# COVER PHOTOGRAPH AND FRONT MATTER: TOOLINNA COVE, BAXTER CLIFFS, WESTERN AUSTRALIA

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# COVER PHOTOGRAPH

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**TOOLINNA COVE, BAXTER CLIFFS, WESTERN AUSTRALIA**

Toolinna Cove is the only small pocket of sand on the 160 km long Baxter Cliffs in southeast Western Australia. The cliffs are part of the 790 km long steep southern boundary of the Nullabor Plain located along the western half of Great Australia Bight and facing into the high energy Southern Ocean. The cliffs, which average 90 m in height, are formed from shallow water carbonate deposits and are rich in marine fossils. They consist of a lower (white) Wilson Bluff limestone deposited in shallow seas during the late Eocene and an upper (red) Toolinna and Nullabor limestone deposited during the early Miocene. They were subsequently uplifted to form the level Nullabor limestone plain.

The cove was used during the construction of the trans-continental telegraph line in the 1870s to transfer poles and material from ships to the clifftop via a windlass. The windlass was subsequently used by fishermen to transport their catch and was in use until about 2000, when the area became part of the Nuytsland Nature Reserve and the windlass was removed. Today the beach can only be reached by climbing down the cliffs or by boat. This view shows the cliffs and the small beach and surf zone with a bar, and prominent topographic rip channel against the rocks in the foreground. The cliffs are named for John Baxter, killed near Toolinna in 1840 while accompanying John Eyre on his epic 3000 km exploration trek from Fowlers Bay to Albany. The cliffs remain as remote and uninhabited as they were then. (Photograph taken October 2010, and caption by Andrew D. Short, School of Geosciences, University of Sydney, Australia).

# JOURNAL OF COASTAL RESEARCH

## An International Forum for the Littoral Sciences





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### Editor-in-Chief

**Charles W. Finkl** Ph.D., CSci, CMarSci, FIMarEST, CPGS, CPSSc, PWS

Dr. Charles W. Finkl is President and Executive Director of the Coastal Education & Research Foundation *[CERF]*, publisher of the JCR. Charlie, a founding editor of the *Journal of Coastal Research*, has served as Editor-in-Chief for the past 27 years. He is a Research Professor in the Department of Geosciences at Florida Atlantic University in Boca Raton, Florida. He received his Bachelor and Master of Science degrees from Oregon State University and the Ph.D. from the University of Western Australia. He is a member of more than 20 professional societies and has published more than 200 professional papers, books, and reports. He is a Chartered Marine Scientist (CMarSci) [Institute of Marine Engineering, Science and Technology], Certified Professional Geological Scientist (CPGS) [American Institute of Professional Geologists (AIPG),], Certified Professional Soil Scientist (CPSSc) [American Registry of Certified Professionals in Agronomy, Crops, and Soils], and a Professional Wetland Scientist (PWS) [Society of Wetland Scientists]. Charlie has field experience in parts of the USA, Caribbean area, Brazil, Honduras, Russia, South Africa, Western Europe, Australasia, and South Pacific islands. He is also the Series Editor of the Encyclopedia of Earth Sciences Series that is published by Springer (Germany). There are more than twenty-eight volumes in the Series and about twenty-five are available online. Charlie also serves on the Editorial Board of the *International Journal of Environmental Studies* (Routledge) and is an occasional peer reviewer for many other professional journals.

Charlie has interests and expertise in the general areas of surficial geology, coastal and marine geomorphology (including coastal classification), coastal/marine biophysical environments, exploration geochemistry, soils and weathering (regolith geology), coastal zone management and engineering applications or impacts on natural systems (including erosion control and shore protection), coastal hydrology including submarine freshwater and mineralized seeps, subaerial and marine structural geology, natural hazard mitigation in coastal zones, marine environments and coastal wetland protection and restoration, and remote sensing (*e.g.* land cover classification in coastal wetlands, advection-diffusion turbidity plumes in coastal waters, delineation of bottom types and sand resources), effluent disposal and pollution of wetlands and estuaries, water resources mapping and conservation, time series studies of wetland hydroperiod and soil moisture.

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The International Coastal Symposium (ICS) was originally set up by Per Bruun (deceased) and Charlie Finkl as the official meeting of the Coastal Education & Research Foundation (CERF), with the first meeting being held in Hilton Head, South Carolina, in 1993. After the repeated success of these meetings, CERF moved the ICS to the international scene holding these conferences in conjunction with local sponsors in Australia, Brazil, Iceland, New Zealand, Northern Ireland, Poland and Portugal. The ICS brings together delegates from all over the world to collaborate and discuss the most current coastal research studies and projects. The ICS 2014, which is scheduled to be held from April 13–17 in Durban, South Africa, will be a grand celebration of CERF and the JCR, marking the 30th Anniversary for both. For more information, please visit www.cerf-jcr.org.

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- Coastal and Hydraulics Laboratory (CHL), US Army Corps of EngineersH [Vicksburg, Mississippi, U.S.A.; http://chl.erdc.usace.army.mil/]
- Coastal and Marine Geology Program (CMGP), U.S. Geologic Survey (USGS) [Reston, Virginia, U.S.A.; http://marine.usgs.gov/]
- Coastal Research Laboratory (CRL), University of South Florida [Tampa, Florida, U.S.A.; http://crl.usf.edu/]
- Commission on Coastal System (CCS), International Geographical Union (IGU) [http://www.igu-ccs.org/]
- Consorzio Nazionale Interuniversitario per le Scienze del Mare (Co.N.I.S.Ma.) [Rome, Italy; www.conisma.it/]
- Deltares Institute [Delft, The Netherlands; http://www.deltares.nl/en/coast-sea]
- e-Geo Center for Geographical and Regional Planning Studies [Lisbon, Portugal; http://e-geo.fcsh.unl.pt/]
- Institute of Marine and Coastal Sciences (IMCS), Rutgers University [New Brunswick, New Jersey, U.S.A.; http://marine.rutgers.edu/main/]
- Louisiana Coastal Protection & Restoration Authority (CPRA) [Baton Rouge, Louisiana, U.S.A.; www.coastal.louisiana.gov/]
- Royal Belgian Institute of Natural Sciences: Management Unit of the North Sea Mathematical Models (MUMM). [Brussels, Belgium; www.mumm.ac.be/]

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*Journal of Coastal Research*, an International Forum for the Littoral Sciences, is dedicated to all aspects of coastal research. These include geology, biology, geomorphology (physical geography), climate, littoral oceanography, hydrography, coastal hydraulics, environmental (resource) management, engineering, and remote sensing. Although each field functions effectivelywithin itsownpurview, the cross-disciplinarynature of coastal studies requires familiarity with other fields aswell. Hence, the scope of topics is necessarily broad in order to address the complexity of coastal biophysical and socio-economic interactions. Because of the wide range of interrelated topics, the journal invites original contributions and manuscripts dealing with theory, methodology, techniques, and field or applied topic studies on interdisciplinary coastal issues.

The journal encourages the dissemination of knowledge and understanding of the coastal zone by promoting cooperation and communication between specialists in different disciplines. Natural scientists, for example, are encouraged to collaborate with professionals in other fields to prepare contributions relating to the coastal zone that foster increased appreciation of coastal environments and processes. By means of this journal, with its scholarly and professional papers, systematic review articles, book and symposia reviews, communications and news, and special topical issues, an international forum for the development of integrated coastal research is provided.

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