Virginia Beach, Virginia, USA

"The book is well written and holds the reader's attention. It has elements of documented history along with actual sea-going 'practices' that are necessary for the Ocean or Marine Engineer, Oceanographer, or any person needing to work or live on the seas."

—Stephen Wood, Florida Institute of Technology, USA

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